

Final report

Analysis of the legal and institutional environment in the EU Member States and EFTA Countries

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Abbreviations

Acronyms and abbreviations

EFTA	European Free Trade Association
ESS	European Statistical System
ESSnet	Collaborative ESS networks
ESS.VIP ADMIN	ESS Vision 2020 Implementation Project for Administrative Data
EU-SILC	European Union Survey on Income and Living Conditions
EU-LFS	European Labour Force Survey
MS	Member State
NSI	National Statistical Institute
SBS	Structural Business Statistics
STS	Short-term Business Statistics
WP	Work Package

Country abbreviations

BE	Belgium	HU	Hungary
BG	Bulgaria	MT	Malta
CZ	Czech Republic	NL	Netherlands
DK	Denmark	AT	Austria
DE	Germany	PL	Poland
EE	Estonia	PT	Portugal
IE	Ireland	RO	Romania
EL	Greece	SI	Slovenia
ES	Spain	SK	Slovakia
FR	France	FI	Finland
HR	Croatia	SE	Sweden
IT	Italy	UK	United Kingdom
CY	Cyprus	IS	Iceland
LV	Latvia	NO	Norway
LT	Lithuania	CH	Switzerland
LU	Luxembourg	LI	Lichtenstein

Table of Contents

1. Introduction	7
2. Background information	7
2.1. Mandate of the ESS.VIP ADMIN Work Package 1	7
2.2. The information gathering exercise	7
2.3. Countries and topics covered	8
3. Assessment Checklist	10
3.1. Rationale.....	10
3.2. Methods	10
3.3. Synopsis of findings.....	10
3.3.1. Legal Framework.....	11
3.3.2. Institutional and Organisational Aspects	11
3.3.3. Cooperation with Data Owners and Wider Institutional environment.....	12
3.3.4. Quality and Technical Aspects	12
3.4. Checklist – Conceptual Framework.....	13
4. Presentation of the Current Situation	16
4.1. Legal Framework	16
4.2. Institutional and Organisational Aspects	19
4.3. Cooperation with Data Owners and Wider Institutional Environment	21
4.4. Quality and technical aspects	24
4.5. Data Sources Overview	25
4.5.1. Ranking of Success Factors contributing to Successful Cases of Access and Use of Administrative Data.....	26
4.5.2. Ranking of Obstacles restricting the Effective Access and Usage of Problematic Data Sources	27
4.6. Overview of Obstacles and Areas for Improvement.....	30
5. Synthetic assessment of the situation.....	32
5.1. Legal Framework	33
5.2. Institutional and Organisational Aspects	35
5.3. Cooperation with Data Owners.....	37
5.4. Quality and technical aspects	39
Appendix I – Information collected through the questionnaires	40
Appendix II – Country reports	55

List of Tables

Table 4.1. National legal framework - Scope and extent of mandate to access administrative data ..	17
Table 4.2. National legal framework - Clarity and coverage of legislation; restrictions and limitations	18
Table 4.3. Internal institutional and organisational aspects	20
Table 4.4. Cooperation with data owners - collaborative arrangements and coordination mechanisms	21
Table 4.5. Cooperation with data owners - restrictions and limitations	23
Table 4.6. Quality and technical aspects	24
Table 4.7. Data Sources Overview	25
Table 4.8. Ranking of factors contributing to successful access and use of the reported administrative data sources	27
Table 4.9. Summary table on the issues constituting an obstacle for the effective usage of reported problematic administrative data sources across the four dimensions of access to administrative data	28
Table 4.10. Legal and institutional issues constituting an obstacle for the effective usage of reported problematic administrative data sources	28
Table 4.11. Issues regarding the cooperation with data owners constituting an obstacle for the effective usage of reported problematic administrative data sources	29
Table 4.12. Quality issues constituting an obstacle for the effective usage of reported problematic administrative data sources	29
Table 4.13. Technical issues constituting an obstacle for the effective usage of reported problematic administrative data sources	30

1. Introduction

For some time now, European National Statistical Institutes (NSIs) have been making significant efforts to improve and extend the use of administrative data. This is driven by a variety of strong reasons, from the need to expand data availability by tapping new data sources, to the desirability of substituting such sources for survey data, all the way to improving all aspects of statistical data production, including cost efficiency.

The road towards the facilitation of access of statisticians to the administrative data sources and improvement of cooperation with owners of administrative data is supported by Eurostat under the framework of the Work Package 1 (hereafter WP1) of the ESS.VIP ADMIN¹ (Administrative data sources) project. ESS.VIP ADMIN is one of the projects that contributes to implementing the European Statistical System Vision 2020². It focuses in particular on the key areas of using new data sources, striving for quality and promoting efficiency in the statistical production process.

Along with these lines, a primary objective of the contract “Legal and institutional framework for the use of administrative data (ESS.VIP ADMIN WP1, Access to and development of administrative data sources)”³ is the analysis of the legal and institutional background where the NSIs function as well as the practical obstacles they meet when trying to integrate administrative data in their statistical production process.

The orderly and successful integration of administrative data into the official statistical systems is determined jointly through the combination of the **strength of relevant legal frameworks**; the **quality of formal or institutional arrangements**, and detailed **working-level understanding and practical arrangements**. These, in turn, reflect the cultural attitudes and the stage of evolution of individual subject-matter domains and countries.

2. Background information

2.1. Mandate of the ESS.VIP ADMIN Work Package 1

The goal of the ESS.VIP ADMIN project is to support the increased use of administrative data sources for producing European statistics. WP1 aims at identifying legal and institutional aspects concerning access to and use of administrative data by the NSIs in the EU Member States (MSs) and EFTA countries as well as best practices in the field of access to administrative data sources and cooperation with the owners of these sources.

The work undertaken under the framework of WP1 is reflected in the present report on the legal and institutional environment in MSs, which is complemented by a report on best practices regarding access to data and relation of the NSIs with the administrative data owners.

2.2. The information gathering exercise

The aim of the information gathering exercise is to review the current state-of-the art concerning access to administrative data for the production of official statistics, to identify the problems related to

¹ European Statistical System Vision Implementation Project ADMIN:

https://ec.europa.eu/eurostat/cros/content/ess-vision-2020-admin-administrative-data-sources_en

² <http://ec.europa.eu/eurostat/web/ess/about-us/ess-vision-2020>

³ “Legal and institutional framework for the use of administrative data (ESS.VIP ADMIN WP1, Access to and development of administrative data sources)” (Contract No. 07112.2015.004-2015.678).

administrative data access as well as best practices and solutions adopted for overcoming such problems in order to enable the NSIs to learn from each other and help each other to make progress.

In order to accomplish this task, an extensive review of the information available, mostly in the self-assessment peer review documents⁴ and Admin Data ESSnet deliverables⁵ as well as other publicly available documentation was undertaken during the period November 2015 - January 2016.

In a second phase, a survey was launched during the period August - October 2016, with the view to collect additional information on the obstacles faced by the NSIs in accessing administrative data as well as best practices for overcoming these obstacles.

The NSIs were invited to fill-in two questionnaires. The first one, namely the “Strategy level questionnaire” referred to institutional and legal aspects at organisation level in the NSIs. Its aim was to record the management practices followed, policies adopted and practices implemented across the entire organisation. The second one, namely the “Operational level questionnaire” referred to specific data sources for which obstacles inhibited the effective access to the data or for which good practices facilitated accessing the data. Its aim was to identify best practices and problematic areas from various perspectives: the legal / regulatory framework, the institutional environment and cooperation with data owners, to the data quality and infrastructure factors related to access to administrative data.

Overall, 30 replies were received to the Strategy level questionnaire and 27 to the Operational level questionnaire⁶.

Finally, a Workshop on access to administrative data sources was held in Brussels, on 13-14 September 2016⁷. The aim of the Workshop was to facilitate information exchange and sharing of experiences among NSIs’ representatives concerning the legal and institutional environment, mechanisms of collaboration with administrative data owners, cooperation with administrative data owners on quality and technical issues, NSI’s efficient internal management procedures and practices, and actual implementation obstacles.

2.3. Countries and topics covered

The countries covered were the 28 EU Member States and the EFTA countries (Iceland, Lichtenstein, Norway and Switzerland).

The survey focused on the following topics:

- Information about general practices for accessing and using administrative data, covering the following aspects:
 - a) effects of the overall legal and regulatory environment and the way it is actually applied in practice;
 - b) the organisation, planning and management of access to administrative data within the NSI;
 - c) cooperation with the data source owners;
 - d) the management of data quality and technology issues related to access to administrative data.
- Information about the peculiarities of specific data access cases, covering the following aspects:

⁴ <http://ec.europa.eu/eurostat/web/quality/peer-reviews>

⁵ https://ec.europa.eu/eurostat/cros/content/use-administrative-and-accounts-data-business-statistics_en

⁶ Strategy level questionnaire: Replies received by BE, BG, CZ, DK, EE, IE, EL, ES, FR, HR, IT, CY, LV, LT, LU, HU, MT, NL, AT, PL, PT, RO, SI, SK, FI, SE, UK, IS, NO, CH. Operational level questionnaire: Replies received by: BE, BG, CZ, EE, IE, EL, ES, HR, IT, CY, LV, LT, LU, HU, MT, NL, AT, PL, PT, RO, SI, SK, FI, SE, IS, NO, CH.

⁷ https://ec.europa.eu/eurostat/cros/content/2016-workshop-access-administrative-sources_en

- a) data sources proved impossible or problematic to access;
- b) data sources considered exemplary success access cases.

3. Assessment Checklist

3.1. Rationale

Different countries are at a different stage of evolution with regards to the acquisition and use of administrative data. At the same time, they all continue to intensify their efforts in this area. It is therefore useful to take stock of their progress, identify best practices, present the current situation in terms of relative strengths and weaknesses across countries and facilitate learning from each other.

In order to present the situation in different countries in a harmonised way, a structured list of common criteria is needed. These criteria emerge from the identification of generic, common problems, which some countries have successfully overcome with specific practices, policies or approaches, while others still face. This resulting checklist may be presented in either a “negative” way, as a list of common problems, constraints and hindrances, or in an equivalent “positive” way as a list of practices and approaches that overcome these problems. Thus, the checklist serves as a benchmarking against an “ideal” situation.

In deploying the notion of how the situation should ideally look like, two issues must be well understood. First, “ideal” is situated pragmatically in our times. While not static, it is used to denote the best possible situation that an NSI can achieve today, given the state of societal evolution and the functioning of national arrangements.

Second, the notion of this ideal should be explicitly distinguished from “best practice” concepts. At any given point in time, a country is deemed to be more advanced than others in some aspects related to administrative data (legal, institutional etc.). In that sense, a particular success story in a particular domain of administrative data may represent best practice among countries for now but it may well fall short of the ideal. Then, even the most advanced country today has room to grow, and this is measured by the difference between its actual state of advancement and the ideal. The complete checklist will allow NSIs to produce evidence-based plans in the administrative data pursuits but will also enable them to monitor progress at all times against each dimension.

3.2. Methods

The development of the checklist for the benchmarking exercise has been based on:

- a) an extensive analysis of the current situation in all member states, as reflected in self-assessment peer review reports, legislation and other relevant literature;
- b) the findings of two structured questionnaire-based surveys addressed to NSIs, aimed to cover the strategic and the operational decision making levels respectively;
- c) a workshop that guided discussions with representatives of NSIs.

The synthesis of the findings from all three different sources (see also Section 2.2) has provided the empirical basis on which the benchmarking tool and methodology have been based. The European Statistical Code of Practice (CoP) has been used as the backbone for the structure of the benchmarking tool and methodology.

3.3. Synopsis of findings

The formulation of a tangible, concrete ideal and the path towards it are reflecting a multitude of considerations at various levels and perspectives. These are grouped in four broad categories which become the pillars of the benchmarking exercise: **legal framework**, **institutional and organisational aspects**, **cooperation with data owners and wider institutional environment** as well as **quality and technical aspects**.

3.3.1. Legal Framework

The beginning is undoubtedly a strong **legal framework** empowering NSIs with a **clear mandate** in the area of administrative data and supporting their efforts to access and use administrative data for the production of statistics.

The scope, reach and other provisions in the legal framework should cover all potential aspects of the acquisition of administrative data, including **non-conflicting legal acts**, as opposed to legal acts conferring limited powers to NSIs within specific domains. Undoubtedly, a legal framework covering only a handful of specific administrative domains and imposing a priori restrictions to **specified sources and purposes** is restrictive. Provisions contained settle matters in the areas specified but may leave everything else out of reach. Alternatively, the **passing of specific additional legal acts** in order that the NSI obtains access to specific administrative data sources may be required.

The lack of authority of the NSI to **influence administrative datasets**, and by extension the procedures and even specific forms involved, could lead to delays in institutional negotiations and complicate matters practically in other ways too. For instance, it can make legal arguments the prominent area **leading to disputes over interpretation and the like**. In tandem with the lack of explicit provisions obliging the data owners to **consult the NSI when setting up, changing or discontinuing an administrative data source**, it can potentially lead to serious inefficiencies. Conceivably, even after having achieved good cooperation with an administrative source, things can unravel at any time putting at risk the integrity of statistical outputs which may have been (re)designed to rely on such data.

Data protection restrictions stipulated in legal acts can also impose limitations, particularly if they are linked to the issue of microdata. That may lead to provisions obliging the NSI to request **permission from a data protection authority** on every instance of obtaining data.

3.3.2. Institutional and Organisational Aspects

The second main pillar is **institutional and organisational aspects**. Developments in this area are critical and, practically, will dictate the pace of progress. Five areas are distinguished here as part of a taxonomy that can underpin the benchmark.

First, the internal institutional environment is crucial since good intentions are not enough – they must be coupled with the commitment to a certain quantity and quality of resources to make it happen. The **adequacy of resources and competences** relates to the increasingly specialised nature of such activities: negotiation of deals, acquisitions, building of subject-matter expertise in integration of new data, and eventual dissemination together with metadata.

Then, even the presence of sufficient and competent resources cannot carry the day without the support of structures inside the institutions. Thus, **procedures and policies for monitoring and promoting the use of administrative data** are needed, in a way that they become entrenched and integrated into the daily work of the office. Not only these need to be in place to guide a successful acquisition of administrative data from each source but horizontal coordination is necessary to ensure internal efficiency and effectiveness.

Therefore, an additional layer is needed, that is, **mechanisms for coordination of activities** – both across multiple administrative sources as well as between new administrative sources and more traditional ones.

Furthermore, **practices to ensure confidentiality and security** must also be present. While such practices have been at the heart of the established practices for more traditional data, more stringent confidentiality measures may be required to be adopted when integrating newer administrative data in order to prevent the risk of disclosure when linking data from multiple sources.

Ultimately, all the above culminate in the need for **practices to ensure quality** of the data – whether with reference to statistical outputs based entirely on the new administrative data or those that may be combinations of traditional and new data.

3.3.3. Cooperation with Data Owners and Wider Institutional environment

Since the legal frameworks cannot contain every detail that will be invariably needed to be ironed out, the more intangible cultural aspects and cooperation with administrative data owners become key aspects.

The **wider institutional environment** subsumes the **culture of staff and public trust**, which include: the attitudes of NSI staff towards the emerging possibilities and the acceptance of the new data sources as opportunities rather than threats to the more traditional survey approaches; the cultivation of an element of trust between NSI staff, data owners, the users of the data, and the general public.

Collaborative arrangements must be struck in order to ensure the acquisition of data from the administrative owners. Considering that one of the main drivers of the push for administrative data is the necessity to curtail costs from spiralling upwards through expensive surveys as a means to respond to increasing data demands, **cost-free access** must be part of the ideal benchmark.

Next, this bloc includes **cooperation with data owners on issues regarding the design or changes in the design of administrative data collections**. Administrative sources owe their existence to policies, regulations, etc. which are subject to changes / evolution. The ideal must include not only excellent cooperation for acquiring the data as they currently exist but must factor in the need for the NSI to be involved in the design of administrative data collections, as changes are being made or contemplated. This bloc identifies **timeliness in data deliveries** as an additional item to be embedded in the ideal benchmark. If administrative data owners send their data with delays relative to the agreed timetable, the statistical outputs that will be supported by those data would face a higher risk of not being prepared on time. In the very least, delays in data deliveries must not come as a surprise but must be known and managed.

The ideal benchmark also includes **coordination mechanisms**. When all is said and done, a good system must include provisions for what happens if everything does not go right. What is the redress? How will adversities be dealt with, by whom, and when? That is, a well-articulated governance structure must be put in place, complete with a dispute resolution mechanism, change management etc.

3.3.4. Quality and Technical Aspects

At the end of the road, the push for administrative data in its entirety is really a quest for more and better data. Quality aspects are thus crucial. Additionally, practical technical aspects must be dealt with.

Efforts to address quality issues must certainly address the **availability of methodological information / metadata** crucial for the NSI. Such information will also determine the proper uses and suitability of the new data sources for statistical purposes.

Moreover, for the same aforementioned reasons, **data quality checks and cooperation with data owners for data quality assurance** will be necessary. Standing behind the quality of such data is primarily the responsibility of the data owners. But in order to achieve this, cooperation of data owners with the NSI for data quality assurance is necessary.

The potential uses of new administrative data sets can be many within the statistical system. Linkages constitute such a powerful tool that helps derive new data beyond each one of the sources linked. Thus, the **existence of unique and consistent identifies across data sources** as well as the

availability of **sufficient information for linking administrative data from different sources** constitutes part of the ideal benchmark.

Lastly, as we still operate under a variety of technical IT infrastructures, critical technical aspects must be spelled out and not be assumed implicitly or taken for granted. The **technical compatibility for the exchange of data**, including standards and related issues (capacity, storage etc.) facilitate the data exchange process. Similar argumentation holds true, of course, for the **technical compatibility for the exchange of metadata**.

3.4. Checklist – Conceptual Framework

Following the discussion in the previous section, a structured checklist may be constructed. This may be used to:

- a) Present the current situation in different countries, either overall or for specific data sources, in a structured and comparable way, identify gaps, problems to be faced and areas of improvement;
- b) Provide a benchmark of an ideal situation;
- c) Provide a conceptual framework for analysis.

The checklist is presented in the following. It has been used as a backbone for the information collection and the presentation of the current situation in different countries presented in Section 4.

Legal Framework

Scope and extent of mandate to access administrative data

- The NSI has the right to access data from any administrative data source and for any statistical purpose, without a priori restrictions to specified sources and purposes only;
- The NSI does not have to request permission from a data protection authority on every instance of obtaining data;
- Data owners are legally obliged to consult the NSI when setting up, changing or discontinuing a data source;
- Legal provisions safeguarding the NSI's right to make recommendations that are binding when data owners set up, change or discontinue an administrative source;
- Legal provisions safeguarding the NSI's right to access administrative data on a cost-free basis.

Clarity and coverage of legislation

- No room for conflicts between the national statistical law and the specific legislation applicable to different administrative data owners;
- No need to pass specific additional legal acts so that the NSI obtains access to specific administrative data sources;
- No room for misinterpretations.

Restrictions and limitations

- No specific limitations or restrictions to the right to access, such as for the reuse the data for statistical purposes other than initially stated, the maximum duration of retention of data or linking microdata with microdata from other sources.

Institutional and Organisational Aspects

Quality Management Systems / Policies and Procedures

- Policies are in place for promoting the use of administrative data in the NSI;
- Procedures are implemented at the strategic and operational levels to monitor developments and progress;
- Documented procedures are followed to identify administrative sources and assess their suitability for statistical purposes;
- Documented practices, specifically adapted to the use of administrative data sources for statistical production, are followed to ensure quality at all stages of the statistical production life-cycle;
- Documented and monitored practices are followed to protect confidentiality and data security.

Management Aspects

- Effective coordination of activities, either centralised or horizontal, facilitates synergies and usability of third-party data for multiple purposes;
- The organisation ensures the adequacy of methodological, technical and other competences needed for an effective and efficient utilisation of administrative data sources;
- The organisation ensures the adequacy of resources required for the utilisation of administrative data sources.

Cooperation with Data Owners and Wider Institutional Environment

Wider environment

- The overall culture of the staff in the public sector is favourable to data sharing and interoperability;
- Concerns in the general public trusts concerning personal data privacy and confidentiality are not obstacles for data sharing among organisations.

Collaborative arrangements

- Bilateral written agreements such as Memoranda of Understanding are used to establish cooperation, unambiguously define mutual obligations and make provisions for the resolution of conflicts or problems.

Coordination mechanisms

- Effective coordination mechanisms (such as single points of contact, liaison roles, etc.) are established and used;
- Cooperation exists on the design of source data structures, data collection mechanisms etc. to ensure suitability for statistical purposes, semantic compatibility, coverage of NSI needs etc.;
- Recommendations of the NSI are taken into account;
- Changes in data structures, methods and procedures are communicated in advance to the NSI;
- Communication to the data owners of the procedures in place to ensure confidentiality and security of the data;
- Authority to demand suitable modifications from data owners when quality-related problems are encountered.

Elimination of unnecessary restrictions and limitations

- Data owners do not arbitrarily refuse to provide data;

- Timeliness: new data are made available according to an agreed schedule and delays in data deliveries are avoided;
- Cost: data are provided free of charge for the NSI or requests for payment are limited only to additional costs incurred by the data owner;
- No obstacles or delays due to excessive formality or bureaucracy.

Quality and Technical Aspects

Data Quality

- Relevant methodological metadata are maintained and made available to the NSI;
- Sufficient quality checks are applied by the data owner and relevant quality information is communicated to the NSI.

Data Linkages

- Existence of unique and consistent identifiers to enable linkages of data from different data sources;
- Access to other methodological information necessary to enable linking of data from different sources (e.g. definitions of concepts and variables, mappings between classifications etc.).

Data and Metadata exchange standards, mechanisms and technologies

- Proper, agreed or standard formats, syntax and structures are used for the exchange of data;
- Proper, agreed or standard formats, syntax and structures for the exchange of metadata;
- Mechanisms, platforms and tools are in place for the automated data exchange of data;
- Mechanisms, platforms and tools are in place for the automated data exchange of metadata.

4. Presentation of the Current Situation

The presentation in this section is based on the NSIs' replies to the strategy level questionnaire. The presentation relies heavily on the NSIs' replies to the questionnaire that largely reflect their perceptions on the current situation in their country. Cross country comparisons should be treated with care due to the fact that the persons that filled in the questionnaire have different positions in the organisation, and therefore may have different views and perceptions on the issues concerning access to administrative data.

For countries for which replies to the questionnaire have not been provided by the NSIs, the information presented has been identified in the legislation, self-assessment peer review reports and other relevant literature.

4.1. Legal Framework

First, the national legal frameworks are examined across the thematic elements introduced in the assessment checklist (see Section 3.4). In the process of delineating the ideal situation, the best situation defined is a strong and all-encompassing legal framework authorising the NSI to access administrative sources without imposing any restrictions with reference to the provisions laid down in the Regulation (EC) 223/2009.

On this basis, even if at the cost of a rough simplification, a synthetic presentation of the information collected by the NSIs on the extent of their mandate to access administrative data and on limitations imposed by the national legal frameworks is presented in Table 4.1 and Table 4.2.

At first, the established national statistical laws that afford NSIs' access to administrative data, set in principle, the stage for the use of administrative data for statistical purposes. In the majority of countries, NSIs have the authority to access any administrative source and use the data for any statistical purpose.

Notwithstanding, there are factors that hinder the full exploitation of administrative data. For instance, in three countries, the legal basis permits the NSI to access administrative data only from specific sources while in three others, the legal basis establishes the right of the NSI to use administrative data only for specific statistical purposes. In three countries, the NSI's power to access each administrative data source is established through separate legal acts that make provisions on a case by case basis.

In most countries, the NSIs have the legal right to obtain administrative microdata from all or most sources. In the majority of countries where access to microdata is granted, these data do not have to be anonymised first before being transmitted to the NSI. Permission from a data protection authority should be requested on every instance of obtaining administrative microdata from all or most sources in few countries.

Data protection restrictions stipulated in legal acts governing the data sources are usually the main factor leading to conflicts with NSI's legal right to access the data source. That most frequently leads to the requirement of passing additional legal acts for accessing specific data sources. Such restrictions are most frequently imposed to some data sources usually containing sensitive, health or tax data.

One of the most prevalent limitations is the lack of provisions in the national statistical laws obliging the data owners to consult and inform the NSI when setting up or modifying an administrative data source. Even in cases where such a provision is in place, the NSI may lack the authority to influence administrative databases and by extension the procedures involved for collecting the data, defining the variables, the reference period of data collection, etc.

Table 4.1. National legal framework - Scope and extent of mandate to access administrative data

● = For all or most sources; ○ = For some sources; × = For none of the sources, : = Missing information

	NSI has the right to access administrative microdata	NSI is obliged to request authorisation from a third party on every instance of obtaining data	Data owners are obliged to consult the NSI when setting-up, discontinuing the data source	The NSI has the authority to influence the databases	NSI has the right to access data on a cost-free basis
BE	●	○	●	●	●
BG	●	×	●	●	●
CZ	●	×	×	×	●
DK	●	●	●	×	●
DE ⁽¹⁾	○	:	×	×	●
EE	●	×	●	●	●
IE	●	×	●	●	●
EL	●	×	●	×	●
ES	●	×	×	×	●
FR	●	○	×	×	●
HR	●	○	○	○	●
IT	●	●	○	○	●
CY	●	○	●	●	●
LV	●	×	●	●	●
LT	●	×	×	×	●
LU	●	○	×	×	●
HU	●	×	×	×	●
MT	●	○	●	●	●
NL	●	×	×	×	●
AT	●	×	●	×	●
PL	●	×	●	●	●
PT ⁽²⁾	○	○	×	×	●
RO	●	×	●	●	●
SI	●	×	●	×	●
SK	●	×	●	●	●
FI	●	×	●	●	●
SE ⁽³⁾	●	×	×	×	×
UK	○	×	×	×	○
IS	●	×	●	×	●
NO	●	×	●	×	●

	NSI has the right to access administrative microdata	NSI is obliged to request authorisation from a third party on every instance of obtaining data	Data owners are obliged to consult the NSI when setting-up, discontinuing the data source	The NSI has the authority to influence the databases	NSI has the right to access data on a cost-free basis
CH	●	×	●	●	●
LI ⁽¹⁾	●	×	●	×	●

Source: NSIs' replies to strategy level questionnaire.

⁽¹⁾ Information identified in legislation, self-assessment peer review report and other relevant literature.

⁽²⁾ The NSI may issue recommendations regarding the design and the set-up of an administrative data source. However, the recommendations of the NSI are not binding.

⁽³⁾ The NSI does not have right to access administrative data on a cost-free basis, unless these are used for the production of European statistics. However, in practice, the NSI usually obtains the data for free.

Other less restrictive limitations such that of the maximum duration of retention of data⁸, linking microdata with microdata from other sources, and reuse of data for other statistical purposes than initially stated are, at least for most sources, less prevalent across countries.

Cost-free access to administrative sources is a precondition for an effective exploitation of the data, which is guaranteed by the national legal frameworks in the vast majority of countries.

Overall, in view of the NSIs, the legal framework governing access to administrative data sources does not leave room for misinterpretations in all but six countries.

Table 4.2. National legal framework - Clarity and coverage of legislation; restrictions and limitations

● = For all or most sources; ○ = For some sources; × = For none of the sources; : = Missing information

	Legislation applicable to data owners contradicts NSI's right to access the data	Additional legal acts are needed for accessing specific data sources	Reuse of data for other statistical purposes is restricted	Legal restrictions on maximum duration of retention of data	Legal restrictions on linking microdata with microdata from other sources
BE	×	×	○	○	○
BG	×	×	○	×	×
CZ	○	○	○	○	×
DK	×	○	×	×	×
DE ⁽¹⁾	×	●	○	○	○
EE	×	×	×	×	×
IE	×	×	×	×	×
EL	○	○	×	×	×
ES	×	×	●	●	×
FR	×	○	×	×	×
HR	×	×	×	×	×
IT	×	○	●	●	×
CY	○	×	×	×	×
LV	○	○	×	×	×
LT	×	×	×	○	×
LU	○	×	×	×	×

⁸ A distinction based on the length of the duration of retention of the data has not been made in the questionnaire. In some countries the duration of retention of the data may be long (e.g. 50 years) while in others, data must be deleted after their use for statistical purposes.

	Legislation applicable to data owners contradicts NSI's right to access the data	Additional legal acts are needed for accessing specific data sources	Reuse of data for other statistical purposes is restricted	Legal restrictions on maximum duration of retention of data	Legal restrictions on linking microdata with microdata from other sources
HU	○	○	×	○	×
MT	○	○	×	○	×
NL	○	○	●	●	×
AT	×	●	×	×	×
PL	×	○	×	×	×
PT	○	○	×	×	○
RO	○	○	×	×	×
SI	×	○	×	●	×
SK	○	×	×	×	×
FI	×	×	×	×	×
SE	×	×	×	×	×
UK	×	●	×	×	×
IS	×	○	○	●	×
NO	○	×	×	×	×
CH	×	○	○	○	○
LI ⁽¹⁾	●	●	●	●	:

Source: NSIs' replies to strategy level questionnaire.

⁽¹⁾ Information identified in legislation, self-assessment peer review report and other relevant literature.

4.2. Institutional and Organisational Aspects

The NSIs face organisational challenges in terms of planning, managing and coordinating activities for the exploitation of administrative data sources, adopting procedures for identifying new data sources with potential statistical use and monitoring developments in the field.

Most countries have established policies for promoting the use of administrative data for statistical purposes. Such policies usually prescribe that data from respondents should be collected only if administrative data are not available. In some countries coordination networks (e.g. Statistics Councils, Statistical Advisory Committees, etc.) have been established with the view to promote NSI's strategy, which among others include the use of administrative data for the production of official statistics.

However, a significant number of NSIs do not follow (or do so only partly) documented, established procedures to identify and assess potential data sources, ensure their quality and monitor developments in the legal framework governing the sharing of administrative data between authorities.

Almost all NSIs follow well-defined standard and systematic practices to protect confidentiality and data security (this also being a legal requirement in most cases).

On the operational level, most NSIs have organised management structures for the coordination of activities related to data access. In most cases, the responsibility for establishing contacts and communication with the administrative data owners is assigned to a key actor within the NSI (e.g. coordination or administrative unit). However, in some cases, field experts or statisticians get in direct contact with the administrative data owners.

Additionally, in many countries, the NSI's personnel has the required competences and skills to effectively exploit administrative data for statistical purposes, while in a significant number of them the available resources are partly sufficient (mostly due to financial constraints).

Table 4.3. Internal institutional and organisational aspects

● = Yes; ○ = Partly; × = No; : = Missing information

	Policy for promoting the use of administrative data	Procedures to monitor developments in the legal framework	Procedures to identify new administrative sources	Standardised criteria to ensure quality	Practices to ensure confidentiality and security	Centralised coordination of activities	Adequacy of competences	Adequacy of resources
BE	●	●	●	●	●	●	●	●
BG	●	●	●	●	●	●	●	●
CZ	○	○	○	○	●	○	●	○
DK	●	●	●	●	●	●	●	●
DE	:	:	:	:	:	:	:	:
EE	●	●	○	○	●	●	●	×
IE	●	○	○	×	●	●	○	○
EL	×	×	×	○	●	×	○	○
ES	●	○	○	×	●	●	●	●
FR	●	○	×	×	○	●	●	●
HR ⁽¹⁾	○	×	○	●	●	×	○	○
IT	●	○	○	○	●	●	●	○
CY	●	×	○	×	×	●	●	×
LV	●	○	○	○	●	●	○	○
LT	●	○	○	×	●	●	●	×
LU	●	×	○	×	●	×	●	●
HU	●	○	○	×	●	×	○	○
MT	×	×	×	○	●	○	○	○
NL	●	●	●	●	●	●	●	●
AT	●	●	●	○	●	○	●	●
PL	●	●	●	○	●	●	●	●
PT	●	○	●	○	●	×	●	○
RO	●	×	○	○	●	●	●	○
SI	●	●	●	○	●	○	●	●
SK	●	●	●	●	●	●	○	○
FI	●	●	●	●	●	○	●	●
SE	●	●	○	●	●	○	●	●
UK	●	○	○	○	●	●	●	○
IS	○	○	○	×	○	●	●	○
NO	●	●	●	●	●	●	●	○

	Policy for promoting the use of administrative data	Procedures to monitor developments in the legal framework	Procedures to identify new administrative sources	Standardised criteria to ensure quality	Practices to ensure confidentiality and security	Centralised coordination of activities	Adequacy of competences	Adequacy of resources
CH	○	●	●	○	●	●	●	●
LI ⁽²⁾	:	×	×	●	●	:	:	×

Source: NSIs' replies to strategy level questionnaire.

⁽¹⁾ There are coordination units for business and national accounts statistics but due to the lack of a population register and a register of buildings and dwellings, it is not yet feasible to establish a central coordination unit that will also cover social statistics.

⁽²⁾ Information identified in self-assessment peer review report and other relevant literature.

4.3. Cooperation with Data Owners and Wider Institutional Environment

In view of 18 NSIs, the overall culture of the staff in the country's public sector is favourable to data sharing and interoperability. In the rest but one countries, the NSIs consider that the staff in the public sector is neutral to data sharing. Concerns in the general public regarding personal data privacy and confidentiality are considered to be obstacles for the sharing of data among organisations in ten countries. The opposite is true in 12 countries.

A national strategy on data sharing in the public sector exists in 21 countries. Often the rationale underlying these strategies is wider than the mere reduction of statistical response burden by using administrative data, and aims to prevent citizens from providing information already available by authorities. According to the NSIs, these strategies on data sharing are effectively implemented just in eight countries.

Access to administrative data sources under the provisions of formal bilateral agreements, is established in most cases for all sources (Table 4.4).

Effective coordination mechanisms with the data providers are in place in almost all cases for all or most sources. However, there is still room for improvement towards the establishment of cooperation with all data owners on the design of administrative data collections, as well as in terms of changes planned to be implemented in the data source that may have impact on the statistical production.

In practice, most NSIs are consulted by the data owners on issues concerning the design of administrative databases only in a few cases and data owners rarely take into account the recommendations of the NSI in terms of changes planned to be implemented in the data source. In some countries, even if provisions in the national statistical law obliging the data owners to cooperate with the NSI on such issues are in place, these are not always respected.

Similarly, in the vast majority of countries, data owners inform the NSI sufficiently in advance of the changes in the structure or design of their databases only in a few cases.

Table 4.4. Cooperation with data owners - collaborative arrangements and coordination mechanisms

● = For all or most sources; ○ = For some sources; × = For none of the sources; := Missing information

	Written agreements are signed with the data owners	Effective coordination mechanisms exist	NSI is consulted by data owners on the design of administrative data	NSI's recommendations are taken into account by the data owners	NSI is informed in advance of changes	Confidentiality procedures are communicated to data owners	NSI has the right to demand modifications
BE	●	●	○	○	○	●	×
BG	●	●	○	○	○	○	○

	Written agreements are signed with the data owners	Effective coordination mechanisms exist	NSI is consulted by data owners on the design of administrative data	NSI's recommendations are taken into account by the data owners	NSI is informed in advance of changes	Confidentiality procedures are communicated to data owners	NSI has the right to demand modifications
CZ	●	●	○	○	○	●	×
DK	●	●	●	●	●	●	×
DE	:	:	:	:	:	:	:
EE	●	●	○	○	○	●	×
IE	●	●	×	○	×	●	×
EL	●	○	○	○	○	●	●
ES	○	●	○	○	○	○	×
FR	●	●	○	○	○	×	×
HR	●	●	●	●	●	●	○
IT	●	●	○	○	○	●	×
CY	○	●	○	○	×	×	●
LV	●	●	●	●	○	●	●
LT	●	●	●	○	○	●	×
LU	○	●	○	○	○	●	●
HU	●	●	○	○	○	○	×
MT	○	●	○	○	×	●	●
NL	○	●	○	○	●	●	×
AT	×	●	○	○	○	●	×
PL	○	●	●	○	●	●	●
PT	●	●	○	○	○	●	×
RO	●	●	○	●	○	○	○
SI	●	●	●	●	●	●	●
SK	●	●	●	○	●	●	●
FI	●	●	○	●	●	●	×
SE	○	○	○	×	○	●	×
UK	●	●	○	×	○	●	×
IS	●	○	○	●	○	×	×
NO ⁽¹⁾	●	●	●	●	●	●	●
CH	●	●	○	○	●	●	●
LI ⁽²⁾	○	●	:	:	:	●	:

Source: NSIs' replies to strategy level questionnaire.

⁽¹⁾ The NSI does not have the legal right to demand modifications from the data owners. However, in practice, the NSI asks for modifications from data owners on an informal basis and under the framework of good cooperation that has been established.

⁽²⁾ Information identified in self-assessment peer review report and other relevant literature.

With the exception of few countries, NSIs communicate to the administrative data owners the procedures in place to ensure the confidentiality and security of administrative data from all or most data sources. Moreover, more than two-third of countries communicate to the data owners issues related to the inconsistencies identified in their data. During that communication, the NSIs undertake all necessary measures to protect individual confidentiality. However, in more than half countries, the

NSIs do not have the authority to demand suitable modifications from the data owners when quality-related problems are encountered.

Excessive bureaucracy and formality, as well as delays in data deliveries are the most common obstacles, while in several cases NSIs have to face the refusal of some data owners to provide data. The latter issue is most frequently met with data sources containing sensitive data or with sources which are protected by strict confidentiality rules. In few cases, the NSIs state that data owners refuse to provide their data since they misinterpret the national law governing access to administrative data.

Usually data owners do not request from the NSIs payments not foreseen in the law for providing their data. In few cases, data owners request the NSI to pay charges in order to process, extract or prepare the data in accordance with the NSI's specifications.

Table 4.5. Cooperation with data owners - restrictions and limitations

● = Always or sometimes; ○ = Rarely; × = Never; : = Missing information

	NSI faces difficulties in cooperating with data owners	Refusal of data owners to provide their data	Data owners send their data with delays	Data owners request payments not foreseen in the law	Excessive formality or bureaucracy constitutes an obstacle for cooperation
BE	●	○	●	×	●
BG	●	●	○	×	●
CZ	●	●	○	●	●
DK	●	×	○	×	○
DE ⁽¹⁾	●	:	:	:	:
EE	●	○	●	○	○
IE	●	×	●	×	○
EL	●	●	●	×	●
ES	○	○	○	×	○
FR	○	○	●	×	○
HR	○	○	●	●	●
IT	●	●	●	×	○
CY	●	○	●	×	●
LV	●	●	○	○	●
LT	●	○	○	●	●
LU	○	○	○	×	○
HU	●	○	●	×	○
MT	●	●	●	○	●
NL	○	○	●	○	○
AT	●	×	○	×	○
PL	●	○	●	×	●
PT	●	●	●	×	●
RO	●	●	●	×	○
SI	●	○	○	×	×
SK	●	○	○	×	●
FI	○	×	○	×	×

	NSI faces difficulties in cooperating with data owners	Refusal of data owners to provide their data	Data owners send their data with delays	Data owners request payments not foreseen in the law	Excessive formality or bureaucracy constitutes an obstacle for cooperation
SE	○	○	○	×	○
UK	●	○	●	○	●
IS	●	●	●	×	●
NO	○	×	○	×	○
CH	●	●	●	×	●
LI	:	:	:	:	:

Source: NSIs' replies to strategy level questionnaire.

(¹) Information identified in self-assessment peer review report and other relevant literature.

4.4. Quality and technical aspects

The overall image concerning quality aspects (i.e. availability of relevant metadata and application of sufficient data quality checks by data owners) is rather satisfactory for most NSIs. In the vast majority of countries, the NSIs have access to sufficient methodological information for all or most sources. In slightly less than half of them, data owners apply quality checks that are useful to the NSI. A few countries stated that information on the data quality checks applied by the administrative data owners is not available or the checks applied by the data owners only fit for their own purposes.

Regarding linkage information (i.e. existence of unique identifiers, availability of sufficient information for linking different data sources, etc.) the situation is also satisfactory but it must be noted that linkages of data from different sources may be restricted for legal reasons.

Concerning the actual exchange of data and metadata, no problems are usually confronted for most sources, but in several cases, there is a lack of platforms and systems for a fully automated exchange of data and metadata. Some countries have developed centralised IT system for receiving administrative data. In limited cases, issues with regard to the existence of outdated technologies or of heterogeneous IT systems in the public sector have been raised.

Table 4.6. Quality and technical aspects

● = For all or most cases; ○ = For a few cases; × = For none of the cases; : = Missing information

	Access to sufficient metadata	Sufficient quality checks applied by the data owners	Unique and consistent identifiers used	Information for linking different sources	Proper format for exchange of data	Proper format for exchange of metadata	Mechanisms for automated data exchange of data	Mechanisms for automated data exchange of metadata
BE	●	●	●	●	●	●	●	○
BG	●	○	●	●	●	○	○	○
CZ	●	○	●	●	●	●	○	○
DK	●	●	●	●	●	●	●	●
DE	:	:	:	:	:	:	:	:
EE	○	○	●	●	●	●	○	○
IE	○	×	×	●	●	●	×	×
EL	○	○	○	○	●	●	○	×
ES	●	●	●	●	●	●	○	○
FR	●	●	●	●	●	●	○	○

	Access to sufficient metadata	Sufficient quality checks applied by the data owners	Unique and consistent identifiers used	Information for linking different sources	Proper format for exchange of data	Proper format for exchange of metadata	Mechanisms for automated data exchange of data	Mechanisms for automated data exchange of metadata
HR	●	●	●	●	●	●	●	●
IT	●	○	●	●	●	●	●	●
CY	○	●	●	○	●	○	○	×
LV	●	●	●	●	●	●	●	●
LT	●	○	●	●	●	●	●	●
LU	●	●	●	●	●	●	○	○
HU	○	○	●	○	●	●	○	×
MT	×	○	○	○	○	×	○	×
NL	●	●	●	●	●	●	●	●
AT	●	●	●	●	●	●	●	●
PL	●	●	●	●	●	●	○	○
PT	●	○	○	○	●	●	●	●
RO	○	○	●	●	●	○	○	○
SI	●	●	●	●	●	●	○	×
SK	●	○	●	●	●	●	●	●
FI	●	●	●	●	●	●	●	○
SE	○	○	●	●	●	●	●	○
UK	●	●	○	●	●	●	○	○
IS	○	○	●	●	●	○	●	○
NO	●	●	●	●	●	●	●	●
CH	●	○	●	●	●	●	●	○
LI	:	:	:	:	:	:	:	:

Source: NSIs' replies to strategy level questionnaire.

4.5. Data Sources Overview

In Table 4.7, an overview is presented of representative exemplary and problematic data access cases, as reported by countries in the operational level questionnaire. The table reflects the experience of NSIs in practically attempting to exploit administrative data sources. The NSIs were requested to select “exemplary” and “problematic” cases that are representative of the general situation in each country concerning access to administrative data and to provide complementary examples of obstacles and success factors in order to give as a complete picture as possible (i.e. excluding peculiarities specific to a data source).

As depicted in Table 4.7, overall 59 data sources considered as exemplary success cases of 24 NSIs' access to and use of administrative data were reported, while 30 data sources for which access is not yet feasible or is achieved in a considerable problematic way have been identified by 15 NSIs.

Table 4.7. Data Sources Overview

● = Exemplary; ○ = Problematic

Tax and VAT	Social Security	Population	Business registers	Property	Energy	Education	Health	Environment	Agriculture	Private data	Other
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	Tax and VAT	Social Security	Populat ion	Business registers	Property	Energy	Educa tion	Health	Environ ment	Agricu lture	Privat e data	Oth er
BE	●											
BG	○	●	●		○	●			○			
CZ	○	○	○		●							
EE			●	●	●					○		
IE	●										○	
EL	●○						○		○			○
ES	●	●										
HR	●	●							●	●		
IT	●	●		●		○				○		○
CY	○	●		●	●							
LV	●	●	●				○				○	
LT	●	●	●									
LU	●○	●				●						
MT	○											○
NL	●	●									○	
AT	●	●	●									
PL		●	○	○			●		●			○
PT			●○	●				○				○
RO			○	●				○				
SI			●							●		●
SK		●	●					●				
FI	●		●									●
SE	●		●		●							
CH	○●	●										●

Source: NSIs' replies to the operational level questionnaire.

Note: Not available information for Denmark, Germany, France, the United Kingdom and Lichtenstein. Hungary, Iceland and Norway did not report any "exemplary" or "problematic" cases.

It must be noted that the different specific data sources have been grouped under more generic headings, according to the administrative domain (e.g. taxation, population, social security, etc.), which can however conceal differences among sources under the same heading (such as VAT, personal tax records, enterprise tax records etc.). This is unavoidable due to the differences in administrative and organisational structures among countries which result in differences concerning data owners, organisation of registers etc. On the other hand, there is a considerable homogeneity concerning the reported target usages (i.e. target statistical domain) among sources under the same heading.

In the following, an analysis of the favorable factors and obstacles for data sources reported by the NSIs is provided.

4.5.1. Ranking of Success Factors contributing to Successful Cases of Access and Use of Administrative Data

An overview of the factors that contributed to successful access to the identified exemplary data sources, in order of their relative ranking (i.e. decreasing order of frequency for reported data

sources) are presented in Table 4.8. The analysis stems from NSIs' reports on the three most important favourable factors resulting in quality data access.

Table 4.8. Ranking of factors contributing to successful access and use of the reported administrative data sources

Success factor	Number of data sources
Close cooperation with data owner	43
Legal framework	27
Data quality	20
Data exchange technology	17
Existence of uniform / unique identifiers	10
Collaboration agreement	10
Availability of linkage information	5
Timeliness in data release	5
Right granted by the data protection authority	4
Experience of the NSI with the data	3
Political support	2
Data owner's understanding of NSI's needs	2
Availability of metadata	2
Adoption of common technical solutions	2
Data not subject to changes over time	1
Data protection technology	1
Payment agreement	1
Commitment of resources by the NSI	1
Recognition by the data owners of the importance of the data for the NSI	1

Note: Multiple answers were allowed.

As shown in Table 4.8, the most important success factors reported by the NSIs are the close and high level of cooperation with data owners (e.g. participation of the NSI in working groups, provision of methodological assistance to the data owners, establishment of permanent contact points, readiness of the data owner to share its data), the favourable and the well-grounded provisions in the legal framework governing NSI's access to administrative data as well as the good quality of the data (e.g. definitions, scope and coverage, concepts of variables and classifications used in the data source in line with that required for statistical purposes). Other critical success factors frequently mentioned include the existence of data exchange technologies for sharing the data (e.g. automated data exchange mechanisms, common software to both the NSI and the data owner, real-time updates of statistical registers via an information system interface), the signature of collaboration agreements which are respected by the data owners and the existence of uniform and unique identifiers across data sources.

Obstacles inhibiting access to specific data sources were overcome through different means; including authorisation granted to the NSI by a data protection authority, mobilisation of political support, commitment of resources from the part of NSI or signature of a payment agreement.

4.5.2. Ranking of Obstacles restricting the Effective Access and Usage of Problematic Data Sources

Issues constituting obstacles for the effective usage of the identified problematic data sources have been captured by the NSIs in terms of the perspectives of the of the four dimensions of access to

administrative data, namely the legal framework, the institutional environment and cooperation with data owners to the data quality and technical preconditions. The tables that follow list those issues, in order of their relative ranking (i.e. decreasing order of frequency for reported data sources). Specifically, Table 4.9 lists the number of sources for which at least one issue restricting NSI's access to the reported problematic data sources was identified across the four dimensions of access to administrative data. The table aims to point out whether those restrictive factors have been attributed solely to one of the four above mentioned dimensions or to a combination of them.

Table 4.9. Summary table on the issues constituting an obstacle for the effective usage of reported problematic administrative data sources across the four dimensions of access to administrative data

	Number of sources			
	Legal and institutional issues	Cooperation with data owners	Quality issues	Technical issues
Issues only in the dimension of reference	1	5	0	1
Issues in the dimension of reference and in at least one of the other three dimensions	19	19	21	18
No issues in the dimension of reference but in one out of the other three dimensions	5	2	6	5
No issues in the dimension of reference but in two out of the other three dimensions	2	1	2	3
No issues in the dimension of reference but in all other three dimensions	2	3	0	2

For about 30% of the reported problematic cases (see Table 4.9), it was not the legal framework which created obstacles for the effective usage of the data source but mainly the cooperation with data owners and / or the quality of the data in the data source.

In the remaining cases, restrictions imposed by the legal framework, including the usage of the data for specific statistical purposes only, contradictions between the law granting the right to access and laws governing the data sources, room for misinterpretations or even the requirement for specific ad hoc legal acts are some of the main inhibiting factors (Table 4.10).

Table 4.10. Legal and institutional issues constituting an obstacle for the effective usage of reported problematic administrative data sources

Legal and institutional issues	Number of sources
The legal framework grants access to the data source only for specific statistical purposes	10
Conflicts with legislation applicable to the data source	9
Legal framework leaves room for misinterpretations	7
Permission to access the data source needs to be granted from an authority other than the data owner	6
Specific legal acts are needed for accessing the data source	5
The NSI does not have the right to access the data source for free	2
Linking of microdata from different sources is not permitted	2
The NSI has the right to access the data at aggregated level only	1
Other	2

Note: Multiple answers were allowed.

With reference to cooperation with administrative data owners, the NSIs indicated that bureaucratic burdensome procedures between organisations constitute an important obstacle for cooperation (Table 4.11). For about two third of the cases, the refusal of the data owners to provide their data, mostly due to restrictions imposed by the legal framework (e.g. data protection restrictions, contradictions, etc.), puts a halt to NSIs' attempts to access the data source.

Complementarily to that, another adverse factor is the lack of an adequate cooperation level between the NSI and the data owners. Among other difficulties identified is the lack of financial resources and IT tools to extract and process the data from the part of the data owners.

Table 4.11. Issues regarding the cooperation with data owners constituting an obstacle for the effective usage of reported problematic administrative data sources

Cooperation with data owners	Number of sources
Excessive formality and bureaucracy between organisations	12
Data owners refuse to provide access to their data	10
Lack of effective cooperation mechanisms	9
Other	4
Written agreements do not cover each case of data provision	3
Written agreements are not always respected	3
Data owners request payments not foreseen in the law	2
Data owners request payments for the development of tools to process their data	2

Note: Multiple answers were allowed.

Data quality issues do not constitute a problem for slightly more than 20% of the identified problematic data access cases (see Table 4.9). For the vast majority of them, it is the legal framework and / or cooperation issues that inhibit NSIs' access to the data source.

In what concerns the remaining unsuccessful ones, some of the most commonly reported adverse factors were the lack of sufficient metadata on the data collection process operated by the data owners, the different coverage of the data in the data source than the one required for statistical purposes as well as the significant number of missing records and data items (Table 4.12).

Table 4.12. Quality issues constituting an obstacle for the effective usage of reported problematic administrative data sources

Quality issues	Number of sources
Lack of sufficient metadata on the data collection process	8
Coverage is different from that required for statistical purposes	7
Significant number of records is missing in the data source	7
Significant number of data items is missing in the data source	6
Definitions of variables and classifications are different from those required for statistical purposes	5
Definition of the statistical unit is different from that required for statistical purposes	6
Other	5
Lack of unique and consistent identifiers	4
Lack of information for linking different data sources	4
Reference period is different from that required for statistical purposes	3
Data become available too late for the needs of the NSI	2

Note: Multiple answers were allowed.

The availability of data exchange technology was reported as a favorable condition in several successful cases, while a lack thereof was identified as an obstacle in 11 out of the 29 problematic cases (Table 4.13). In some cases, technical problems in place completely restrict NSIs' access to the data source. Similarly, the NSIs have expressed concerns with regard to the lack of exchange mechanisms for transferring metadata. Difficulties related to format used for the exchange of data and metadata have been also relatively frequently identified as an adverse factor. Other obstacles

confronted by the NSIs are the unavailability of the data in an electronic format or the usage of outdated technologies by the data owners.

However it should be noted that for about 35% of the reported problematic cases (see Table 4.9), it was not the technical infrastructure that restricted NSI's access to or usage of the data source but mainly the cooperation with data owners and / or legal issues.

Table 4.13. Technical issues constituting an obstacle for the effective usage of reported problematic administrative data sources

Technical issues	Number of sources
Automated metadata exchange mechanisms for transferring data are not in place	11
Automated data exchange mechanisms for transferring metadata are not in place	10
Difficulties related to the format used for exchange of metadata	7
Difficulties related to the format used for exchange of data	6
Other	6

Note: Multiple answers were allowed.

4.6. Overview of Obstacles and Areas for Improvement

Overall, following the findings emerging from the presentation in the previous chapters, a more unified view can be obtained by ranking the most prevalent obstacles or favourable factors, according to their relative frequency of being reported.

The most common obstacles identified are:

1. Difficulties in cooperating with the data owners
2. Data owners send their data with delays relative to the agreed timetable
3. Excessive formality or bureaucracy between organisations
4. Concerns of the public regarding personal data privacy and confidentiality
5. Data owners refuse to provide access to their data
6. Other difficulties with data providers
7. Legal restrictions on the maximum duration of retention of the data
8. Difficulties related to the format used for the exchange of the metadata
9. The legal framework leaves room for misinterpretations
10. Legal restrictions on the reuse of data

A different group of problems stems from the fact that a series of best or good practices facilitating efficient access to administrative data is not followed or actually implemented. The most common such gaps or areas for improvement identified are:

1. The NSI does not have the authority to demand modifications from the data owner when quality-related problems are encountered
2. Automated data exchange mechanisms are not used for transferring metadata
3. The NSI is not consulted by data owners on issues such as specifications or design of relevant databases, adoption of common definitions and classifications, etc.
4. Data owners do not inform the NSI in advance on changes in the structure or design of their databases
5. Data owners do not take into account the recommendations of the NSI when setting-up, changing or discontinuing an administrative data source
6. Data owners do not apply sufficient data quality checks
7. Lack of standardised and documented data quality criteria to assess the adequacy of administrative data for statistical purposes
8. Automated data exchange mechanisms are not used for transferring data

9. Where the law obliges administrative data owners to consult the NSI when setting up, changing or discontinuing an administrative source, the recommendation of the NSI is not binding

5. Synthetic assessment of the situation

This section provides a synthetic assessment of the situation across countries with similar typical access situations according to their legal and institutional environment and the practical issues related to accessing administrative sources. Aiming at offering a comparison of the various national access situations in the abstract, it builds on a suggested arrangement of countries in three main clusters following the gradually self-reported growing number of difficulties and obstacles that NSIs meet when trying to access and integrate administrative data in their statistical production process as well as the identified gaps still needed to be filled along a roadmap to the ideal situation.

Also, it must be noted that for the sake of operational efficiency, the categorisation of countries into groups is not aligned against a prioritisation of problems encountered by the NSIs according to their significance or importance but rather to their number (i.e. many, some, a few). This may lead to unavoidable distortions: e.g. in a country where access to administrative data is already advanced, the remaining obstacles may be deemed more important than in countries which still have to face other, more fundamental obstacles.

Similarly, the four dimensions have to be understood as independent: there is no way to tell if a country facing a few limitations in one and many in another is in a better or worse condition than a country with the exactly inverse situation in the same dimensions. In other words, there are many alternative paths reflecting the actual state of advancement towards the ideal, depending on the specific circumstances and priorities in each country.

The reader is warned that cross-country comparisons must be interpreted with care since the presentation is based on replies to questions that largely reflect the perceptions of the NSI on the current situation in their country rather than objective measures. Additional lack of comparability can be due to the fact that the persons who filled in the questionnaires have different positions in the organisation, and therefore may have different perceptions on the issues surrounding the access to administrative data.

5.1. Legal Framework

As already discussed in the previous chapter, overall, the national statistical laws in force across EU countries recognise and foster the right of the NSIs to access administrative data with statistical value. Nevertheless, the extent and strength of the provisions established by the legal frameworks regulating NSIs' access to and use of administrative sources, as well as provisions affecting the actual implementation of this access and use, may vary considerably across countries. Moreover, as pointed out by the NSIs themselves, there are several factors, intrinsic to the legal framework, such as ambiguities, contradictions, or points of conflict in areas such as confidentiality issues etc., which indirectly restrict to a greater or lesser extent the application of their otherwise legally established right to exploit the full potential of administrative data.

A qualitative comparative analysis of the findings of the analysis presented in the previous chapter reveals an emergent rough grouping of countries into three distinct groups, according to their own assessment of the efficacy of their legislative framework as regards the effective exploitation of available administrative data. There is a group of countries where the overall legal framework is not only formally complete and well-defined but can also be efficiently applied in practice; a second group of countries where, although the rights of NSIs to access administrative data are established, the NSIs still identify areas of necessary improvement; and a third group where NSIs identify problematic areas.

The first of the above-mentioned groups of countries includes Bulgaria, Estonia, Ireland, Cyprus, Latvia, Poland, Romania, Slovakia and Finland, where an almost uniformly high assessment is evidenced across the thematic elements examined under the legal framework dimension of the analysis. In these cases, the assessment of the NSIs reflects a well-established legal environment which clearly sets their right to access administrative data, including microdata, and encompassing access to any administrative source without any requirement of further authorisation from a third-party authority.

One important characteristic that distinguishes this group is the existence of established provisions in the relevant national statistical laws, which imposes to the data owners the obligation to consult and inform the NSIs when setting up or modifying an administrative data source. Similarly, in these countries the NSIs are allowed to influence the structure and information content of administrative databases and have their own needs taken into account. It may be highlighted that these factors are two of the most prevalent limitations identified by several of the other countries included in the other two groups.

An additional factor in this group is the inclusion in the legal texts of provisions which regulate, at least for most sources, without imposing any overly burdensome restrictions, such aspects as the reuse of data for statistical purposes other than initially foreseen, the maximum duration of retention of the data, and the linking of microdata with those obtained from other data sources. Among the few problems identified by some NSIs in this group were that the legal framework leaves room for conflicts between the national statistical law and the specific legislation applicable to some administrative data sources (in Cyprus, Latvia, Romania and Slovakia) as well as the need to pass specific additional legal acts so that the NSIs obtain access to specific administrative data sources (in Latvia, Romania and Poland).

In the second group of countries (namely Belgium, Denmark, Greece, France, Croatia, Lithuania, Luxembourg, Hungary, Malta, Austria, Slovenia, Sweden, Iceland, Norway and Switzerland), the legal framework clearly establishes the right of the NSIs to access and use administrative data, including microdata, but NSIs still feel a need for further improvement of the corresponding legal framework. The most prevalent restriction reported by all NSIs in this group (with the exception of Belgium, Malta and Switzerland) concerns the lack of explicit provisions giving them power to influence the structure

and the information content of administrative databases, as required to build synergies and improve the quality and statistical potential of these data.

Furthermore, countries can be grouped into two distinct subgroups following other limitations that they appear to have in common: those in which the national statistical law clearly obliges administrative data owners to consult the NSI when setting-up, modifying or discontinuing an administrative data source (Belgium, Denmark, Greece, Malta, Austria, Slovenia, Iceland, Norway and Switzerland) and those where there is an evident lack of such provisions.

Among the countries in the first of these subgroups, the most prevalent problem emerges due to data protection restrictions stipulated in other legal acts governing the data owners, whereby access is conditional by virtue of additional legal acts or provisions for authorisation by a third-party. In such cases contradicting interpretations may arise which may create unforeseen obstacles.

In the second subgroup, although the NSIs recognise that they lack the authority to influence the structure and content of administrative databases and by extension factors affecting statistical quality such as procedures for collecting the data, definition of variables, classifications and coding, metadata reference period of data collection, etc., they do not nevertheless see themselves as having major other limitations for the majority of the data sources. On the other hand, data protection restrictions, as well as limitations on the reuse, maximum duration of retention of the data and linking of microdata with microdata from other sources either do not hold for any data source or, if so, those regulate access only to some specified sources.

NSIs in the third group, including the Czech Republic, Germany, Spain, Italy, the Netherlands, Portugal, the United Kingdom as well as Lichtenstein, identified relatively more problems themselves. With the exception of Germany and Portugal, where access to microdata is only granted for some sources, the rest of the NSIs face important issues as regards their power to influence the structure and quality of administrative databases as well as with the need to be consulted when data owners set up or discontinue a data source. Limitations on the maximum duration of retention and reuse of the data as well as contradicting legislation applicable to the data source are the more prevalent ones, at least for some sources where countries perceive that there is still room for improvement.

Following the above qualitative overview and analysis, a general conclusion that may be drawn is that while statistical laws in principle grant to NSIs the necessary rights to access administrative data, this is a necessary condition but not a sufficient one. Apart from the obvious need to eliminate contradictions and room for different interpretations where other legal acts primarily regulate data owners, the legal environment should move from merely asserting a right to access to the direction of allowing or even securing the actual and close involvement of NSI's in aspects such the structure and the quality of administrative data so as to make this right to access feasible in practice.

5.2. Institutional and Organisational Aspects

The effective exploitation of administrative data sources for the production of high quality official statistics requires a favourable institutional environment, including a supporting internal organisation. Similarly, even when the legal framework ensures all the prerequisites for access to administrative data, factors in the institutional environment, established statistical production processes or even aspects of the internal organisational culture, can create obstacles and inhibit a systematic and consistent exploitation of available administrative data, if not in line with a data-sharing strategy.

A qualitative analysis of the information collected under the relevant thematic areas reveals that many NSIs face similar challenges, while in others the institutional environment is already rather favourable. Satisfaction of the specific qualitative criteria of the analysis varies across countries, but common groupings emerge, as described in the following.

A first group (namely Belgium, Bulgaria, Denmark, the Netherlands, Austria, Poland, Slovenia, Slovakia, Finland, Sweden, Norway and Switzerland) almost uniformly demonstrates a high self-assessment in all or most of the criteria. More specifically, Belgium, Bulgaria, Denmark and the Netherlands identified no limitations, whereas Poland, Finland and Norway report only a limited number of issues to be tackled. Similarly, according to the NSIs' views, in Austria, Slovenia, Slovakia, Sweden and Switzerland a well-established institutional and organisational environment is in place although a couple of issues may be further improved.

Nevertheless, those are not uniformly common among the latter countries; they are mostly related to diverse factors such as the usage of standardised criteria to ensure data quality across all statistical domains (Austria, Poland, Slovenia and Switzerland); the centralisation of all coordination of activities with regard to contacts and cooperation with data owners (Austria, Slovenia, Finland and Sweden); and assurance of sufficiently adequate resources for a successful exploitation of administrative data for statistical purposes (Slovakia and Norway).

In a second group, including the Czech Republic, Estonia, Ireland, Spain, France, Italy, Latvia, Lithuania, Luxembourg, Portugal, Romania, the United Kingdom and Iceland, the NSIs declared that they face some organisational challenges in terms of their internal planning, managing and coordinating activities. Thus, NSIs in this group mostly operate in an overall favourable and efficient organisational and institutional environment with some few localised exceptions, while the vast majority of the NSIs demonstrated a common view about the most challenging problems they still have to face.

Thus, most NSIs in this group have already well-established policies for promoting the use of administrative data for statistical purposes (with the exception of the Czech Republic and Iceland, where such policies are perceived to be partly in place), while standardised practices to ensure the confidentiality and security of the data are followed (with France and Iceland having partly done so). In terms of those two areas, countries' views do not reveal major limitations.

On the other hand, six of the countries in this group (namely Spain, Ireland, France, Lithuania, Luxembourg and Iceland) see that efforts shall be mostly fostered towards the adoption of standardised criteria for assessing and ensuring the quality of the administrative data.

Apart from this, in Portugal and Luxembourg, the NSIs recognise the need for an organisational unit specifically dedicated for dealing and cooperating with data owners, while, similarly Romania and Luxembourg would like to undertake actions for the establishment of procedures to identify and assess potential new administrative data sources which will prove potentially useful for the production of official statistics. With reference to the NSI's personnel, Estonia and Lithuania see themselves as having issues with insufficient available resources within the NSI for an effective and successful exploitation of administrative data for statistical purposes.

The third group of countries (Greece, Croatia, Cyprus, Hungary, Malta) has identified several issues that require considerable effort to be dealt with. A number of common limitations are found between Malta and Greece: covering the lack of procedures for identifying and assessing new potential data sources and for monitoring developments in the legal framework (also together with Croatia and Cyprus) as well as the need for an organisation-wide policy for promoting the use of administrative data.

Having referred to Croatia and Cyprus, it must be noted that the NSIs perceive that there are still unresolved issues with reference to the extent that standardised criteria for assessing the quality of the administrative data be used across all statistical units within the NSI. Moreover, Croatia, Hungary and Greece – together also with Portugal and Luxembourg from the second group – acknowledge the lack of a central coordination unit that would handle communication and cooperation with administrative data owners.

As a conclusion, while different improvements are still needed in different countries in the domain of institutional and organisational environment, if one had to single out a priority in this area, this would refer to the need for the establishment of well-defined, standardised, uniform and commonly applicable criteria and methods for the assessment and assurance of the statistical quality of administrative data. This conclusion has to be considered in conjunction with the one of the previous section, regarding the legal framework, where the need for a closer involvement of the NSIs in the structure and information content of the data sources has been singled out as a major factor affecting the statistical quality of data obtained from these sources. It must also be noted that methodological and standardisation work in the area will also facilitate the cooperation of NSIs with data owners by establishing common guidelines and frameworks.

5.3. Cooperation with Data Owners

Despite the provisions of the applicable legal framework, NSIs may still perceive varying room for improvement of cooperation with data owners, since other factors come into play, such as organisational culture, bureaucracy, excessive formality or mere organisational inertia etc. These factors are more difficult to overcome by mere legislative action and need coordinated efforts such as promotion of awareness and mutual understanding of needs, establishment of permanent cooperation channels, cooperation towards mutually beneficial solutions, etc.

A qualitative analysis of the findings allows a rough grouping of NSIs that reported difficulties as regards their cooperation with data owners based on the emergence of common characteristics according to their own evaluation of the situation. In this analysis a first group of countries reports satisfactory overall levels of cooperation, coordination and involvement of the NSI in data structure and quality related issues, a second group reports overall adequate cooperation, albeit with problems in some cases, while a third group reports significant needs for improvement in the same aspects of cooperation, i.e. the actual involvement of the NSI in data structure or data quality issues.

The first cluster of countries reporting a relatively high level of cooperation with data owners includes Denmark, Slovenia, Slovakia, Finland and Norway. The NSIs' views coincide in terms of a number of thematic areas examined, such as the existence of established effective coordination mechanisms with the data providers and the existence of written agreements covering each instance of data provision with the data owners for all or most sources. Those NSIs also stated that in practice they are consulted by the data owners on issues concerning the design of administrative databases (with the exception of Finland, where this occurs only in a few cases) and data owners take into account their recommendations in terms of changes planned to be implemented in the data source (except for Slovakia where this occurs in a few cases).

Along these lines, several NSIs in this group (excluding Denmark and Finland) considered that they can actually request suitable modifications from the data owners when quality-related problems are encountered. However, one of the most common problems encountered in Denmark, Slovenia, and Slovakia concerns the difficulties sometimes faced in cooperating with some data owners. Also, only Slovakia perceives that excessive bureaucracy is an important obstacle for establishing cooperation with data owners that needs to be overcome.

In the second group (including Luxembourg, Croatia, Latvia, Poland, Switzerland, Spain, the Netherlands, Austria and Romania) the NSIs mostly report that the cooperation with some data owners needs to be better established since some problems still persist. This is especially evident in Spain, Luxembourg, the Netherlands, Austria, Romania and Switzerland, where the NSIs have reported that they are not consulted by some data owners when changes to the design of the administrative databases are about to be made, while at the same time (with the exception of Romania) they report that their recommendations or requests are not always taken into account by some data owners. Moreover, Spain, the Netherlands and Austria stated that they have to deal with the fact that they even lack the formal authorisation to request modifications from the data owners when those are considered necessary for the improvement of the quality of the data source.

On the other side, Austria, Latvia, Poland, Romania and Switzerland reported that they frequently face difficulties in achieving an effective cooperation with the data owners, which frequently either send their data with delays or data exchange is restricted due to excessive formality or bureaucracy. The latter also is true for Croatia, Latvia, Poland and Switzerland.

The third group of countries (Belgium, Bulgaria, the Czech Republic, Estonia, Ireland, Greece, France, Italy, Cyprus, Lithuania, Hungary, Malta, Portugal, Sweden, the United Kingdom and Iceland) report that there is still room for significant improvement towards the establishment of close cooperation with all data owners. Although the vast majority of the NSIs in this group is not in need of promoting the signature of formal written agreements or establishing coordination mechanisms with

data owners, they see that they lag behind for a number of reasons: firstly, data owners do not always consult the NSIs when designing or modifying their administrative databases and secondly the NSIs' recommendations are rarely taken into account. At the same time the NSIs are not formally authorised to demand suitable modifications from the data owners when quality-related problems are encountered.

The NSIs in this group also report that they often face the problem of receiving administrative data with delays relative to the agreed timetable, which is an important challenge. It must be noted that several of the NSIs in this group (Bulgaria, the Czech Republic, Greece, Italy, Malta, Portugal and Iceland) report cases where data owners refuse to provide them access to their data.

The main conclusion of the qualitative analysis in this dimension is related to the main findings of the previous two dimensions, namely the need of NSIs to ensure that their statistical production needs will be actually taken into account, without obstacles that may emerge in practice, even when such a right is formally established by law or even accommodated in written cooperation agreements. This shows that apart from "top-down" actions (i.e. legal provisions and high-level strategic commitments of the organisations), a close and effective cooperation at the actual operational level is also needed to overcome such obstacles or inefficiencies.

5.4. Quality and technical aspects

Quality and technical aspects concern the actual, operational level of access to administrative data sources, and constitute the prerequisites for an efficient implementation of an agreed data exchange. In this area, quality checks and automated data exchange mechanisms are the most important factors and three groups can be identified concerning the level of identified problematic areas.

The eleven NSIs belonging in the first group (Belgium, Denmark, Croatia, Italy, Latvia, Lithuania, the Netherlands, Austria, Slovakia, Finland and Norway) did not identify any quality or technical issues restricting their access to and use of administrative data. Thus, the situation is considered to be rather satisfactory by all countries in this group.

Nonetheless, in Italy, Lithuania and Slovakia the NSIs would like to make progress towards the achievement of higher quality of received data from all data sources since the quality checks applied by the data owners are not always regarded as completely sufficient. Similarly, Belgium and Finland recognise the need for the establishment of automated mechanisms for the exchange of metadata coming from some administrative data sources.

The NSIs included in the second group, namely, Bulgaria, the Czech Republic, Estonia, Spain, France, Luxembourg, Portugal, Poland, Slovenia, Sweden, the United Kingdom as well as Iceland and Switzerland, recognise that attempts for overcoming still persisting quality and technical problems for some sources shall be fostered. Problems identified are sparse and mostly pronounced for specific data sources.

Focusing upon the sufficiency of the quality of the checks applied by the data owners, the NSIs of Bulgaria, the Czech Republic, Estonia, Portugal, Sweden, Iceland and Switzerland see themselves as having issues for some data sources. Another prevalent problem across all NSIs in this group is the lack of automated data exchange mechanisms (with the exception of Portugal, Iceland and Switzerland), whereas the need for the establishment of automated mechanisms for the exchange of metadata is supported by all NSIs (except for Portugal).

In the last group (Ireland, Greece, Cyprus, Hungary, Malta and Romania) the issues identified by the NSIs outnumber those recorded by the NSIs in the previous two groups. In detail, almost all NSIs in this group perceive that they do not have access to sufficient methodological information for all sources, whereas some of them (Greece, Cyprus, Hungary and Malta) lack, for some sources, sufficient information for linking purposes. Additionally, among the problems pointed out by the NSIs, most of them were concentrated on technical limitations, i.e. lack of mechanisms for the exchange of data and metadata.

Appendix I – Information collected through the questionnaires

A. Legal Framework

Q1. The national law governing the functioning of the NSI grants to the NSI the right to:

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
access data from any administrative source and use them for any statistical purpose	✓	✓	✓			✓	✓	✓	✓		✓		✓		✓	✓			✓				✓	✓	✓	✓			✓	✓	✓		20
access data only from specific administrative sources				✓										✓														✓					3
use administrative data only for specific statistical purposes												✓								✓	✓												3
other situation										✓							✓		✓								✓						4

Q2. Where the NSI has the legal right to access administrative data, this right extends to:

a. aggregated data

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all sources	✓		✓	✓		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓		24
For most sources									✓						✓					✓													3
For some sources		✓																	✓				✓										3
For none of the sources																																	0

b. micro data

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all sources	✓			✓		✓	✓	✓	✓		✓	✓	✓		✓			✓	✓					✓		✓	✓		✓	✓			17
For most sources		✓	✓							✓				✓		✓	✓			✓	✓		✓		✓						✓		11
For some sources					✓																✓					✓							3
For none of the sources																																	0

Q2.1. Where the NSI has the legal right to obtain administrative microdata, the legal framework requires that they are anonymised first

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all sources																														✓		1	
For most sources				✓																✓													2
For some sources			✓								✓					✓	✓	✓					✓	✓					✓				8
For none of the sources	✓			✓		✓	✓	✓	✓	✓		✓	✓	✓	✓				✓		✓	✓			✓	✓	✓	✓		✓			19

Q3. Where the NSI has the legal right to access administrative data, there are legal restrictions on:**a. the reuse of data for statistical purposes other than initially stated**

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all sources									✓			✓							✓														3
For most sources																																	0
For some sources	✓	✓	✓		✓																								✓		✓		6
For none of the sources				✓		✓	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓			22

b. the maximum duration of retention of the data

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all sources									✓			✓							✓					✓				✓					5
For most sources																																	1
For some sources	✓		✓		✓										✓		✓	✓													✓		6
For none of the sources		✓		✓		✓	✓	✓		✓	✓		✓	✓		✓				✓	✓	✓	✓		✓	✓	✓	✓		✓			17

c. linking microdata with microdata from other sources

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all sources																																	0
For most sources																																	0
For some sources	✓																					✓								✓		3	

Appendix I – Information collected through the questionnaires

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For none of the sources		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	27

d. other legal restrictions

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all sources																		✓									✓					2	
For most sources																																0	
For some sources		✓	✓		✓								✓	✓			✓	✓				✓			✓							9	
For none of the sources	✓			✓		✓	✓	✓	✓	✓	✓	✓			✓	✓				✓	✓		✓	✓		✓	✓		✓	✓	✓	20	

Q4. Where the law grants to the NSI the right to access administrative data, it also obliges it to request permission from an authority other than the data owner (e.g. a data protection authority):

a. before obtaining them for the first time

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all sources				✓																							✓					2	
For most sources												✓				✓																2	
For some sources		✓	✓							✓	✓		✓					✓					✓						✓			8	
For none of the sources			✓			✓	✓	✓	✓					✓	✓		✓		✓	✓	✓		✓	✓	✓	✓	✓			✓	✓	18	

b. on every instance of obtaining data

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all sources				✓																													1
For most sources												✓																					1
For some sources		✓								✓	✓		✓			✓	✓						✓										7
For none of the sources			✓	✓		✓	✓	✓	✓					✓	✓		✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	21

Q5. Where the law grants to the NSI the right to access administrative data, it also obliges the data owners to consult the NSI when setting up, changing or discontinuing a source

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
--	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-------

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all sources	✓	✓		✓		✓	✓	✓					✓					✓		✓	✓		✓	✓	✓			✓	✓	✓		16	
For most sources														✓												✓							2
For some sources											✓	✓																					2
For none of the sources			✓		✓				✓	✓					✓	✓	✓		✓			✓					✓	✓					11

Q5.1. Where the law obliges administrative data owners to consult the NSI when setting up, changing or discontinuing an administrative source, the recommendation of the NSI is binding

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all sources	✓	✓				✓	✓						✓					✓					✓		✓								8
For most sources														✓												✓							2
For some sources											✓	✓																					2
For none of the sources				✓				✓												✓	✓			✓					✓	✓	✓		8

Q6. Where the NSI has the legal right to access administrative data, it also has the right to obtain them for free

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all sources	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓		✓	✓	✓	✓	✓	✓	✓	✓				✓	✓	✓		25
For most sources														✓	✓		✓									✓							4
For some sources																												✓					1
For none of the sources																										✓							1

Q7.:

a. legislation applicable to the administrative data owners contradicts the NSI's legal rights to access and use their data

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all sources																																0	
For most sources																																0	
For some sources			✓					✓					✓	✓		✓	✓	✓	✓			✓	✓		✓					✓		12	
For none of the sources	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓			✓					✓	✓			✓		✓	✓	✓	✓		✓	19	

b. the passing of specific additional legal acts is required to access specific administrative data sources

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all sources					✓															✓													2
For most sources																												✓					1
For some sources				✓	✓			✓		✓		✓		✓		✓	✓	✓			✓	✓	✓	✓					✓		✓		15
For none of the sources	✓	✓				✓	✓		✓		✓		✓		✓	✓									✓	✓	✓			✓			13

c. additional legal obstacles

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all sources																																	0
For most sources																																	0
For some sources				✓									✓	✓		✓	✓	✓				✓	✓						✓				9
For none of the sources	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓			✓				✓	✓	✓			✓	✓	✓	✓	✓		✓	✓		21

Q8. The legal framework specifying the NSIs rights to access and use administrative data leaves room for misinterpretations

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
No	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓	✓	✓		✓	✓			24
Yes			✓										✓		✓		✓				✓								✓				6

B. Internal Institutional Aspects**Q9.:****a. an organisation-wide policy for promoting the use of administrative data is in place**

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
Yes	✓	✓		✓		✓	✓		✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓				24
Partly			✓								✓																		✓		✓		4
No								✓										✓															2

b. a procedure to monitor developments in the legal framework governing the sharing of administrative data between authorities is in place

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
Yes	✓	✓		✓		✓													✓	✓	✓			✓	✓	✓	✓			✓	✓		13
Partly			✓				✓		✓	✓		✓		✓	✓		✓					✓						✓	✓				11
No								✓			✓		✓			✓		✓					✓										6

c. a standard, systematic procedure to identify administrative data sources potentially useful for statistical purposes is in place

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
Yes	✓	✓		✓															✓	✓	✓	✓		✓	✓	✓				✓	✓		12
Partly			✓			✓	✓		✓		✓	✓	✓	✓	✓	✓	✓						✓				✓	✓	✓				15
No								✓		✓								✓															3

d. standardised and documented data quality criteria are used across statistical domains to assess the adequacy of administrative data for statistical purposes

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
Yes	✓	✓		✓							✓								✓						✓	✓	✓			✓			9
Partly			✓			✓		✓				✓		✓			✓			✓	✓	✓	✓	✓				✓			✓		13
No							✓		✓	✓			✓		✓	✓	✓												✓				8

e. a specific unit / department of the NSI coordinates the NSI's contacts and cooperation with the administrative data owners

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
Yes	✓	✓		✓		✓	✓		✓	✓		✓	✓	✓	✓				✓		✓		✓		✓			✓	✓	✓	✓		19
Partly			✓															✓		✓				✓		✓	✓						6
No								✓			✓					✓	✓					✓											5

f. standard, systematic practices are in place to ensure confidentiality and security of administrative data (e.g. secure room, controlled access, etc.)

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
Yes	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		27

Appendix I – Information collected through the questionnaires

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
Partly									✓																			✓					2
No													✓																				1

g. the NSI's personnel has the required competences to effectively exploit administrative data for statistical purposes

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
Yes	✓	✓	✓	✓		✓			✓	✓		✓	✓		✓	✓			✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		23
Partly							✓	✓			✓			✓			✓	✓							✓								7
No																																	0

h. the NSI has the required resources to effectively exploit administrative data for statistical purposes

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
Yes	✓	✓		✓					✓	✓						✓			✓	✓	✓			✓		✓	✓				✓		13
Partly				✓			✓	✓			✓	✓		✓			✓	✓				✓	✓		✓			✓	✓	✓			14
No						✓							✓		✓																		3

C. Cooperation with Data Owners and Wider Institutional Environment

Q10. Impact of the wider environment on the exploitation of administrative data by the NSI:

a. the overall culture of the staff in the country's public sector is favourable to data sharing and interoperability

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
(5) Strongly agree				✓		✓														✓					✓	✓							5
(4) Agree									✓	✓	✓	✓			✓	✓	✓		✓		✓	✓		✓	✓				✓				13
(3) Neither agree nor disagree	✓	✓	✓				✓	✓					✓	✓									✓				✓	✓		✓			11
(2) Disagree																	✓																1
(1) Strongly disagree																																	0

b. concerns in the general public regarding personal data privacy and confidentiality are obstacles for the sharing of data among organisations

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
--	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-------

[illegible]

Q11. A national strategy on data sharing in the public sector exists

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
Yes	✓		✓	✓		✓		✓	✓	✓		✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓		✓		✓					21
No		✓					✓				✓					✓	✓								✓		✓		✓		✓		9

Q11.1. The national strategy on data sharing in the public sector is effectively implemented

[illegible]

Q12. Cooperation with data owners:

a. written agreements that cover each instance of data provision are signed between the NSI and the administrative data owners

[illegible]

Appendix I – Information collected through the questionnaires

b. effective coordination mechanisms between the NSI and the administrative data owners exist (e.g. assigned permanent contact points, liaison offices, inter-organisational coordination committees)

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all cases																								✓		✓				✓	✓		4
For most cases	✓	✓	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓			✓					23
For a few cases								✓																			✓		✓				3
For none of the cases																																	0

c. the NSI is consulted by the administrative data owners on issues such as specifications or design of relevant databases, adoption of common definitions and classifications, etc.

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all cases																																0	
For most cases				✓							✓			✓	✓						✓			✓	✓					✓		8	
For a few cases	✓	✓	✓			✓		✓	✓	✓		✓	✓			✓	✓	✓	✓	✓		✓	✓			✓	✓	✓	✓		✓		21
For none of the cases							✓																									1	

d. administrative data owners take into account the recommendations of the NSI when setting-up, changing or discontinuing an administrative data source

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all cases														✓																			1
For most cases				✓							✓												✓	✓		✓			✓	✓			7
For a few cases	✓	✓	✓			✓	✓	✓	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓			✓						✓		20
For none of the cases																											✓	✓					2

e. administrative data owners inform the NSI sufficiently in advance of the changes in the structure or design of their databases

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all cases																																	0
For most cases				✓							✓								✓		✓			✓	✓	✓				✓	✓		9
For a few cases	✓	✓	✓			✓		✓	✓	✓		✓		✓	✓	✓	✓			✓		✓	✓				✓	✓	✓				18
For none of the cases							✓						✓					✓															3

f. the NSI communicates to the administrative data owners the procedures in place to ensure the confidentiality and security of the data

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all cases	✓		✓			✓	✓	✓				✓		✓	✓	✓		✓	✓	✓	✓			✓	✓	✓	✓	✓			✓		19
For most cases				✓							✓											✓								✓			4
For a few cases		✓							✓								✓						✓										4
For none of the cases										✓			✓																✓				3

g. when quality-related problems are encountered, the NSI has the authority to demand suitable modifications from the data owner

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all cases								✓					✓	✓				✓						✓									5
For most cases																✓					✓				✓					✓	✓		5
For a few cases			✓								✓												✓										3
For none of the cases	✓			✓	✓	✓	✓		✓	✓		✓			✓		✓		✓	✓		✓				✓	✓	✓	✓				17

Q13. The NSI communicates to the administrative data owners issues related to the errors or inconsistencies identified in their data

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all cases		✓		✓		✓			✓		✓				✓																		6
For most cases							✓	✓					✓	✓		✓		✓	✓	✓	✓			✓	✓	✓				✓	✓		14
For a few cases				✓													✓					✓	✓				✓	✓	✓				7
For none of the cases	✓									✓		✓																					3

Q13.1. The NSI takes all the necessary measures to protect individual confidentiality when communicating to the data owners the issues related to the errors or inconsistencies identified in their data

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
Always		✓	✓	✓		✓	✓	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	27
Sometimes																																	0

Appendix I – Information collected through the questionnaires

Rarely	0
Never	0

Q14. The NSI faces difficulties in cooperating with the administrative data owners

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
Always													✓																				1
Sometimes		✓	✓	✓	✓		✓	✓	✓			✓		✓	✓		✓	✓		✓	✓	✓	✓	✓	✓			✓	✓		✓		21
Rarely									✓	✓	✓					✓			✓							✓	✓			✓			8
Never																																	0

Q14.1.:

a. administrative data owners refuse to provide access to their data

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
Always																																	0
Sometimes			✓	✓				✓				✓		✓			✓					✓	✓						✓		✓		10
Rarely		✓				✓			✓	✓	✓		✓		✓	✓	✓		✓		✓			✓	✓		✓	✓					15
Never				✓			✓													✓						✓				✓			5

b. administrative data owners send their data with delays relative to the agreed timetable

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
Always																																	0
Sometimes		✓				✓	✓	✓		✓	✓	✓	✓				✓	✓	✓		✓	✓	✓					✓	✓		✓		16
Rarely			✓	✓	✓				✓					✓	✓	✓				✓				✓	✓	✓	✓			✓			14
Never																																	0

c. administrative data owners request from the NSI payments not foreseen in the law for providing their data

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
Always																																	0

[illegible]

d. excessive formality or bureaucracy between organisations is an obstacle for cooperation

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
Always																		✓															1
Sometimes	✓	✓	✓					✓			✓		✓	✓	✓						✓	✓			✓		✓	✓		✓			14
Rarely				✓		✓	✓		✓	✓		✓				✓	✓		✓	✓			✓				✓			✓			13
Never																								✓		✓							2

e. other difficulties

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
Always																		✓															1
Sometimes			✓								✓		✓	✓														✓	✓		✓		7
Rarely	✓			✓				✓								✓	✓		✓	✓		✓	✓		✓								10
Never		✓				✓	✓		✓	✓		✓			✓						✓			✓		✓	✓			✓			12

D. Quality and Technical Preconditions

Q15.: Quality aspects

a. the NSI has access to sufficient methodological information / metadata on the data collection process operated by the data owner

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all cases				✓																				✓		✓							3
For most cases	✓	✓	✓						✓	✓	✓	✓		✓	✓	✓			✓	✓	✓	✓			✓			✓		✓	✓		17
For a few cases						✓	✓	✓					✓				✓						✓				✓		✓				8
For none of the cases																	✓																1

b. the data owners apply sufficient data quality checks that are useful to the NSI

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all cases																																	0
For most cases	✓			✓					✓	✓	✓		✓	✓		✓			✓	✓	✓			✓		✓		✓		✓			13
For a few cases		✓	✓			✓		✓				✓			✓		✓	✓				✓	✓		✓		✓		✓		✓		14
For none of the cases							✓																										2

c. unique and consistent identifiers are used across data sources

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all cases	✓			✓		✓					✓				✓					✓				✓		✓	✓				✓		10
For most cases		✓	✓						✓	✓		✓	✓	✓		✓	✓		✓		✓		✓		✓				✓	✓			15
For a few cases								✓									✓					✓					✓						3
For none of the cases							✓																										1

d. the NSI has sufficient information for linking different data sources

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all cases	✓			✓		✓			✓						✓					✓				✓		✓	✓		✓		✓		11
For most cases		✓	✓				✓			✓	✓	✓		✓		✓			✓		✓		✓		✓			✓		✓			13
For a few cases								✓					✓			✓	✓					✓											5

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For none of the cases																																	0

e. other

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all cases																																	0
For most cases			✓													✓			✓				✓										4
For a few cases																													✓				1
For none of the cases	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓	✓		✓	✓		24

Q16. Technical aspects:**a. there are difficulties related to the format used for the exchange of the data**

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all cases																																	0
For most cases																		✓															0
For a few cases		✓	✓	✓		✓		✓		✓		✓	✓	✓	✓	✓					✓		✓			✓		✓	✓	✓	✓		18
For none of the cases				✓			✓		✓		✓						✓		✓	✓		✓		✓	✓		✓						11

b. there are difficulties related to the format used for the exchange of the metadata

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
For all cases																		✓															1
For most cases			✓										✓										✓						✓				4
For a few cases		✓		✓		✓				✓	✓			✓		✓				✓	✓					✓	✓			✓	✓		12
For none of the cases				✓			✓	✓	✓			✓			✓		✓		✓			✓		✓	✓	✓							12

c. automated data exchange mechanisms are used for transferring data

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	IS	NO	CH	LI	Total
--	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-------

[illegible]

d. automated data exchange mechanisms are used for transferring metadata

[illegible]

Appendix II – Country reports

1	Belgium	57
2	Bulgaria.....	61
3	Czech Republic.....	66
4	Denmark.....	72
5	Germany.....	76
6	Estonia	82
7	Ireland	87
8	Greece	92
9	Spain	97
10	France	102
11	Croatia.....	106
12	Italy	110
13	Cyprus.....	117
14	Latvia.....	121
15	Lithuania	127
16	Luxembourg	132
17	Hungary.....	137
18	Malta.....	142
19	Netherlands	148
20	Austria.....	153
21	Poland	157
22	Portugal.....	163
23	Romania.....	169
24	Slovenia	173
25	Slovak Republic.....	179
26	Finland	183
27	Sweden.....	188
28	United Kingdom.....	192
29	Iceland.....	198

Appendix II – Country reports

30	Norway	202
31	Switzerland	206
32	Lichtenstein	211

1 Belgium

1.1 Legal framework

In Belgium, access to administrative data for statistical purposes is granted by the Statistics Act of 4 July 1962, modified on 22 March 2006. The 2006 Belgian Statistics Act had three objectives: (a) to spell out the principles governing public statistics i.e. transparency of processes, proportionality, impartiality, objectivity and professional independence; (b) to promote a more effective use of administrative data; and (c) to bring statistical legislation in line with national and European regulations, especially with regard to privacy. Article 24 bis of the Statistics Act of 2006 guarantees the NSI's legal right to access administrative data for statistical purposes. This right extends to aggregated data and microdata for all sources.

Legal right to access administrative data at microdata level

The NSI has the right to obtain administrative data at microdata level from all administrative data sources. Access to personal administrative data should be granted upon the approval of a Committee for data protection. In practice, the Belgian Privacy Commission grants authorization for using the requested data if (a) these are vital for the project needs and (b) they can be protected against any violation of confidentiality.

Based on the information collected from the questionnaire, prior authorization from the Belgian Privacy Commission is required for some sources for each instance of data transmission. However, it is also possible that the NSI is granted by the Belgian Privacy Commission a more general authorisation for some sources.

Although the national legal basis does not require that data transmitted to the NSI are anonymized first for any data source, anonymization of the microdata received from the administrative data owners is undertaken by the data collection centre of the NSI once the data are received. Thus, the NSI's staff has access only to anonymized microdata.

Cooperation with data owners in design of administrative databases

According to the information provided in the questionnaire, the Belgian Statistics Act obliges the data owners to consult the NSI when setting up, changing or discontinuing a source for all administrative sources where the NSI has access. The recommendations provided by the NSI are binding.

Cost-free access to administrative data

The NSI has the right to access all administrative data sources on a cost-free basis.

Coherence of the legal framework

According to the information reported by the NSI, the legislation applicable to the administrative data owners does not contradict the NSI's legal right to access administrative data and additional legal acts are not required to be passed for accessing specific administrative data sources. Overall, the national legal framework specifying the NSI's right to access and use administrative data does not leave room for misinterpretation.

1.1.1 Legal restrictions

According to the peer reviewers' assessment, the federal law does not overrule the regional / community law and therefore access to administrative data held by regional authorities is often cumbersome or even impossible in practice. Further legal provisions are considered essential in order to strengthen the right of the NSI to access administrative data without restrictions. This problem has been to a large degree solved by the development of the Inter-Federal Institute for Statistics

overseeing the federal, regional and community statistical authorities, each having the right to access administrative data at their respective levels.

Based on the information gathered from the questionnaire, the restrictions imposed by the legal framework in place are summarized as follows:

- For each case of data transmission involving personal data, an explicit case by case authorisation by the Belgian Privacy Commission is required. The Privacy Commission may impose for some sources restrictions on:
 - the reuse of data for statistical purposes other than the ones initially stated.
 - the maximum duration of retention of data.
 - the linking of microdata with microdata from other sources.

1.2 Internal institutional aspects

Policy on administrative data

According to the NSI, an organization-wide policy for promoting the use of administrative data is in place. Standard procedures are in place in order to:

- Monitor developments in the legal framework concerning use of administrative data.
- Identify administrative sources with potential statistical use.
- Ensure confidentiality and security of administrative data. The security policy of the database systems and IT networks is strict. A logging system, tracking the actions performed when accessing the data is in place, whereas a formal procedure for granting access to the NSI's staff is regularly repeated.
- Use standardised and documented quality criteria across the statistical domains to assess the adequacy of administrative data for statistical purposes.

Organisation within the NSI

The key players within Statistics Belgium responsible for the promotion and use of administrative data are the coordinator of administrative and big data, which is responsible for the contacts and communication with the administrative data owners, the Data Protection Officer, the Data Collection Centre and the Data Warehouse.

As stated in the questionnaire, the NSI's staff has the required competences to effectively exploit administrative data for statistical purposes. Also, the NSI has the required resources to effectively exploit administrative data for statistical purposes.

1.2.1 Internal institutional obstacles

No issues have been identified.

1.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

Based on information provided by the NSI to the questionnaire the overall culture of the staff is neutral to data sharing. Concerns in the general public regarding personal data privacy and confidentiality are considered to be an obstacle for the sharing of data among organisations.

However, a national strategy on data sharing in the public sector exists and is effectively implemented. A strong political commitment to reduce response burden by using to the maximum possible extent administrative data is in place. Since 1998, the Agency of Administrative Simplification works towards this end. In 2007, the NSI in cooperation with the Agency of Administrative Simplification moved towards an increased and more effective use of administrative data with the view to reduce response burden. The response burden was reduced through the use of administrative data

sources, such as of the Crossroads Bank for Enterprises, the National Social Security Office, the land register and the national population register.

Cooperation with data owners

Written agreements covering each instance of data provision have been signed between the NSI and data owners for most cases. Furthermore, the coordination mechanisms between the NSI and data owners are considered by the NSI effective for most cases. The NSI always communicates to the administrative data owners the procedures in place to ensure the confidentiality and security of data but does not communicate to them any inconsistencies or errors identified in their data since this would be against the national statistics law. Administrative data owners never request from the NSI payments not foreseen in the law for providing their data.

1.3.1 Issues related to the wider institutional environment and cooperation with data owners

In practice, the NSI considers that communication and cooperation is good with most data owners, although:

- There are concerns in the general public regarding personal data privacy and confidentiality.
- The NSI is consulted by the administrative data owners on design of databases only in a few cases.
- Administrative data owners take into account the recommendations of the NSI when setting up or changing an existing database only in a few cases.
- Administrative data owners inform the NSI in advance on planned changes in the structure or design of their databases only in a few cases.
- When quality-related problems are encountered, the NSI lacks the authority to demand suitable modifications from data owner.
- Sometimes data owners send their data to the NSI with delays relative to the agreed timetable.
- Sometimes excessive formality or bureaucracy between organisations is an obstacle for cooperation.

1.4 Quality and technical preconditions

Quality aspects

In most cases, the NSI has access to sufficient methodological information on the data collection processes operated by the data owners, in most cases data owners apply sufficient quality checks that are useful to the NSI. Unique and consistent identifiers are used across data sources in all cases and the NSI has sufficient information for linking various sources.

Technical aspects

In most cases, automated data exchange mechanisms are used for transferring data. However, for metadata, automated data exchange mechanisms are used only in a few cases.

1.4.1 Quality and technical restrictions

Concerning quality and technical restrictions, the NSI reported that:

- Technical difficulties sometimes arise due to the structure and format of the data files transmitted to the NSI or to the different software used by the NSI and the other public authorities.
- Automated data exchange mechanisms for the transmission of metadata are used only in a few cases.

1.5 Some examples of administrative data usage

Business Statistics

In 2008, the NSI initiated a project⁹ on the development of a web-based application for the electronic collection of SBS data, based on the XBRL (eXtensible Business Reporting Language) open standard. XBRL standard has been also adopted by the National Bank of Belgium and the Ministry of Finance. The use of a common standard allows the enterprises to automatically complete and transmit annual accounts, corporate taxes and statistical data to the three organisations. The NSI uses data coming from administrative registers to pre-fill the electronic questionnaire.

Social Statistics

The 2011 population census was based on numerous administrative sources that provided the majority of the required data¹⁰. The lacking variables, i.e. those not covered by administrative data, were collected as part of existing sample surveys. Estimation procedures similar to the model that the Netherlands uses (i.e. the virtual Census) were applied so as to combine survey and administrative data.

Belgium has recently benefited from a Eurostat grant¹¹ on improving the use of administrative sources. The work focused on the use of administrative data (social security, corporate taxes) for the Labour Cost Survey.

Examples of sources used

(1) National register of natural persons, (2) Statistical database derived from the Crossroads Bank for Enterprises (CBE) (DBRIS2), (3) Data warehouse Labour Market and Social Protection of the Crossroads Bank for Social Security (CBSS), (4) General Administration of the Patrimonial Documentation (former land register), (5) Educational data from the Communities, (6) Central Identification Address Database (CIAD), (7) Fiscal data from the Federal Public Service (FPS) Finances.

1.5.1 Problematic data access cases

Statistics Belgium did not report any issues about administrative data sources for which access is not feasible or is achieved in a considerably problematic way.

1.5.2 Successful data access cases

Data source	Data owner	Purpose of access	Statistical domain
Belcotax ¹²	Ministry of Finance	Direct compilation of statistics in combination with other data sources	Labour Cost Survey, LFS, SILC

Factors contributing to successful access: Belcotax is an online application of the FPS Finance, where employers insert data to be used for pre-filling individual tax forms. Belcotax data are available at least one year before the completed tax forms. The NSI considers that the factors contributing to successful access to these sources were:

- Dedicated services in Statistics Belgium for following-up the process;
- Unique persons and enterprise identifiers used across federal and regional administrations.

⁹ Olivier Goddeeris, Statistics Belgium, Conference of European statisticians, "Use of administrative data within data collection" (2012)

¹⁰ Statistics Belgium: <http://statbel.fgov.be/en/statistics/surveys-methodology/census/Census2011/>

¹¹ "Improvement of the use of administrative sources (ESS.VIP ADMIN WP6 Pilot studies and applications)", Grant Agreement number 07112.2015.002-2015.346).

¹² Federal Public Service (Ministry) of Finance, Belcotax: <http://financien.belgium.be/nl/E-services/Belcotaxonweb>

Obstacles overcome in accessing the data source: Obtaining authorization from the privacy commission took about 90% of the total effort for accessing the data source.

Best practice study: According to the information provided to the questionnaire, the case of Belcotax data source is too specific to serve as a best practice (strict privacy legislation, authorization from the Belgium Privacy Commission, unique identifiers for persons and enterprises used for in all federal and regional administrations).

2 Bulgaria

2.1 Legal framework

In the Republic of Bulgaria, the National Statistical System (NSS) is composed of the National Statistical Institute of Bulgaria, the Bodies of Statistics and the Bulgarian National Bank. The organisations composing the NSS are responsible for the collection of data for the compilation of national and European statistics. The Bodies of Statistics include state bodies or structural units in ministries, institutions or other central / territorial bodies of the executive authorities and are part of the NSS, under the Prime Minister's order. The bodies that make up the NSS can change every five years based on a Prime Minister's order. The NSI is responsible for coordinating all activities within the ESS.

Under the provisions of the Bulgarian Statistics Act of 1999 (consolidated)¹³, the NSI and the Bodies of Statistics shall receive from other government authorities, the necessary administrative data, at personal level and / or aggregate data, for producing national or European statistics included in the National Statistical Programme.

The Statistics Act obliges the central and local government authorities, other central government institutions, the Bulgarian National Bank and the bodies maintaining registers and information systems to provide the NSI with their data, free of charge, upon its written request.

Article 30 of the Statistics Act specifies that the NSI shall establish and maintain a register of statistical units and a statistical register of persons, based on data obtained from the Unified State Register of the Economic Subjects (BULSTAT Register), the Commercial Register, the National System for Civil Registration, other national registers and administrative sources, as well as data stemming from surveys.

Statistical information related to the defence of the country, the internal economic security and the security of organisation units, information systems or networks is considered of official secrecy.

Legal right to access administrative data at microdata level

As stated in the peer review report, access to microdata, although granted by the Bulgarian Statistics Act, is often based on special agreements, and in some cases, where no agreement is place, on formal letters. In practice, as further specified in the questionnaire, administrative data owners often insist on signing an agreement with the NSI in order to grant the NSI access to their data. However, as reported in the survey, the NSI does not consider the latter a factor restricting NSI's access to administrative microdata. Additionally, for some sources, administrative microdata should be anonymized before their transmission to the NSI, whereas a permission should be granted to the NSI by an authority other than the data owner before obtaining access to some administrative sources for the first time.

¹³ National Statistical Institute, "Bulgarian Statistics Act" (<http://www.nsi.bg/en/content/218/basic-page/law-statistics>)

Cooperation with data owners in design of administrative databases

The NSI reported in the questionnaire that any government body producing statistical information is part of the National Statistical System (NSS) and should consult the NSI for any methodological issues or any changes planned to be implemented, since the NSI is responsible for coordinating all activities within the ESS.

Cost-free access to administrative data

The NSI has the right to obtain administrative data for free.

Coherence of the legal framework

According to the information reported by the NSI in the questionnaire, the overall legal framework does not leave room for misinterpretation and the legislation applicable to the administrative data owners does not contradict the NSI's legal right to access administrative data.

2.1.1 Legal restrictions

The following legal restrictions with regard to accessing administrative were listed by the NSI:

- Although the NSI has the right to administrative microdata, data owners insist on signing an agreement in order to grant the NSI access to their data.
- The reuse of some administrative data sources for statistical purposes other than initially stated is not allowed.
- For some sources, the administrative microdata should be anonymized first before their transmission to the NSI.
- For some sources, a permission from an authority other than the data owner shall be requested by the NSI before obtaining access to the data source for first time.

2.2 Internal institutional aspects

Policy on administrative data

Within the NSI, an organization-wide policy promoting the use of administrative data is in place. The NSI reported that one of the main challenges, defined in its NSS strategy for 2013-2017¹⁴ is the reduction of respondents' burden through the usage of administrative data, ensuring, at the same time, that the quality of the compiled statistics meets the ESS standards.

Standard procedures are in place with the view to:

- Monitor developments in the legal framework regarding the use of administrative data
- Identify administrative data sources potentially useful for statistical purposes
- Ensure confidentiality and security of administrative data
- Use of common quality criteria across the statistical domains to assess the adequacy of administrative data.

Organisation within the NSI

Within the NSI, a specific unit coordinates the NSI's contacts and cooperates with data owners. Moreover, as stated in the questionnaire, the NSI has the required resources to effectively exploit administrative data and the NSI's personnel has the required competences to effectively exploit administrative data for statistical purposes.

2.2.1 Internal institutional obstacles

No obstacles have been mentioned by the NSI.

¹⁴ National Statistical Institute, "Strategy for the development of the National Statistical System, 2013-2017" (<http://www.nsi.bg/en/content/11790/basic-page/strategy-development-national-statistical-system-2013-2017>)

2.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

The NSI considers that the overall culture of the staff in the country public sector is neutral to data sharing but there are concerns in the general public regarding data privacy and confidentiality that prevent data sharing among organisations. Although the NSS strategy for 2013-2017 lays great stress on data sharing across public sector bodies, the NSI has stated that a national strategy on data sharing in the public sector is not in place.

The representatives of the Bodies of Statistics can participate in the National Statistical Council (NSC) which works and discusses on the strategy of the NSS development for each five-year period. The annual Statistical Programme includes and describes the statistical activities to be undertaken not only by the NSI but also the Bodies of Statistics. However, the peer reviewers mention that some Bodies of Statistics do not cooperate closely with the NSI. They have also added that the organization and activities of other National Authorities producing European statistics (ONAs) are considerably influenced by the administrative culture and rules of the general government.

Cooperation with data owners

Written agreements covering each case of data provision are signed between the NSI and the data owners. In most cases, the NSI considers that the coordination mechanisms between the NSI and the data owners are effective. In all cases, the NSI communicates to the data owners issues related to errors or inconsistencies in their data. In this communication, the NSI takes all necessary measures to protect the confidentiality of data. However, the NSI rarely communicates to the data owners the procedures in place to ensure confidentiality and security of the data. Administrative data owners never request from the NSI payments not foreseen in the law for providing data and in most cases they send their data without delays relatively to the agreed timetable.

A special case concerning SBS statistics was mentioned by the peer reviewers: selected SBS data collected only for statistical purposes by the NSI are also used by the National Revenue Agency (NRA) for administrative purposes (see also Section 2.5). According to the opinion of peer reviewers, statistical data cannot be used for administrative purposes, especially when data providers have not provided their approval for the use of their data for other than statistical purposes.

2.3.1 Issues related to the wider institutional environment and cooperation with data owners

The NSI reported the following difficulties:

- There are concerns in the general public regarding personal data privacy that are obstacles for the sharing of data among organisations.
- A national strategy on data sharing in the public sector does not exist.
- The NSI is consulted by the administrative data owners on design of databases only in a few cases.
- Administrative data owners take into account NSI's recommendations when setting up a new or changing an existing database only in a few cases.
- Administrative data owners inform the NSI in advance on planned changes in the structure or design of databases only in a few cases.
- When quality-related problems are encountered, the NSI has the authority to demand suitable modifications from data owner only in a few cases.
- Sometimes excessive formality or bureaucracy between organisations is an obstacle for cooperation.

2.4 Quality and Technical preconditions

Quality aspects

Although it was stated in the questionnaire that the NSI has access to sufficient metadata on the collection process operated by the data owner, the peer reviewers reported that the data received are not always of good quality (e.g. different units, definitions, classifications, lack of input control, and lack of main variables).

Unique and consistent identifiers are used across most data sources and the NSI has sufficient information for linking various sources.

Technical aspects

Automated data exchange mechanisms for transferring the data and metadata are in place in a few cases, whereas technical difficulties arise in most cases with regard to the format used for the exchange of metadata.

2.4.1 Quality and technical restrictions

The NSI identified the following issues:

- Data owners apply sufficient quality checks that useful for the NSI only in a few cases. Data received are not always of good quality (e.g. different units, definitions, classifications, etc.)
- In most cases, there are difficulties related to the format used for exchange of metadata.
- Automated data and metadata exchange mechanisms are used only in a few cases.

2.5 Some examples of administrative data usage

Business Statistics

In 2007, the NSI, under the framework of a Eurostat project “The more effective way of collecting data”¹⁵, developed an inventory of the administrative sources that could potentially be used in business statistics. The NSI investigated the possibility of using new administrative sources for the compilation of business statistics, such as the trade register, tax declarations, VAT declarations, register of fiscal devices, general register of professional builders, register of bakers and other registers.

Since 2009, the register of insured persons and the trade register are used either for the direct compilation of variables (e.g. number of employees, hours of work) or as auxiliary source for defining / updating the survey frame. The business register, “Register of Statistical Units”, constitutes the main source for defining and updating the survey frame for all surveys undertaken under the business statistics domain. The overall quality of the register is considered good.

Recently, a single-entry point has been developed, via which economic units, which have a unique identifier, can submit their data both to the NSI and to the National Revenue Agency (NRA), thus avoiding duplications and reducing significantly respondents’ burden¹⁶. The data are stored in a common accounting database, and each institution uses the data for its own purposes; the NSI for the compilation of SBS and annual accounts (balance sheet, revenue-income statement, etc.) and the NRA for fiscal purposes. However, part of the data collected only for statistical purposes is also used by the tax agency.

For the compilation of tourism statistics, the NSI uses administrative data collected by the Ministry of Interior (e.g. trips of national residents abroad, arrivals of visitors from abroad to the country) in combination with monthly sample surveys.¹⁵

¹⁵ National Statistical Institute of Bulgaria, “Use of administrative data in the production of business statistics in the National Statistical Institute of Bulgaria” (2010).

¹⁶ National Statistical Institute of Bulgaria, “Reducing the administrative burden for the business in Bulgaria: Single Entry Point for Reporting Fiscal and Statistical Information” (2011).

Social Statistics

In the field of population statistics, data from administrative sources (e.g. insured persons, beneficiaries of pensions and others) were used for validating 2011 population census data¹⁷.

Administrative data are also used for the compilation of migration statistics, such that on international migration and on foreign citizens permanently staying in the country territory of Bulgaria¹⁸.

Recently the NSI benefited from a Eurostat grant on improving the use of administrative data sources¹⁹. Several administrative registers of the Ministry of Education and Science (MES) have been evaluated in order to assess their suitability and reliability. Several registers were selected for further use in the production of statistical information. It was concluded that the administrative registers can partly replace the NSI surveys and fulfil EU requirements on education statistics, provided that some issues of coverage and classification are solved. A procedure to integrate education data from administrative registers in the forthcoming census was also tested. Most of the information will be used for quality checks, but the replacement of at least one census variable seems feasible. A register of the MES on the institutions within the system of pre-primary, primary and secondary was also used for assessing the possibility of improving data quality in the field of public health statistics. The potential use of the MES registers for core variables in sample household surveys, in particular EU-SILC, was also studied.

The possibility to make better use of administrative register already in use (registers belonging to the National Revenue Agency (NRA) and the National Social Security Institute (NSSI)) was also investigated. A new detailed cooperation agreement was signed. The NSI evaluated the possibility to use the NRA and NSSI registers to replace collecting some variables in the census and in the regular sample household surveys.

Examples of sources used

- Statistical Business Register: (1) Register “BULSTAT” (data automatically transferred and incorporated to the Register of Statistical Units), (2) Trade register (Ministry of Justice; data automatically transferred and stored to an intermediate database), (3) Register of Insured Persons (National Revenue Agency; data received upon written request).
- Tourism statistics: (1) Ministry of Interior.
- Vital and migration statistics: (1) Unified System for Civil Registration and Administrative Services of the Population (Ministry of Regional Development and Public Works), (2) Register of foreigners (Ministry of Interior), (3) National Revenue Agency (National Social Security Institute).

2.5.1 Problematic data access cases

The NSI identified the following administrative data sources for which access is not feasible or is achieved in a considerable problematic way.

Data source	Data owner	Purpose access ^[1]	of Statistical domain where data are used
VAT declarations	National Revenue Agency	3, 4, 5	STS
Environmental subsidies	Ministry of Finance	4	Environmental statistics
Property register	Registry Agency	3, 4, 5	Housing price statistics

Legal and institutional issues: No legal or institutional issues have been reported.

¹⁷ National Statistical Institute of Bulgaria, United Nations, Conference on European Statisticians, “Census 2011 in Bulgaria” (2012).

¹⁸ National Statistical Institute of Bulgaria, Methodological notes on the compilation of internal and external migration statistics.

¹⁹ Action “Improvement of the use of administrative sources (ESS.VIP ADMIN WP6 Pilot studies and applications)”, Grant Agreement number 07112.2015.002-2015.347).

Cooperation with data owners: Regarding VAT declarations, the NSI reported that the lack of effective cooperation mechanisms between the NSI and the administrative data owner constitutes an obstacle. For environmental subsidies, the NSI reported facing difficulties in accessing the data source since data owners refuse to provide access to their data and written agreements covering each case of data provision are not in place. For the property register, no issues have been reported with regard to the cooperation with the Registry Agency.

Quality aspects: Reported quality issues for the VAT declarations include differences in the coverage and definitions of variables. Similar problems are confronted for the environmental subsidies, since the definitions and classifications used in the administrative data differ, while data become available too late for the needs of the NSI. In the property register, the main issue reported is that a significant indicator on the “purpose of the transacted property”, which is essential for data processing, is often missing.

Technical aspects: The NSI stated that automated data exchange mechanisms are not used for transferring the data on VAT declarations and environmental subsidies. For the property register, there are difficulties related with the format of the data file; information is usually entered in a text unstructured format.

2.5.2 Successful data access cases

Data source	Data owner	Purpose of access ^[1]	Statistical domain
Register of insured persons	National Social Security institute	2, 5	Labour Statistics
Population Register	Ministry of Regional Development and Public Works	1	Demographic statistics
Data on renewable energy sources	Sustainable Energy Development Agency	1	Energy statistics

^[1] (1) Main source for the survey frame, (2) Auxiliary source for the survey frame (3) Direct compilation of statistics from administrative aggregated data or microdata, (4) Direct compilation of statistics in combination with other sources (e.g. other administrative sources, surveys), (5) Source of auxiliary data for prefilling, editing / validation, imputation, etc.

Factors contributing to successful access: The NSI considers that the good cooperation mechanisms between NSI and the National Social Security Institute and timely provision of the data are the two main factors contributing to the successful use of the register of insured persons. In the case of the population register, an agreement between the NSI and the Ministry of Regional Development and Public Work covering all issues regarding data coverage, content and structure is in place and always respected. Good relationships established with the Sustainable Energy Development Agency is considered by the NSI the most important factor that contributed to successful access to the data source on renewable energy sources.

Obstacles overcome in accessing the data source: No obstacles have been confronted.

Best practice study: According to the NSI, none of the above-mentioned data access cases could be used as a best practice study.

3 Czech Republic

3.1 Legal framework

The State Statistical Service Act (SSSA) No. 89/1995 (incorporating various amendments, from 1999 to 2014) specifies that the State Statistical Service is carried out by the NSI and, under specific conditions, by ministries and other central administrative authorities.

Section 9 of SSSA states that bodies providing State Statistical Services use data acquired or collected by ministries and other administrative authorities under specific regulations. Ministries and other administrative authorities are bound to provide them the necessary data on their request in time

and free of charge. It also makes specific provisions for some data sources and, in some cases, the individual variables that must be provided to the NSI.

According to the peer review report, in 2015 the NSI planned initiating negotiations with the office of the Minister for Human Rights, Equal Opportunities and Legislation with the view to amend to the SSSA so that the unambiguous and undeniable right of the NSI to access administrative data is granted.

Legal right to access administrative data at microdata level

Upon the provisions of the SSSA, administrative data should be transmitted to the NSI in a format that would not permit the direct identification of natural or legal persons. As stated in the questionnaire, the NSI is authorized to receive anonymized administrative microdata for most sources. Where the SSSA grants to the NSI the right to access administrative microdata, it does not oblige the NSI to request permission from any authority other than the data owner. The legislation governing some administrative data sources imposes strict rules for the protection of data against any violation of confidentiality.

Cooperation with data owners in design of administrative databases

The SSSA does not oblige the data owners to consult the NSI when setting up, changing or discontinuing the administrative data source.

Cost-free access to administrative data

The SSSA specifies that ministries and other administrative bodies are bound to provide the NSI the necessary data in time and free of charge, unless otherwise stated. For instance, the SSSA further states that individual data from tax returns shall be transmitted to the NSI under the condition that they have been processed by financial bodies and are available in a central database in an electronic format. As further commented by the peer reviewers, in practice, tax authorities transmit free of charge only part of their data, i.e. those captured in an electronic format, thus rendering access to large amount of data, i.e. those not recorded in an electronic format, impossible. To overcome this issue, the NSI has been asked by the tax authorities to fund their electronic recording.

Coherence of the legal framework

As far as it is stated in the peer review report, the wording of the SSSA is restrictive and often misinterpreted by the data owners, as the right of the NSI to access administrative data seems to be limited to specific data sources or specific variables. For instance, since 2013, the Ministry of Interior refuses to provide the NSI with population register updates on newly registered persons (births and immigrants). Although the NSI was under negotiation with the Ministry of Interior, which in its turn consulted the Office for Personal data protection on this issue, an agreement had not been reached until 2015.

Another obstacle mentioned by the peer reviewers is the reluctance of some ministries to provide their data, as provisions made in the SSSA are not considered sufficient, and specific provisions in their own legislation are deemed necessary.

3.1.1 Legal restrictions

The legal restrictions identified by the NSI with regard to its access to administrative are summarized as follows:

- The SSSA does not oblige data owners to consult the NSI when setting up, changing or discontinuing an existing data source.
- For some sources, the reuse of data for statistical purposes other than initially stated is not allowed.

- For some sources, there are restrictions regarding the maximum duration of retention of the data.
- In some cases, the legislation applicable to administrative data owners contradicts NSI's rights to access administrative data.
- In some cases, additional legal acts are required so that the NSI obtains access to the administrative data source. This process is time consuming, since the adoption of a legal provision takes about two years under the condition that there are no other complications.

3.2 Internal institutional aspects

Policy on administrative data

An organization-wide policy promoting the use of administrative data is partly in place and one of the top priorities for the NSI is to increase the use of administrative data. The Czech Statistical Council, which is the advisory body for the NSI, meets about three times a year, and discusses, among other issues, on administrative sources potentially useful for statistical purposes. From 2014 onwards, other state authorities are requested to explicitly state in their legislative proposal whether a new administrative data source is going to be established or whether an existing one is planned to be modified. According to the peer reviewers, the latter would be of benefit to the NSI's activities on keeping up with latest developments.

With regard to data quality, the NSI partly uses standardized criteria across the statistical domains to assess the adequacy of administrative data. The NSI has developed systematic practices to prevent the disclosure of personal data and ensure security of administrative data.

Organisation within the NSI

The NSI considers that it has the required competences and expertise to effectively exploit administrative data for statistical purposes. However, in the view of the NSI, the available experienced staff is not sufficient to effectively exploit new administrative data sources taking also into account financial constraints, the lack of other qualified staff (e.g. programmers, administrators) as well as other restrictions (e.g. data storage limitations).

3.2.1 Internal institutional obstacles

In summary, the following obstacles were identified by the NSI:

- An organisation-wide policy promoting the use of administrative data is only partly in place.
- The developments in the legal framework concerning the use of administrative data are only partly monitored.
- A procedure to identify administrative sources potentially useful for statistical use is only partly in place.
- Documented quality criteria to assess the quality of administrative data are only partly used across the statistical units of the NSI.
- When it comes to new administrative data sources, the capacity of experienced statisticians to effectively exploit the new sources is not sufficient due to financial constraints and lack of other qualified staff.

3.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

The NSI considers that the overall culture of the staff in the country's public sector is neutral to data sharing. A national strategy on data sharing in the public sector has been recently adopted and is currently under a pilot phase (e.g. only for the system of common registers).

Cooperation with data owners

In most cases, written agreements covering each case of data provision are signed between the NSI and the data owners. The coordination mechanisms between the NSI and data owners are considered by the NSI effective, with the exception of the Ministry of Interior, with which negotiations for accessing data to be used for the 2021 census are still ongoing.

Despite that, the NSI is rarely consulted by the data owners on the design of new databases and data owners rarely take the NSI's recommendations into account. In most cases, administrative data owners send their data without delays relative to the agreed timetable but sometimes refuse to provide access to their data. In the latter cases, the negotiations are time consuming on account of the frequent change of the contact persons. Even though the NSI does not have the authority to demand modifications from the data owners, these are often willing to make changes in their data (e.g. tools used, format of the data files) on the condition that the NSI covers that costs.

The NSI always communicates to the data owners the procedures in place to ensure the confidentiality and security of the data. When quality-related problems occur, the NSI lacks the power to ask for suitable modifications in administrative databases. The NSI communicates to data owners the inconsistencies identified in their data in few cases. During this communication, the NSI takes all necessary measures to protect the confidentiality of the data.

3.3.1 Issues related to the wider institutional environment and cooperation with data owners

In summary, the NSI reported the following problems regarding its cooperation with the data owners:

- There are concerns in the general public regarding personal data privacy and confidentiality.
- The NSI is consulted by the administrative data owners on the design of databases only in a few cases and the data owners rarely take into account the recommendations of the NSI.
- Data owners inform the NSI sufficiently in advance on planned changes in databases only in a few cases.
- The NSI communicates to the data owners issues related to the errors or inconsistencies in their data only in a few cases.
- Sometimes data owners refuse to provide access to their data.
- Sometimes administrative data owners request payments from the NSI in order to make changes in the data (e.g. tools used, format of the data files).
- Sometimes excessive formality or bureaucracy between organisations is an obstacle for cooperation.
- When quality-related problems are encountered, the NSI does not have the authority to demand suitable modifications from the data owner.

3.4 Quality and Technical preconditions

Quality aspects

The NSI considers that it has access to sufficient methodological information on the collection process operated by the data owners with the exception of the Ministry of Interior, with which negotiations are currently in place. Unique and consistent identifiers are used across data sources in most cases and the NSI has sufficient information for linking different data sources. However, according to the information provided in the questionnaire, sufficient quality checks useful for the NSI are applied by data owners only in a few cases.

Technical aspects

The NSI stated in the questionnaire that there are few difficulties related to the format used for the exchange of data and metadata. The technological means used for the exchange of data are outdated. It has also added that the databases in the government sector are not homogeneous, while

part of the data are not in electronic format. The latter raises difficulties for the data owners to implement technological changes in their data due to budget restrictions, different priorities and dependence on external contractors.

3.4.1 Quality and technical restrictions

Based on the information in the questionnaire, the following technical and quality restrictions have been identified by the NSI:

- Data owners apply quality checks that are useful for the NSI only in a few cases.
- Data and metadata exchange mechanisms are automated only in a few cases.
- The technological solutions used for data exchange are outdated.
- Data owners face difficulties in implementing technological changes in their databases.

3.5 Some examples of administrative data usage

Business Statistics

Access to the VAT register resulted in the reduction of the number of enterprises that had to fill-in the questionnaire in the 2013 implementation of the SBS survey. Several administrative sources are used to update the business register and compile some variables of SBS. The rest of the variables are collected via surveys. Among the administrative data sources used for the update of the business register, “Income Tax Returns” has been identified as one of the sources for which access is achieved in a problematic way (see Section 3.5.1).

Social Statistics

In the 2011 implementation of population census, some data from the population register and from the register of census districts had been used as secondary sources (e.g. prefilling of the questionnaires, data validation).

Plans are set towards a combined census in 2021. The population register, maintained by the Ministry of Interior will be the backbone source for Census 2021, as well as for vital statistics. The NSI has recently benefited from a Eurostat grant on improving access to administrative data sources²⁰. Important progress has been made on analysing data sources that could be used for the census 2021. The NSI analysed samples of administrative data provided by several ministries and other public authorities (Ministry of Finance, of Interior, of Labour and Social Affairs, of Education, Youth and Sports, the General Health Insurance Company, the Social Security Administration etc.). Contracts with the data owners were signed, which specified the conditions for accessing and processing the administrative data. The conditions were defined in cooperation with the Office for Personal Data Protection. The data were analysed from quality point of view and they were linked with other data through the birth number. It was concluded that several variables can be used to replace the census variables (sex, legal marital status, citizenship) while others can be used as complementary sources during data processing. The NSI noted that most owners of administrative sources were not prepared for providing data to external users and therefore ad-hoc procedures had to be created. In the future, standardized modes of data exchange need to be develop in order to transmit the data needed for the census.

Examples of sources used

- Business statistics: (1) VAT Register (Ministry of Economics), (2) Commerce Register (Ministry of Justice), (3) Trade Register (Ministry of Industry and Trade), (4) Czech Social Security Administration Ministry of Labour and Social Affairs, (5) Income Tax Returns (Ministry of Economics).

²⁰ Grant 07112.2015.002-2015.358 Improvement of the use of administrative sources (ESS.VIP ADMIN WP6 Pilot studies and applications).

- Population census statistics: (1) Population Register (Ministry of Interior), (2) Register of Census districts and Buildings Register (RCDB), (3) Social information system.

3.5.1 Problematic data access cases

The NSI identified the following administrative data sources for which access is not feasible or is achieved in a considerable problematic way.

Data source	Data owner	Purpose of access ^[1]	Statistical domain where data are used
Annual income tax returns of the natural and legal persons including profit and loss account and balance sheet statement	Ministry of Finance	2, 4	SBS (directly), Business statistics (indirectly), Business register
Register of inhabitants and constitutive sources (information system of citizens and of foreigners) (CPR)	Ministry of Interior	2, 4	Population statistics, Population census; Business register (personal data on employers, own-account workers)
Social information system	Social Security Administration, Ministry of Labour and Social Affairs	4	Population census

^[1] (1) Main source for the survey frame, (2) Auxiliary source for the survey frame (3) Direct compilation of statistics from administrative aggregated data or microdata, (4) Direct compilation of statistics in combination with other sources (e.g. other administrative sources, surveys), (5) Source of auxiliary data for prefilling, editing / validation, imputation, etc.

Legal and institutional issues: As reported by the NSI, access to the annual income tax returns is granted to the NSI under specific conditions (see also Section 3.1) and only for specific statistical purposes, i.e. for the needs of compiling national accounts pursuant to requirements of the European system of national and regional accounts and for maintaining statistical registers. The act governing access to the CPR data (CPR Act) requires that data only for the update / maintenance of the registers / information systems specified in the SSSA are provided. However, the NSI does not have the legal right to establish an information system. Access to the Social Information System microdata was granted after the amendment of the EC regulation No. 223/2009.

Cooperation with data owners: Following the NSI's comments in the questionnaire, access to the annual income tax returns data source is restricted due to excessive formalities among the NSI and the Ministry of Labour and Social Affairs. In fact, the data owner is willing to make any changes required in the data source under the condition that the NSI undertakes the financial cost. Regarding the CPR data source, the NSI stated that data owners refuse to provide to the NSI their data except for data on migration (see also previous subsection on "legal and institutional issues"). According to the NSI, problems confronted with regard to the Social Information System data source stem from the lack of written agreements that cover each case of data provision (except for aggregated data), the lack of effective cooperation mechanisms as well as the fact that excessive formality is in place.

Quality aspects: The NSI stated that it has access to selected data items of the profit and loss account and balance sheet statement, although the Ministry of Finance collects additional information. Access is restricted since some data are not available in electronic format, while other technical issues restrict access to the data available in electronic format. For the register of inhabitants, the NSI mentioned that the coverage of the data in the administrative source is significantly different from the one required for statistical purposes (e.g. over-coverage of the registered persons living abroad and under-coverage of internal migration, which is caused by misreporting the number of people who changed their place of residence). From NSI's experience gathered so far with regard to the Social

Information System data source, since the NSI reported that it does not have yet sufficient methodological information on the data collection process, differences in the definitions of the statistical units and variables used have been identified.

Technical aspects: Based on the information reported by the NSI in the questionnaire, the usage of outdated technologies by the data owner and its dependence on external contractors restrict its access to the complete dataset from the persons and loss account and balance sheet statement. For the exchange of data on CPR data, the NSI stated that the web services used, are not appropriate for exchanging large datasets. Finally, in accordance with the NSI, there are still many technical issues to be resolved for the exchange of data and metadata on the Social Information System.

3.5.2 Successful data access cases

The registry of territorial identification, addresses and real estate is considered by the NSI as a successful data access case.

Data source	Data owner	Purpose of access	Statistical domain
Registry of territorial identification, addresses and real estate	National mapping agency	Source for the Statistical territorial register	Census and other statistical terrain surveys, statistical data analysis, presentation and dissemination in spatial context

Factors contributing to successful access: The fact that data are obtained free of charge and the established long-term cooperation between the NSI and the data provider have contributed to the successful NSI's access to the data source. Additionally, data can be accessed remotely and the statistical registers are updated automatically in real time.

Obstacles overcome in accessing the data source: No obstacles have been confronted.

Best practice study: According to the NSI, the above-mentioned data access case cannot be used as a best practice study.

4 Denmark

4.1 Legal framework

The Consolidated Act No. 599/2000²¹ on Statistics Denmark specifies that the NSI is responsible for supervising or assisting the establishment and utilization of central public registers that serve data for administrative duties for the public sector, business and industry, and that can be used for statistical purposes. According to the provisions of the Act on Statistics, the NSI shall collect, process and publish statistical information, possibly in collaboration with municipal authorities and other statistical bodies.

Moreover, Section 6 of the Statistics Act states that within the framework of the working programme adopted by the Board, public authorities and institutions shall supply information, upon the NSI's request.

Reference to statistical confidentiality is made in different general laws, including the Act on Processing of Personal Data of 2 June 2000, the Danish Public Administration Act of 19 December 1985 and the Danish Access to Public Administration Files Act of 19 December 1985.

Legal right to access administrative data at microdata level

The NSI has the legal right to access administrative microdata from all sources. The legal framework does not require that they are anonymised first before their transmission to the NSI. Based on the

²¹ http://www.dst.dk/pukora/epub/upload/2285/5_1_en.pdf

information collected from the questionnaire, prior authorization from the national Data Protection Agency is required to be obtained for all sources for each instance of data transmission. As stated by the NSI, each transfer of administrative data to Statistics Denmark should be registered at the national Data Protection Agency.

Cooperation with data owners in design of administrative databases

According to the Section 1 of the Statistics Act, one of the activities of Statistics Denmark should be the supervision or provision of assistance in the establishment and utilisation of central public registers, which serve to perform administrative duties for the public sector, business and industry, and which can be used for statistical purposes. The Statistics Act also specifies that if the collection and processing of statistical information by a public authority or institution is being contemplated, then the NSI should be informed so that to negotiate on a potential coordination. The data owners are obliged to inform the NSI on potential changes in their databases that may have impact on the final statistical output. However, the recommendations made by the NSI are not binding.

Cost-free access to administrative data

The NSI has the legal right to access administrative data from all sources on a cost-free basis.

Coherence of the legal framework

As stated by the NSI, the legal framework does not leave room for misinterpretations. For some sources, the passing of specific additional legal acts is required in order that the NSI obtains access to those sources.

In 2015, the peer reviewers reported that the current regulatory or administrative framework does not specify the conditions for data sharing among the NSI and the administrative data owners. Therefore, the production of statistics relying on administrative data may be affected any time when the data source is modified or discontinued. The peer reviewers make reference to specific instances where the NSI has not been notified in advance about changes in the administrative registers which had significant impact on the compilation of statistics. For instance, when the reference period for the collection of data on benefits from unemployment allowances was shrunk from four to two years the NSI had to revise its whole approach for the derivation of the unemployment series.

4.1.1 Legal restrictions

According to the NSI, the legal restrictions are presented below:

- The NSI has access to data only from specific administrative sources. Access to administrative data should be approved by the Board of Statistics Denmark.
- A permission from the national Data Protection Agency should be obtained on every instance of obtaining administrative data. Each data transfer shall be registered at the national Data Protection Agency.
- For some sources, the passing of additional legal acts is required to access specific administrative data sources.

The peer reviewers mentioned the following issues:

- The current regulatory or administrative framework does not specify the conditions for data sharing among the NSI and the administrative data owners.

4.2 Internal institutional aspects

Policy on administrative data

Based on the information provided in the questionnaire, within the NSI, an organization-wide policy for promoting the use of administrative data is in place.

Standard procedures are in place in order to:

- Monitor developments in the legal framework concerning use of administrative data.
- Identify administrative sources with potential statistical use.
- Ensure confidentiality and security of administrative data.
- Use standardised and documented quality criteria across the statistical domains to assess the adequacy of administrative data for statistical purposes.

According to the peer review report, the NSI produces about 90% of all European statistics, while the rest of them are being compiled and disseminated by other national authorities (ONAs) such as the AgriFish Agency, the Ministry of Education, the Environmental Protection Agency, and the Immigration Service. The statistical production system is centralized, but there are no binding arrangements establishing the cooperation mechanisms between the NSI and the ONAs.

Organisation within the NSI

The statistical production is based, to a large extent, on registers. Data from administrative registers of other public organisations are centrally edited and organised by the NSI into statistical registers, which are highly harmonized across subject areas and time. The Central Person Register (CPR), the Central Business Register (CBR) and the Register of Buildings and Dwellings (BDR) are the three core registers used. These cover people, business and dwellings and are supplemented by many others that provide data for different areas, such as taxation, health, education, social welfare, crime and employment. The assignment of unique identifiers for persons, businesses and buildings allows the linking of information among the various registers used. Only a small proportion of the statistical data are derived through surveys on businesses or households.

Moreover, according to the peer review report, the NSI has the capacity and the expertise to use administrative data to produce reliable statistics, and could probably take over the production of some of the European statistics produced by the ONAs.

As reported in the questionnaire, the NSI is well-resourced and its personnel has the required competences to effectively exploit administrative data for statistical purposes.

4.2.1 Internal institutional obstacles

No issues have been identified by the NSI.

4.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

In view of the NSI, the overall culture in the country's public sector is favourable to data sharing. Concerns in the general public regarding personal data privacy and confidentiality are not obstacles for the sharing of data among organisations.

A national strategy on data sharing in the public sector is in place. The NSI's view on the effectiveness of implementation of the data sharing strategy is neutral.

According to the peer reviewers' assessment, there is a long tradition in the use of administrative data. However, many of the ONAs lack of statistical expertise. Due to the lack of coordination mechanisms within the National Statistical System (NSS), the ONAs neither cooperate with the NSI nor benefit from the NSI's expertise on quality assessment.

Cooperation with data owners

As reported in the questionnaire, written agreements covering each instance of data provision are signed between the NSI and the data owners in most cases. In 2015, the peer reviewers stated that

36 out of the 58 administrative data sources used for the compilation of statistics are subject to a formal agreement with the data owner specifying the time frames and the file format for data deliveries. For instance, the reception of data from the Central Person Register is based on an informal agreement.

The NSI considers that the coordination mechanisms with the data owners are in most cases effective.

According to the NSI, in most cases, Statistics Denmark is consulted by the data owners on issues such as specifications or design of administrative databases. In most cases, the data owners take into account the recommendations of the NSI when setting-up, changing or discontinuing an administrative data source. Moreover, in most cases, data owners inform the NSI sufficiently in advance of the changes planned to be implemented in the structure or design of their databases.

The NSI mentioned that it communicates to the administrative data owners the procedures in place to ensure confidentiality and security of the data in most cases. Issues related to the errors and inconsistencies identified in administrative data are also communicated to the data owners for all cases. During this communication, the NSI always takes all necessary measures to protect individual confidentiality.

Based on the information provided in the questionnaire, the NSI sometimes faces difficulties in cooperating with data owners. In view of the NSI, in general the cooperation with data owners is good but in few cases, data owners send their data with delays relative to the agreed timetable.

Excessive formality or bureaucracy is rarely an obstacle for cooperation.

4.3.1 Issues related to the wider institutional environment and cooperation with data owners

In summary, the NSI identified the following issues:

- When quality-related problems are encountered, the NSI does not have the authority to demand suitable modifications from the data owners.
- The NSI faces sometimes difficulties in cooperating with administrative data owners.
- In few cases, administrative data owners send their data with delays relative to the agreed timetable.

4.4 Quality and Technical preconditions

Quality aspects

Based on the information in the questionnaire, the NSI has access to sufficient methodological information on the data collection process operated by the data owners for all cases. In most cases, data owners apply sufficient quality checks that are useful to the NSI.

Unique and consistent identifiers are used across data sources for all cases and the NSI has sufficient information for linking different data sources.

Technical aspects

The NSI did not report any difficulties regarding the format used for the exchange of data and metadata. Automated data exchange mechanisms are used for transferring data and metadata for most cases.

4.4.1 Quality and technical restrictions

No issues have been identified by the NSI.

4.5 Some examples of administrative data usage

Business Statistics

Business statistics are register-based, but when necessary, additional data are collected from surveys.

Social Statistics

Population census²², vital statistics²³ and labour market statistics (LCI), education and health and crime statistics are register-based. Data from statistical registers are also used as secondary sources complementing labour force²⁴ as well as income statistics²⁵.

Agricultural Statistics

In the field of agricultural statistics, the agricultural census²⁶ is mainly based on a survey but additional data are complementarily derived from administrative sources.

Examples of sources used

- Business statistics: (1) Business Register and Central Tax Payers Register (data for SBS), (2) Income (data for STS).
- Social statistics: (1) Central Population Register (for population census), (2) Danish Immigration Services Register (for population statistics), (3) Central Pension Register (for population census and income statistics), (4) Pension Tax Register (for income statistics), (5) Income Register (for labour market and income statistics).
- Agricultural statistics: (1) IACS register (data for subsidies) (Ministry of Agriculture), (2) Livestock Register (Ministry of Agriculture).

4.5.1 Problematic data access cases

The NSI did not provide any information.

4.5.2 Successful data access cases

The NSI did not provide any information.

5 Germany

The information for Germany stems solely from the publicly identified documentation as well as from the national peer review report and the Workshop on access to administrative data sources held in Brussels in September 2016.

5.1 Legal framework

In Germany, the main producers of federal and EU statistics are the Federal Statistical Office (FSO) and the Statistical Offices of the Länder (SLO). Other National Authorities (ONAs) (e.g. the Federal Employment Agency, the Federal Agency for Agriculture and Food, etc.) also produce EU statistics. The NSI's legal role is the coordination of the production of federal statistics by the Länder.

²² Statistics Denmark, Documentation of Statistics for the Population, the Movements and the Population in the Municipalities and Regions (2013).

²³ Statistics Denmark, Documentation of Statistics for Births (2013).

²⁴ Statistics Denmark, Documentation for Register-Based Labour Force Statistics (2013).

²⁵ Statistics Denmark, Documentation for Income Statistics, (2014).

²⁶ Statistics Denmark, Census of Agriculture, Explanatory notes (2010).

For instance, the Law on statistical registers specifies that administrative files from the tax authorities, the Federal Institute for employment, the Chambers of Craft, the Federal Finance Office and the Chambers of Industry and Commerce may be used by the NSI²⁷.

Upon the provisions of the Federal Statistics Law (hereafter FSL), the NSI shall examine whether a public administrative agency has suitable data, in terms of quality, for producing statistics. If and to the extent that the NSI establishes the suitability of administrative data, these data should be used for compiling relevant federal statistics, under the condition that the transmission of the data is regulated by a legal provision ordering or amending the federal statistics.

Thus, a general legal act allowing the NSI and the SLOs to access each and every administrative data source for statistical purposes is not in place. The mandate of the statistical authorities for obtaining access to administrative data is given by specific legal acts. During the legislative procedure, the administrative authorities concerned are consulted.

Article 13 of the FSL authorizes the NSI to keep a business register (statistical register) and a register of addresses for the needs of preparation and production of federal statistics. The SLOs shall participate in maintaining these registers and may use them for accomplishing their tasks. Data from federal and Länder statistics as well as from generally accessible sources may be used for maintaining the registers.

Legal right to access administrative data at microdata level

Upon request, the federal administrative agencies and the agencies performing public administration duties under Land law shall transmit individual data to the NSI that do not include names or addresses (formally anonymised individual data), if these are required for additional tests regarding the suitability of the administrative data for statistical purposes and if the competent federal ministry has commissioned the NSI to carry out such tests. Where agencies performing duties of public administration of the Länder are concerned, the relevant competent Land ministries shall be consulted (FSL, Article 5a).

Cooperation with data owners in design of administrative databases

Usually, the NSI does not have early involvement in the design of administrative data sources. Communication with data owners takes place during the legislative process, which leads to the regulation ordering the statistical use of administrative data. During this phase, the NSI and the data owners have rather informal discussions on quality aspects of the data. However, some ONAs are also producers of administrative data and as such directly involved in the design of administrative data (e.g. the Federal Employment Agency).

The NSI and the SLOs seek to become members of the so-called advisory boards of users, set up by the owners of administrative databases in order to be consulted on the design and make-up of administrative databases.

Cost-free access to administrative data

The NSI has the right to access administrative data on a cost-free basis.

Coherence of the legal framework

Following the provisions under Section 13a of the Federal Statistics Law, the following data may be linked in order to obtain statistical information: (a) data from economic and environmental statistics of enterprises, establishments and local units, including data from such statistics compiled by the Deutsche Bundesbank, (b) data from the statistical register, (c) data specified in the Act on the Use of

²⁷ United Nations Statistics Division, Country profile of Germany (<https://unstats.un.org/unsd/dnss/docViewer.aspx?docID=508#start>)

Administrative Data, and (d) data obtained by the NSI and the SLOs from generally accessible sources.

Specific restrictions arise with regard to the legal provisions regulating population census statistics. According to the 2011 Census Act, personal variables in the register of addresses and buildings have to be deleted after 2015. The peer reviewers mention that under the provisions of the Census Act, the NSI has limited authority to promote measures that enable the linking of the population data with other data sources or reuse them for other statistical purposes. They also add that the NSI does not have the right to link household survey data with administrative data.

5.1.1 Legal restrictions

The legal restrictions stemming from the collected information are summarized as follows:

- Specific legal acts are required to be passed to give the NSI access to each administrative data source.
- The legal framework does not foresee that the NSI is informed in advance by the data owners about planned changes in their databases.
- The legal framework does not foresee that the NSI is consulted by the data owners when changes are implemented in their databases.
- For some sources, there are restrictions regarding the maximum duration of retention of the data.
- For some sources, the reuse of data for statistical purposes other than initially stated is not allowed.

5.2 Internal institutional aspects

Policy on administrative data

As far as it is stated in the peer review report, the use of administrative data for statistical purposes is improving over the years within the German Statistical System. The NSI and the SLOs use about 140 different administrative sources for statistical purposes.

General provisions on the mandate of the NSI to access any administrative data source for the compilation and dissemination of EU statistics and on data sharing among public national authorities are not in place.

As mentioned by the peer reviewers, in 2015, an exercise was undertaken across the German Federation in order to standardize administrative data and facilitate the effective integration of different administrative databases.

Organisation within the NSI

Not available information.

5.2.1 Internal institutional obstacles

On the basis of the collected information, no obstacles have been identified.

5.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

As stated by the NSI during the Workshop on access to administrative data sources (2016), in Germany the public is positive or at least indifferent to the use of administrative data about them by the NSI.

Cooperation with data owners

According to the peer reviewers, a more systematic communication between the NSI and the administrative data owners needs to be established.

The peer reviewers also mention that the FSL does not allow the Deutsche Bundesbank to access the data as well as centralized data storage systems held by the NSI and the SLOs. Moreover, the ONAs are not part of the data-sharing arrangements.

5.3.1 Issues related to the wider institutional environment and cooperation with data owners

According to the peer reviewers, NSI's cooperation with administrative data owners is not systematic.

5.4 Quality and Technical preconditions

Quality aspects

Following the peer reviewers' assessment, cooperation between the NSI, the SLOs and the administrative owners on data quality issues has been established but rather on an informal basis. Since the collection of administrative data aims primary to serve other purposes, the quality checks applied by the data owners are rather limited. The peer reviewers state that several issues arise with regard to the conformity of the administrative data for use, which are related to the coverage, concepts and coding schemes used by the data owners.

In 2016, the NSI in cooperation with the SLOs started to develop a strategy for the provision of tools and rules for the systematic examination of the quality of the data collected by the administrative data owners.

Technical aspects

A standardization framework that supports the use of XML in the German public administration (XÖV) has been developed. The XÖV framework has been designed with the view to promote the systematic use of common IT standards for the electronic exchange of data in the federal public administration. The framework is used for the transmission of several administrative datasets, part of which is used for statistical purposes.

As stated by the peer reviewers, technical tools facilitating the data sharing between the NSI and data owners exist.

5.4.1 Quality and technical restrictions

No restrictions have been identified on the basis of the information derived from the identified documentation, except for the fact that the data owners apply few quality checks and thus administrative data are not always of good quality.

5.5 Some examples of administrative data usage

Business Statistics

Data from businesses are partly obtained directly from the information systems of businesses with the support of an accounting software.

The business register is updated regularly using the annual data from the tax authorities and the Employment Office as well as structural data from other sources, such as Chambers of Commerce and Chambers of Crafts²⁸.

Statistics about the enterprises of the crafts sector are a separate part of the programme of official statistics in Germany. To define the statistical population for the crafts statistics, the Chambers of Crafts provide their membership lists to the statistical offices on a yearly basis. These lists are an

²⁸ Federal Statistical Office of Germany, Robin Lorenz, "Use of administrative data in the production of business statistics", Rome (2010).

important administrative source for the crafts statistics. The statistical offices link the lists to the business register.

Agricultural Statistics

Several administrative data sources are used for the compilation of agricultural statistics, such that on the cattle stock coming from the central database on animal identification and registration (HIT)²⁹. The regional and local statistical offices may further use data of the agricultural administrations from the integrated administration and control system (IACS). In the latter case, the Law on Agricultural Statistics states explicitly that the competent regional and local authorities are obligated to provide their data to the NSI.

The production of wine statistics is entirely based on registers. Every wine producer must be registered in a register of vineyard owners.

Registers are also used for land-use statistics. Remote sensing information is used as a complementary source.

Social Statistics

In the field of population statistics, efforts are in place to use the population registers maintained by the municipalities. The population census 2011 was register-based³⁰. Personal data from different sources were linked to the microdata collected by the statistical authorities. The register of addresses and buildings served as the sampling frame for the survey. In addition, the register of addresses and buildings was used to develop a system of spatial analyses.

Regarding statistics on criminal prosecution agencies and civil and criminal courts, administrative data on the total number of criminal prosecution proceedings and civil and criminal courts proceedings are used for a long time. The German case is particular in that the German court, police and statistical systems are decentralised, with authority devolved to the 16 Länder. In addition, statistical reporting on police is a task of the Criminal Police Offices at the 16 Länder and at federal level. So, the SLOs get administrative data (micro-data) from the Länder's criminal prosecution agencies, civil and criminal courts. The SLOs then produce statistical tables for their Länder and provide anonymised data at Länder-level to the NSI. The latter produces totals at federal level based on data at Länder level.

Examples of sources used

- Business statistics: (1) VAT Register, (2) Federal Employment Agency, (3) Chambers of Commerce, (4) Chambers of Crafts.
- Agricultural statistics: (1) Central database on animal identification and registration, (2) Integrated administration and control system (IACS).
- Social statistics: (1) Federal Employment Agency, (2) Administrative files of public agencies with personnel, (3) Population registers of the municipalities, (4) Geo-referenced address data of the Federation.

5.5.1 Problematic data access cases

The NSI did not provide in the questionnaire any information about administrative data sources for which access is restricted or achieved in a considerable problematic way.

Some problems regarding specific administrative data sources were raised during the Workshop on access to administrative data sources (2016).

For international trade statistics, some problems were mentioned concerning the use of the V.I.E.S. (VAT Information Exchange System). Data on recapitulative statements collected in each EU country regarding exports to other EU countries are shared through the V.I.E.S. in order to control for the

²⁹ Census of agriculture, explanatory notes (2010).

³⁰ Federal Statistical Office of Germany, Sabine Bechtold, Lessons learned from a mixed-mode census for the future of social statistics (2013).

respective imports (mirror data). V.I.E.S. could serve as an instrument for controlling the partner country level data for imports and exports within Intrastat (trade with EU countries). However, there is no possibility of using it as missing months and various inconsistencies were identified on the imports' side. It had been tried to solve this problem by consultation with the respective Tax authority, but the results were so far very modest.

For crafts statistics, one problem was that VAT statements were sometimes made for groups of enterprises. So VAT information was not available for all enterprises at individual level. Another issue was that NACE codes were not supplied by the data owner. The NSI added that it is difficult to address these issues with the owners of administrative data.

Another issue concerns the International Accounting Standards which were sometimes changed, without regard for statistical interests. Germany pointed out that there are technical problems due to the different way Länder handled data. A solution that had been applied was direct contact between the NSI and specific data owners.

Moreover, the NSI mentioned some technical problems with data for the Business Register, obtained from Finance and Labour authorities.

With regard to the production of wine statistics, some over-coverage occurs when owners own vineyards in more than one Land (double ownership).

According to the law, registers used for land-use statistics should take statistical interests into account, but according to the NSI, this is sometimes problematic.

5.5.2 Successful data access cases

The NSI did not provide in the questionnaire information about administrative specific data sources which can be considered as exemplary success cases.

As an example, the NSI elaborated on the factors and conditions facilitating the management and coordination of the data collection on criminal prosecution and criminal courts proceedings in all Länder during the Workshop on access to administrative data sources (2016). As pointed out by the NSI in the Workshop on access to administrative data sources, these include the following:

- Coordination between statistical offices at national level: The NSI invites the SLOs once a year to discuss and decide on statistical and technical aspects of compiling different statistics on justice at subnational and national level. The Federal Ministry of Justice attends this meeting as well and informs on new political issues.
- Coordination between ministries and statistical offices: Once a year the Länder Ministries of Justice meet to update data requirements in the set of statistics on justice. The Federal Ministry of Justice, the NSI and the SLOs attend this meeting as well. In this meeting discussions take place and decisions are made on harmonised data collection as a main task of the ministries of the Länder and on harmonised data preparation and validation as a main task of the statistical offices.
- Though there are different types of statistics on justice (criminal courts, civil courts, labour courts etc.), for each type of justice statistics the same data collection form is used in all Länder. This unique form is implemented in the software tools used by the courts to carry out their everyday business. Within these tools there is a special tool to transmit statistical data to the SLOs.

6 Estonia

6.1 Legal framework

The Official Statistics Act (OSA) of 2010 in Estonia gives the right to the NSI to primarily use administrative records and databases, generated in the course of activities of state, local government authorities and private entities under the condition that administrative data allow the production of official statistics complying with the standard quality criteria.

The OSA establishes the right of the NSI to create statistical registers based on the data collected from various administrative records and databases and other sources for the production of official statistics, independently of the initial purpose for which these data were collected.

Upon the provisions of the OSA, the NSI has the right to link the microdata collected from respondents with other administrative records and databases by using characteristics that allow the direct or indirect identification of statistical units.

With reference to statistical confidentiality, the OSA does not make explicit provisions, but is covered indirectly through to the statement that official statistics should be produced in line with the principles prescribed in the EU regulation.

Legal right to access administrative data at microdata level

The NSI has the right to access microdata and aggregated data from all sources. The legal framework neither requires that administrative microdata are anonymised before their transmission to the NSI nor obliges the NSI to request permission from any authority other than the data owner for accessing the data source.

Cooperation with data owners in design of administrative databases

As stipulated by the OSA (Subsection 29(2)), if the coverage, quality and level of detail of the administrative data do not allow the production of official statistics complying with the standard quality criteria of official statistics, the NSI has the right to make proposals for amending the structure and the classifications used in administrative records and databases. The recommendations of the NSI are binding.

Cost-free access to administrative data

The NSI has the legal right to obtain administrative data from all sources for free.

Coherence of the legal framework

According to the NSI, the OSA does not leave room for misinterpretation and explicitly establishes the right of the NSI to access administrative data for statistical purposes.

6.1.1 Legal restrictions

Following the information provided in the questionnaire, no legal restrictions have been identified.

6.2 Internal institutional aspects

Policy on administrative data

The NSI is an authority operating under the governance of the Ministry of Finance. As stated in the peer review report, more and more processes are centralized in almost all phases of the data production process. Upon the provisions of the OSA, administrative data must be used to the maximum possible extent for the production of official statistics. An organization wide policy for promoting their use is in place. Systematic and standard procedures are used in order to monitor developments in the legal framework governing the sharing of administrative data between authorities and to ensure confidentiality and security of administrative data.

Organisation within the NSI

The Director General of Statistics Estonia is required to submit to the Ministry of Finance an annual report on the implementation of the NSI's statistical programme, which includes a dedicated section on the quality of administrative records.

At Statistics Estonia, a specific unit within the NSI responsible for coordinating NSI's contacts and cooperation with the data owners exists. The Methodology Department (established in 2004) and the Data Processing Systems Department (also established in 2004, but re-organised in 2011) are responsible for the administrative data collection³¹.

The Methodology Department negotiates with the owners of administrative and other registers, and organises the conclusion of agreements with them. It is also in charge of the description of data in a central metadata system. Technically, the data from registers are transmitted to the NSI via a single entry point which is under the responsibility of the Data Processing Systems Department. The latter is responsible for pre-processing the data and making them available to NSI's in-house applications. Through this procedure, it is ensured that there is no duplicated data and that the data are ready for statistical analysis.

Since the Ministry of Finance has centralised IT-functions in its area of administration, traditional IT operations are undertaken by another institution, the IT Centre of the Ministry of Finance (established in 2012).

Additionally, in 2011, the office started developing the System of Statistical Registers (SRS) which integrates existing statistical registers (economic entities and agricultural holdings) and new statistical registers (persons, and buildings and dwellings) into a common system (see also Section 6.4).

As stated in the questionnaire, the staff of the NSI is highly skilled and has the required competences to effectively exploit administrative data for statistical purposes.

6.2.1 Internal institutional obstacles

Based on the information provided in the questionnaire by the NSI, the following issues were identified:

- Systematic procedures to identify administrative sources potentially useful for statistical purposes are only partly in place.
- Standardized and documented quality criteria to assess the quality of administrative data are only partly used across statistical domains.
- The NSI has limited resources and additional funding for the exploitation of administrative data is not anticipated to be received in the near future.

6.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

As reported by the peer reviewers and the NSI, the general public in Estonia is positive towards data sharing among organisations. The same also holds for the staff in the country's public sector. Although a national strategy on data sharing in the public sector exists, its implementation is still in progress. However, data owners become increasingly aware of the strategy and strive for its implementation.

Cooperation with data owners

³¹ United Nations, Conference of European Statisticians, Meeting on the Management of Statistical Information Systems (Paris, MSIS2013), Statistics Estonia, Allan Randlepp and Tuulik Sillajõe, "Business Case for Industrialisation in Statistics Estonia: Small Example of a Large Trend".

In most cases, written agreements covering each case of data provision are signed between the NSI and the data owners, while the coordination mechanisms between the NSI and data owners are considered effective in most cases.

In view of the NSI, difficulties are sometimes faced in cooperating with the administrative data owners. Although foreseen by the OSA, the NSI reported that is rarely consulted by the data owners on the design of their databases and its recommendations are rarely taken into account. The NSI added that data owners inform the NSI on planned changes in databases sufficiently in advance only in a few cases. However, the peer reviewers have mentioned that changes in the administrative databases are recorded centrally and are communicated to the NSI by the relevant authority.

In all cases, the NSI communicates to the data owners the procedures in place to ensure confidentiality and security of the data as well as issues related to the inconsistencies identified in their data. During this communication with data owners, the NSI takes all necessary measures to protect personal confidentiality.

The NSI stated that it lacks the authority to request suitable modifications from the data owners when quality related problems are encountered. In general data owners do not request payments not foreseen in the data. The NSI has been requested once by a private company to cover the financial costs for the implementation of the requested technological changes.

Bureaucracy is rarely an obstacle in the overall communication with the data owners.

6.3.1 Issues related to the wider institutional environment and cooperation with data owners

The NSI identified the following issues with regard to its cooperation with data owners:

- The NSI is consulted by the data owners on issues regarding the design of their databases only in a few cases, while data owners rarely take into account NSI's recommendations.
- Data owners inform the NSI sufficiently in advance about planned changes in their databases only in a few cases.
- When quality-related problems are encountered, the NSI does not have the authority to demand suitable modifications in the data.
- Sometimes the NSI faces difficulties in cooperating with the administrative data owners.
- Sometimes data owners send their data with delays relative to the agreed timetables.

6.4 Quality and Technical preconditions

Quality aspects

Unique and consistent identifiers are used across all data sources. Moreover, the NSI has sufficient information for linking various sources.

Technical aspects

A data collection system for administrative data, ADAM, developed by the IT Centre of the Ministry of Finance, permits the extraction of detailed personalized information from administrative sources using X-road (national data exchange layer), ftp, etc. ADAM³² has been created for supporting NSI's transition to register-based statistics production. It is used for storing data in raw databases and for making data available to NSI's in-house applications.

Finally, according to the NSI, difficulties related to the format used for the exchange of data and metadata are in place only in a few cases.

³² UNECE Seminar on New Frontiers for Statistical Data Collection, Tuulikki Sillajõe, "Statistics Estonia on its way to improving efficiency", Geneva (2012).

6.4.1 Quality and technical restrictions

Difficulties identified by the NSI are summarized as follows:

- The NSI has access to sufficient methodological information on the data collection process only in few cases.
- Data owners apply sufficient quality checks useful for the NSI only in a few cases.
- Automated data and metadata exchange mechanisms for the exchange of data and metadata are used only in few cases.

6.5 Some examples of administrative data usage

Business Statistics

In the field of business statistics, the business register is updated based on data coming from administrative sources and on the results obtained from surveys, such as the business demography survey conducted in the country. SBS data are collected via surveys, while administrative sources are used to some extent.

Agricultural Statistics

Agricultural data are collected via surveys and administrative data are mainly used for the update of the farm register.

Social Statistics

In the implementation of the 2011 Census, administrative data were used as secondary sources. A small share of the required data was obtained from the database of the 2000 census and from various administrative registers. Statistics Estonia has started preparations for a register-based population census in 2021. The goal is to use the existing administrative registers to the greatest possible extent. Statistics Estonia is currently benefiting from a grant in the ESS.VIP ADMIN project³³. Efforts are being made to evaluate the quality problems connected with the interoperability of information systems for register-based census and to make proposals for development activities and the improvement of the census work processes. The office is also working on implementing a harmonized methodology for ensuring confidentiality for geo-referenced data.

Examples of sources used

- Business statistics: (1) Commercial Register, (2) the State Register of State and Local Government Agencies, (3) the Register of non-profit institutions and organisations, (4) Annual book keeping accounts, (5) Register of Bank of Estonia.
- Agricultural statistics: (1) Register of Agricultural Animals, (2) Register of Agricultural support, (3) Annual Land use data, (4) Organic Farm Register.
- Social statistics: (1) Population Register, (2) Register of Construction Works, (3) Estonian Education Information System, (4) Health Insurance Database, (5) Commercial Register, (6) Register of Taxable Persons, (7) State Register of State and Local Government Institutions.

6.5.1 Problematic data access cases

The NSI identified a data source for which access is not feasible or is achieved in a considerable problematic way.

Data source			Data owner		Purpose of access ^[1]		Statistical domain where data are used
Farm	Accountancy	data	Rural	Economy	Research	1	Agriculture Statistics

³³ Grant agreement 07112.2016.004 -2016.586 on Improvement of the use of administrative sources (ESS.VIP ADMIN WP6 pilot studies and applications).

Data source	Data owner	Purpose of access ^[1]	Statistical domain where data are used
network	Centre		

^[1] (1) Main source for the survey frame, (2) Auxiliary source for the survey frame (3) Direct compilation of statistics from administrative aggregated data or microdata, (4) Direct compilation of statistics in combination with other sources (e.g. other administrative sources, surveys), (5) Source of auxiliary data for prefilling, editing / validation, imputation, etc.

According to the information provided to the questionnaire, the following issues have been identified restricting NSI's access to the data source:

Legal and institutional issues: The law governing the farm accountancy data network source contradicts the NSI's legal rights to access the data.

Cooperation with data owners: The Rural Economy Research Centre refuses to provide personal data with identifiers. Instead, aggregated data are provided.

Quality and technical aspects: No issues have been reported.

6.5.2 Successful data access cases

The registry of territorial identification, addresses and real estate is considered as a successful data access case.

Data source	Data owner	Purpose of access ^[1]	Statistical domain
Address data system	Estonian Land Board	5	All statistics
National Defence obligation register	Defence Resources Agency	4	Social and demographic statistics
Business Register	Centre of registers and information systems	3	Economic statistics

^[1] (1) Main source for the survey frame, (2) Auxiliary source for the survey frame (3) Direct compilation of statistics from administrative aggregated data or microdata, (4) Direct compilation of statistics in combination with other sources (e.g. other administrative sources, surveys), (5) Source of auxiliary data for prefilling, editing / validation, imputation, etc.

Factors contributing to successful access: The main factors contributing to a successful access and use of data from the address data system is the close cooperation with the Land Board (understanding of the NSI's needs and of the importance of providing the data), the good quality of statistics and the technological readiness of the data owner for transferring the data using automated mechanisms. The NSI has mentioned that when quality-related problems occur, the Land Board makes efforts to reply to NSI's requests as soon as possible. The same factors have contributed to a successful use of the business register. Regarding access to the national defence obligation register, the NSI has established good cooperation mechanisms with the data owner while the quality of the data is considered good.

Obstacles overcome in accessing the data source: No obstacles have been reported by the NSI.

Best practice study: According to the information provided to the questionnaire, none of the above-mentioned data sources could serve as a best practice study.

7 Ireland

7.1 Legal framework

According to the Statistics Act of 1993³⁴, the Director General of the Central Statistical Office (CSO) may request at any time any public authority to access and take copies of their records. Any public authority shall comply with any such request free of charge. Sections 30 and 31 of the Statistics Act specifically relate to the use of records of public authorities for statistical purposes. The latter provision shall not apply to records pertaining to (a) the Court, the prison administration or the police and (b) medical records not publicly available without the agreement of the Ministry of Health.

Sections 10, 23 and 24 of the Statistics Act establish the legal mandate of the NSI to collect information, including the use of administrative data that could potentially be useful for the compilation of European statistics. The mandate of the CSO also gives a specific commitment, that data provided to the CSO will be treated as strictly confidential, and used solely for statistical purposes.

The CSO is also governed by the Data Protection Acts, 1988 and 2003; as well as EU statistical law. The new General Data Protection Regulation (GDPR) was recently passed by the European Parliament and will come into force in Ireland in May 2018. The new GDPR may require that the Statistics Act 1993 and the Data Protection Acts, 1988 and 2003 be updated to reflect the new roles and responsibilities imposed on the CSO.

Legal right to access administrative data at microdata level

Access to microdata is granted to the NSI for all sources, with the exception of health and criminal justice data. The legal framework neither requires that administrative microdata are anonymised before their transmission to the NSI nor obliges the NSI to request permission from any authority other than the data owner for accessing the data source.

Cooperation with data owners in design of administrative databases

Upon the request of the Director General, public authorities must cooperate with the NSI to assess the potential of using their records for statistical purposes. When a public authority proposes to introduce, revise or extend its system, it shall consult with the Director General and accept any recommendations that he may reasonably make in relation to the proposal. Therefore, data owners are obliged to consult the NSI in the event of changes in their databases and the recommendations of the NSI are binding.

Cost-free access to administrative data

The NSI has access to all administrative data sources for free.

Coherence of the legal framework

According to the NSI, the Statistics Act does not leave room for misinterpretation.

7.1.1 Legal restrictions

No legal restrictions have been reported by the NSI.

7.2 Internal institutional aspects

Policy on administrative data

An organization-wide policy promoting the use of administrative data is in place. The National Statistics Board (NSB), established by the Statistics Act, provides support and guides the NSI by

³⁴ <http://www.cso.ie/en/media/csoie/census/documents/statsact93.pdf>

establishing priorities for the development and compilation of official statistics. Among its activities is the power to arbitrate between the NSI and the other public authorities on the potential administrative data sources that can be used for statistical purposes where any uncertainty exists. In general, the NSB plays an active role in the promotion of the exploitation of administrative data. Moreover, it set out the strategic priorities for official statistics 2015-2020 when publishing its plan 'A World Class Statistical System for Ireland'³⁵ in September 2015. This plan contains thirty-one explicit references to the concept of Governance in the roles and responsibilities of the Irish Public Service.

Procedures to monitor developments in the legal framework concerning the use of administrative data and to identify administrative sources with potential statistical use are partly in place.

According to the peer reviewers, the NSI has been actively promoting the use of an integrated approach for defining common identifiers, classifications and geo-spatial / postcodes across all administrative data sources. This requirement is emphasised in the NSI's statements of strategy. Implementing the institutional strategy 2015-2017, the NSI works on the provision of technical assistance and support to Central Government Departments on the development of the national data infrastructure, advocating for a wider use of the Personal Public Service Number (PPSN) and of a postcode and promoting the usage of a unique business identifier across all relevant administrative records.

Organisation within the NSI

The CSO has a formal coordination role across the wider Irish Public Service in relation to official statistics. Its coordination role is set in a legal context in the national Statistics Act, 1993.

The Irish Public Service Reform Plan³⁶ 2011 requires the NSI to develop a code of practice and standards for the gathering and use of data for statistical purposes in the Irish Public Service.

An Administrative Data Centre (ADC) has been recently set up, as a special unit, responsible for developing and coordinating the statistical use of administrative data within the NSI and with administrative data authorities. The ADC is responsible for setting the quality and technical standards for the statistical use of administrative data and acts as the central portal receiving the administrative data. The ADC is also responsible for the identification of potential new administrative data sources.

The ADC maintains approximately seventy different administrative data flows, comprising over seven hundred and fifty discrete datasets. The Revenue Commissioners and the Department of Social Protection are the largest data providers to the ADC.

The ADC (and the NSI) are strongly committed to Good Governance practice and ensure that access to the data is controlled in accordance with confidentiality obligations under national and EU Data Protection legislation, and reinforced by international, national, and internal CSO protocols on data confidentiality.

Moreover, the ADC requires that users of identifiable and sensitive data within the NSI should complete a Privacy Impact Assessment (PIA) before access is granted. The PIA contains a reference number so that access is recorded on a register, and includes the reason why access is requested as well as the signature of the sanctioning Data Office and Management Board member.

Following the peer reviewers' assessment, the NSI applies different practices across the different statistical domain, which makes the coordination of policies, procedures and activities beyond the NSI more complicated.

7.2.1 Internal institutional obstacles

Overall, the following issues were identified by the NSI:

³⁵ National Statistics Board, "A World Class Statistical System for Ireland", Strategic priorities for official statistics 2015-2020 (2015) (http://www.nsb.ie/media/nsbie/pdfdocs/NSB_Strategy_2015-2020.pdf)

³⁶ <http://www.reformplan.per.gov.ie>

- Procedures to monitor developments in the legal framework regarding use of administrative data are only partly in place.
- Procedures to identify administrative sources potentially useful for statistical purposes are only partly in place.
- Standardised and documented quality criteria are not used across statistical domains to assess the quality of administrative data.
- The NSI's staff has only partly the required competences to effectively exploit administrative data.
- The available resources within the NSI are partly sufficient for an effective exploitation of administrative data for statistical purposes.

7.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

As stated by the NSI, the overall culture of the staff in the country's public sector is neutral to data sharing. Concerns in the general public regarding personal data privacy and confidentiality might constitute an obstacle for data sharing among organisations.

The Government has drafted the Data-Sharing and Governance Bill, which will provide the legal basis for the sharing of data between Irish Public Bodies. The Bill will be presented to the Irish Parliament during the lifetime of the present Government.

Cooperation with data owners

In what concerns the cooperation with administrative data owners, several Memoranda of Understanding have been signed with several public bodies providing detailed specifications on all aspects of the data provided, e.g. variable specifications, data file structure, data file format, transmission deadlines, etc.

A high-level liaison group is set up with each administrative data source owner and is convened at least twice per year to discuss the cooperation with the NSI and any issues of concern that arise from either party in a transparent and open way.

The NSI has statisticians working in many different public sector organisations. A formal network the Formal Statistician Liaison Group (FSLG), comprising official statisticians as well as data analysts and researchers involved in the compilation and dissemination of official statistics in government departments, has been set up in order to compile and disseminate official statistics in these organisations, undertake formal communications between the NSI and statistical units in the public service, monitor the development and implementation of their data strategies, provide advice and promote adherence to international principles.

Overall, as stated by the NSI, in most cases, the coordination mechanisms between the NSI and data owners are effective.

In all cases the NSI communicates to the data owners the procedures in place to ensure the confidentiality and security of the data as well as the inconsistencies identified in their data. During that communication with data owners, the NSI takes all necessary measures to protect individual confidentiality.

Although the Statistics Act grants the NSI the right to ask for changes in administrative data sources, the NSI reported during the Workshop on access to administrative data sources (2016) that it prefers to ask for these changes without invoking its legal powers. In practice, as stated in the questionnaire, the NSI is never consulted by the data owners on the design of their databases and is never informed in advance on changes planned to be implemented in their databases. Moreover, administrative data

owners take the NSI's recommendations into account when setting up, changing or discontinuing a data source only in a few cases.

Additionally, data owners sometimes send their data to the NSI with delays relative to the agreed timetable.

Administrative data owners never refuse to provide access to their data and never request additional payments not foreseen by the law to provide their data. Bureaucracy is rarely an obstacle in the overall communication.

7.3.1 Issues related to the wider institutional environment and cooperation with data owners

In view of the NSI, the following issues were identified:

- A national strategy on data sharing in the public sector is not currently in place.
- There might be some concerns in the general public regarding personal data privacy and confidentiality that restrict the sharing of data among organisations.
- Although foreseen by the Statistics Act, the NSI prefers to ask for changes in administrative data sources without invoking its legal rights.
- The NSI is never consulted by data owners on the design of their databases and data owners take the recommendations of the NSI into account only in a few cases.
- Data owners never inform the NSI sufficiently in advance about potential changes in the design and structure of their databases.
- When quality related problems are encountered, the NSI does not have the authority to demand suitable notifications from the data owner.
- The NSI faces sometimes difficulties in cooperating with data owners.
- Sometimes data owners send their data with delays relative to the agreed timetable.

7.4 Quality and Technical preconditions

Quality aspects

The peer reviewers state that the Irish situation differs from many other EU countries, since no population register exists and the national legal framework does not allow the use of national personal identification numbers. Thus, unique identifiers for persons and businesses are not uniformly used across the administrative data files.

The use of common identifiers (persons and businesses) across the public sector is being promoted, and a system of postcodes is being introduced. The aim is that common identifiers for individuals, businesses and buildings are used across the public sector. The key linking variables for statistical purposes will be the Personal Public Service Number (PPSN), the business identifier and a postcode.

Technical aspects

As reported by the NSI, no difficulties related to the format used for the exchange of data and metadata exchange are faced, although automated data exchange mechanisms for transferring data and metadata files are not used.

The ADC is responsible for the administrative data transmission to the NSI as well as the management and storage of administrative data within the NSI. It provides controlled access to the data catalogues, which include metadata and quality information.

7.4.1 Quality and technical restrictions

Overall, the following issues were identified by the NSI:

- The NSI has access to sufficient methodological information on the data collection process only in few cases.
- Data owners do not apply sufficient quality checks that are useful for the NSI.

- Unique and consistent identifiers are not used across data sources.
- Automated data exchange mechanisms are not used for transferring data and metadata.

7.5 Some examples of administrative data usage

Business Statistics

The Business Register is compiled on the basis of the data coming mainly from tax authorities³⁷. However, business statistics are based on surveys since the linking of different administrative registers is not possible due to the lack of unique identifiers for businesses. A project was in place, to start collecting data from Tax Authorities starting with small enterprises. As mentioned by the NSI during the “Workshop on access to administrative data sources” (2016), consistent reach-out was necessary to obtain cooperation with them, since Tax Authorities gave priority to their core function over supplying data for statistics (their job is to collect taxes, not to produce information for statistics).

Social Statistics

A population or household register does not exist in Ireland; a frame of dwelling addresses serves as the sampling frame for population surveys. This sampling frame is being updated between censuses with administrative data on new dwellings.

Examples of sources used

- Business statistics: (1) Revenue Commissioner Register, (2) VAT Register, (3) Register of employers (PAYEP35), (4) Income Tax.

7.5.1 Problematic data access cases

The NSI identified a data source for which access is not feasible or is achieved in a considerably problematic way.

Data source	Data owner	Purpose of access	Statistical domain where data are used
Mobile phone data	Mobile Network Operators (MNO)	Examination of the data source potential useful for the compilation of tourism statistics	Tourism statistics

Legal and institutional issues: The NSI is preparing a proposal to access, in aggregated and anonymized form, in bound roaming data from the Irish MNOs. This proposal will be discussed with, and cleared by, the Office of the Data Protection Commissioner before access is sought from the MNOs. As added by the NSI during the “Workshop on access to administrative data sources” (2016), the data protection authority stopped the NSI's effort to obtain data from mobile phone operators.

Cooperation with data owners: No issues have been reported by the NSI.

Quality aspects: The main issues identified by the NSI with regard to the quality of the data is the lack of sufficient methodological information on the data collection process as well as of unique and consistent identifiers across the different data providers.

Technical aspects: Besides the legal obstacles, the NSI reported that it faces technological barriers due to the lack of automated exchange mechanisms transferring the data and metadata.

7.5.2 Successful data access cases

The following data source has been identified by the NSI as an exemplary success access case.

Data source	Data owner	Purpose of access	Statistical domain
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³⁷ Central Statistical Office, “Use of administrative data to compile business statistics” (2010).

Employ level returns by registered employers (P35L)	Revenue Commissioners	To produce employment based statistics	Business and household statistics
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Factors contributing to successful access: In the view of the NSI, the critical factors for the successful usage of the data source are the good relationships established with the Revenue Commissioners and the signature of a Memorandum of Understanding.

Obstacles overcome in accessing the data source: The NSI did not confront any obstacles.

Best practice study: According to the information provided to the questionnaire, the case of accessing the data source cannot serve as a best practice study.

8 Greece

8.1 Legal framework

The obligation of the data owners to grant the NSI access to all administrative data sources is stipulated in the Greek Statistical Law, the Regulation on the Statistical Obligations of the agencies of the Hellenic Statistical System and the Commitment on Confidence in Statistics³⁸.

More specifically, the Greek Statistical Law of 2010³⁹ states that services and agencies of the public sector are obliged to grant the NSI access to all administrative sources, public registers and files kept in printed, electronic or other form, including microdata and related information. The same also holds for legal entities under private law, associations of individuals and natural persons.

Moreover, the Annex of the Greek Commitment on Confidence in Statistics states that the NSI is entitled to full and timely access to the economic and financial accounts of all entities belonging to or controlled by general government in order to undertake its activities.

Legal right to access administrative data at microdata level

Under the provisions of the Greek Statistical Law, the NSI has the right to access administrative microdata from all sources. Data do not have to be anonymized by the data owners before their transmission to the NSI. According to Article 18 of the Statistical Law, the NSI should notify the Authority of Personal Data Protection about the set-up, processing and statistical treatment of administrative records. Despite that, the NSI is authorized to access all administrative data sources without requesting permission from an authority other than the data owner.

Cooperation with data owners in design of administrative databases

Data owners are obliged to consult the NSI when setting up, changing or discontinuing a data source. The draft of any legal provision regarding the creation of a new administrative data source or the modification of an existing administrative data source should be submitted to the NSI at the earliest possible point in time. The NSI should provide its opinion before the submission of the draft legal provision to the Parliament. However, the recommendations of the NSI are not binding.

Cost-free access to administrative data

The NSI has the right to access all administrative data sources for free.

Coherence of the legal framework

In view of the NSI, the national legal framework does not leave room for misinterpretations.

³⁸ Commitment on Confidence in Statistics, signed in February 2012, after having been adopted by the Hellenic Parliament and enshrined in Law 4051/2012: <http://www.statistics.gr/documents/20181/c5b9264e-815e-4f74-9955-467d14cad474>.

³⁹ http://www.statistics.gr/documents/20181/1195539/StatLaw3832_EN_30072015.pdf/42f49b16-cab6-41c2-89ce-97ad4329c2e4.

8.1.1 Legal restrictions

According to the NSI, the legal restrictions with regard to its access to administrative data are the following:

- The recommendations of the NSI on the design of administrative databases are not binding.
- For some sources, the legislation applicable to the data owners contradicts the NSI's legal right to access and use their data.
- For some sources, the passing of specific additional legal acts is required to access the specific administrative data source.

8.2 Internal institutional aspects

Policy on administrative data

An organization-wide policy promoting the use of administrative data is not in place.

The NSI works towards an increased use of administrative data. The annual Statistical Work Programme describes the actions to be undertaken to establish closer cooperation with public authorities and better use administrative data.

The NSI reported that standard and systematic procedures to identify administrative data sources potentially useful for statistical purposes and monitor developments in the legal framework governing the sharing of administrative data are not in place.

The NSI has established standard and systematic practices to ensure confidentiality and security of administrative data.

Organisation within the NSI

According to the NSI, the staff partly has the required competences to effectively exploit administrative data for statistical purposes. The available resources are partly sufficient.

8.2.1 Internal institutional obstacles

In summary, the following issues were mentioned by the NSI:

- An organisation wide policy promoting the use of administrative data is not in place.
- A procedure to monitor developments in the legal framework governing the sharing of administrative data between authorities is not in place.
- A standard systematic procedure to identify administrative sources with potential statistical use does not exist.
- Standardised quality criteria to assess the adequacy of administrative data are only partly used across statistical domains.
- Regarding internal organisation, a specific unit within the NSI to coordinate contacts and cooperation with data owners does not exist.
- NSI's staff has partly the required competences to effectively exploit administrative data.
- NSI's resources are partly sufficient to effectively exploit administrative data.

8.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

As reported in the questionnaire, the overall culture of the staff in the country's public sector is neutral to data sharing. A national strategy on data sharing in the public sector exists but it is not effectively implemented.

Cooperation with data owners

According to the peer reviewers' assessment, access to administrative sources for statistical purposes is well covered under the Greek legislation. In practice, progress towards its implementation is relatively slow. Despite signing explicit Memoranda of Cooperation with all Greek Ministries, the Bank of Greece and the General Accounting Office, there are still a lot of difficulties in their practical implementation. Strict confidentiality rules imposed by the data owners in order to protect their data (especially in the case of business data), reluctance of public authorities to cooperate or undertake the necessary actions are some of the obstacles confronted. The Good Practice Advisory Committee (GPAC) records in its annual reports⁴⁰ the actions undertaken by the NSI to establish cooperation with administrative data owners.

In 2015, the peer reviewers stated that cooperation with data owners, particularly with Tax Authorities, should be better established, since the respective signed Memoranda are not always respected and practical issues (e.g. technical characteristics for data transmission) had not been resolved.

In January 2016, the General Secretariat for Public Revenue (GSPR) of the Ministry of Finance requested the opinion of the Hellenic Data Protection Authority on the provision of non-anonymised tax data for businesses by VAT number to ELSTAT. The Data Protection Authority asked the NSI to submit a justification for the statistical need of using the data. Upon the NSI's response to that request, a bilateral agreement between ELSTAT and the Ministry of Finance (GSPR) was signed in May 2016 ensuring the transmission of tax data to the NSI⁴¹. In 2016, data for the years 2011-2015 were provided to the NSI.

In 2010, the NSI proposed the development of a single entry point system through which the enterprises would provide their data to various official bodies simultaneously. However, according to the peer review report, this proposal has received little interest from the Greek ministries.

The NSI stated in the questionnaire that the procedures in place to ensure the confidentiality and security of the data as well as the inconsistencies identified in administrative data are communicated to the data owners. During this communication with the data owners, the NSI takes always all necessary measures to protect the confidentiality of the data.

Moreover, NSI reported that it always has the authority to demand suitable modifications from the data owner when quality-related problems are encountered.

8.3.1 Issues related to the wider institutional environment and cooperation with data owners

Overall, the NSI identified the following problems with regard to its cooperation with the data owners:

- The existing national strategy for data sharing in the public sector is not implemented.
- Effective coordination mechanisms between NSI and the data owners have been established only in a few cases.
- The NSI is consulted by the administrative data owners on design of databases only in few cases.
- Administrative data owners take into account the recommendations of the NSI when setting up or changing an existing database in a few cases.
- Administrative data owners inform the NSI sufficiently in advance on planned changes in the structure or design of their databases in a few cases.
- Administrative data owners sometimes refuse to provide access to their data.
- Sometimes data owners send their data to the NSI with delays relative to the agreed timetable.
- Sometimes excessive formality or bureaucracy between organisations is an obstacle for cooperation.

⁴⁰ <http://www.statistics.gr/en/good-practice-committee>.

⁴¹ Good Practice Advisory Committee, 3rd Report (2016): http://www.statistics.gr/documents/20181/1195539/report_adv_3rd_EN.pdf/594fae41-5542-4bf3-bee9-6e878752586d.

8.4 Quality and Technical preconditions

Quality aspects

The NSI has in a few cases access to sufficient methodological information on the data collection process operated by the data owners, whereas data owners rarely apply sufficient quality checks that are useful to the NSI. Furthermore, unique and consistent identifiers across data sources are used in a few cases.

Technical aspects

Difficulties related to the format used for the exchange of the data exist for a few cases. Similar difficulties with regard to the format used for the exchange of metadata are not in place.

Automated data exchange mechanisms are used in a few cases for transferring data, while such exchange mechanisms are not in place for transferring metadata.

8.4.1 Quality and technical restrictions

In view of the NSI the following issues have been identified:

- The NSI has access to sufficient methodological information on the data collection process operated by the data owners only in few cases.
- Data owners apply sufficient quality checks that are useful to the NSI only in few cases.
- Unique and consistent identifiers are used across data sources only in few cases.
- The NSI has sufficient information for linking different data sources only in few cases.
- Automated data exchange mechanisms for transferring data are used only in few cases.
- Automated exchange mechanisms are not used for transferring metadata.

8.5 Some examples of administrative data usage

Business Statistics

In the domain of business statistics, the business register is updated based on data extracted from administrative sources and from data collected through business surveys. The business register is used as a sampling frame for all business surveys.

The NSI received access to administrative data for SBS in May 2016. Errors were detected by means of various forms of statistical analysis. As noted during the Workshop on “access to administrative data”, the data had a bias in the sense that companies had higher turnover in administrative registers than in statistical surveys. Linking of different data sources appeared to be a problem. Another issue was that VAT was only registered for companies with a turnover of 1 Million Euro and more (see also Section 8.3).

Social Statistics

Administrative registers are used for vital statistics. For the time being, the population and dwelling census is survey-based since a population register does not exist in the country.

Examples of sources used

- Business statistics: (1) VAT Register (Ministry of Finance), (2) Register of Social Security Funds.
- Social statistics: (1) Registry offices.

8.5.1 Problematic data access cases

The NSI identified the following administrative data sources for which access is not feasible or is achieved in a considerable problematic way.

Data source	Data owner	Purpose of access ^[1]	Statistical domain where data are used
Tax Authorities data	Ministry of Finance	4	SBS, STS, National Accounts, Business Register
Platforms for collection of data on primary, secondary and tertiary education	Legal entities supervised by the Ministry of Education	4	Education statistics
Environmental data	Ministry of Environment and Energy	4	Environmental statistics

^[1] (1) Main source for the survey frame, (2) Auxiliary source for the survey frame (3) Direct compilation of statistics from administrative aggregated data or microdata, (4) Direct compilation of statistics in combination with other sources (e.g. other administrative sources, surveys), (5) Source of auxiliary data for prefilling, editing / validation, imputation, etc.

Legal and institutional issues: Access to the specific data sources is problematic since the legal framework grants to the NSI the right to use those administrative sources only for specific statistical purposes.

Cooperation with data owners: According to the NSI, access to the platforms for collection of data on education is problematic due to the lack of effective cooperation mechanisms between the NSI and the data owner. Regarding tax authorities and environmental data, no issues have been mentioned.

Quality aspects: For Tax Authorities data, the main problems identified by the NSI with regard to the quality of the data source are the following: (a) the definition of the statistical unit and variables used in the data source is different from the one required for statistical purposes, (b) a significant number of records and data items is missing. The coverage of the data in the platforms for collection of educational data is different from the one required for statistical purposes, while a significant number of records and data items is missing from the data source. For environmental data, the main restricting factor is that the administrative data are collected for a different reference period than the one required. Again, the NSI stated that its usage is restricted due to the significant number of missing items and records.

Technical aspects: For Tax Authorities data, the NSI reported difficulties related to the exchange of data and metadata, while automated data exchange mechanisms for transferring educational and environmental data and metadata are not in place.

8.5.2 Successful data access cases

Access to taxation data is considered as a successful data access case.

Data source	Data owner	Purpose of access ^[1]	Statistical domain
Taxation data	Ministry of Finance	4	SBS, STS, National Accounts, Business Register

^[1] (1) Main source for the survey frame, (2) Auxiliary source for the survey frame (3) Direct compilation of statistics from administrative aggregated data or microdata, (4) Direct compilation of statistics in combination with other sources (e.g. other administrative sources, surveys), (5) Source of auxiliary data for prefilling, editing / validation, imputation, etc.

Factors contributing to successful access: In view of the NSI, one of the factors contributing to the successful usage of the taxation data is the signature of a Memorandum of cooperation between the NSI, the Secretariat of Public Revenue and the General Secretariat of IT Ministry of Finance. Another important success factor was the development of the technical environment for receiving, editing and protecting data against any disclosure of confidential information. Besides that, the law governing tax data has been recently modified in terms of the rules imposed for protecting data against any violation of confidentiality.

Obstacles overcome in accessing the data source: The law governing tax data imposed restrictions for the protection of the confidentiality of the data. This obstacle was overcome by passing

relevant provisions in the law by the Greek government and by granting to the NSI authorisation by the Greek Privacy Authority.

Best practice study: The case of accessing the taxation data source can be used as a best practice study.

9 Spain

9.1 Legal framework

The Law No. 12/1989 on the Government Statistics Act specifies that if the statistical production requires the usage of administrative data, the bodies, authorities and officials who have the custody of such data must provide with their data as soon as possible.

Tax data, when these are purely used for national statistical purposes, are subject to special regulations and laws.

Article 34 of the abovementioned law states that ministries shall process their records and files in order to permit the use of administrative data for statistical purposes.

Legal right to access administrative data at microdata level

The NSI has the right to obtain administrative microdata from all administrative data sources. Anonymization of the data is not required to be undertaken by the data owners before the transmission of their data to the NSI. Furthermore, the Statistics Law does not require that the NSI request permission from any authority other than the data owner in order to access administrative data.

Cooperation with data owners in design of administrative databases

The Statistics Act does not oblige the data owners to consult the NSI when setting up, changing or discontinuing a source.

Cost-free access to administrative data

Although an explicit legal provision in the Law No. 12/1989 authorising the NSI to access administrative data for free is not in place, administrative data owners always provide their data for free if those are required for the production of official statistics. The NSI's right to access administrative registers for free is unquestionable.

Coherence of the legal framework

Although the Statistics Law make provisions granting the NSI's right to access data from any administrative source and use them for any statistical purpose, it requires that the NSI specifies / describes the concrete and specific purpose of use of each administrative data source before obtaining access to them. Therefore, the reuse of data for statistical purposes other than initially stated is not permitted for any data source. In the practice, upon the reception of data for the first time, the NSI notifies the data owner about reuse of data for other statistical purposes. The data owners usually give the NSI the green light to reuse them for different statistical purposes.

Moreover, according to Article 18 of the Statistics Law, the data must be destroyed when there are of no need for the compilation of statistics.

The peer reviewers consider that the provisions made in the Statistics Law are not "quite sufficient for ensuring efficient and continuous utilisation of administrative data".

An additional restriction mentioned by the peer reviewers is the utilization of micro level tax data for national statistical purposes, as tax laws and tax records are excluded from the national Statistical Law. The latter restriction, however, does not apply when statistics governed by EU regulations are to be compiled.

9.1.1 Legal restrictions

The legal restrictions identified by the NSI with regard to its access to administrative data are summarized as follows:

- The reuse of data for statistical purposes other than initially stated is restricted by the Statistics Law for all sources.
- There are legal restrictions on the maximum duration of retention of data (data must be destroyed when no more necessary).
- Data owners are not obliged to inform the NSI when setting up, changing or discontinuing a data source.

9.2 Internal institutional aspects

Policy on administrative data

An organization-wide policy promoting the use of administrative data is in place. Moreover, standard and systematic practices to ensure confidentiality and security of administrative data are partly in place, while a procedure to monitor developments in the legal framework governing the sharing of administrative data between authorities is partly implemented as part of the usual procedure for monitoring the developments in the legal framework.

The NSI has been using administrative data at different stages of statistical production for more than 30 years. According to the peer reviewers, the Spanish National Statistical System (NSS) is increasingly based on the use of administrative data. During the last three years the NSI has certified about 600 uses of administrative files per year (634 in 2016, 626 in 2015, and 577 in 2014).

Work is in progress in order to establish a procedure to identify administrative data sources potentially useful for statistical purposes. The NSI maintains an inventory of its statistical operations, where information about the use of administrative registers (e.g. direct use instead of surveys, combination of administrative with survey data) is described. For administrative data used under specific surveys, e.g. population census, the NSI drafts reports on the quality of the administrative data sources and shares them with the administrative data owners. However, the assessment of the quality of administrative registers is not systematic and lacks documentation and relevant policy guidelines.

Organisation within the NSI

In Spain, cooperation with data owners is – in most cases – coordinated by the Department of Methodology of the NSI. However, sometimes there are also direct contacts between domain experts and data owners and some production units still keep their own collaboration mechanisms with administrative data owners. These are to be integrated gradually in the indicated common coordinated system. As stated in the Workshop on “access to administrative data”, the main issue preventing the NSI from a more extended use of administrative data is the lack of additional resources and relevant IT infrastructure. However, the NSI considers that the available resources are sufficient to effectively exploit administrative data for statistical purposes and that NSI’s staff has all the required competences.

9.2.1 Internal institutional obstacles

In summary, the following obstacles were identified by the NSI:

- Documented quality criteria to assess the quality of administrative data are not used across all the statistical units of the NSI.

- A procedure to monitor developments in the legal framework governing the sharing of administrative data is only partly in place.
- A procedure to identify administrative sources potentially useful for statistical use is only partly in place.

9.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

Following the information provided in the questionnaire, the overall culture of the staff in the country public sector is favourable to data sharing. There are no concerns in the general public regarding personal data privacy and confidentiality.

In view of the NSI, the national strategy on data sharing in the public sector, which prevents citizens from providing information already available by authorities, is effectively implemented.

As added in the Workshop on “access to administrative data sources”, the public is positive to the use of administrative data by the NSI. The public is positive because it wants to ‘provide data only once’. There are cases when the Spanish NSI learns about potential administrative data sources from respondents’ responses in surveys that the requested information has already been provided to another organisation.

Cooperation with data owners

The NSI stated that written agreements with the data owners covering each case of data provision are available only in a few cases, although they represent the majority of the administrative data that the NSI receives. Thus, collaboration agreements with most of the important public authorities (such as Social Services and tax offices, and some institutions of the autonomous communities) that hold administrative data have been signed. Through these agreements, the purpose of use of the data, the time plan for data transmission and the structure of the transmitted data are specified.

Spain mentioned in the Workshop on “access to administrative data sources” that the autonomy granted to the country’s regions complicates coordination between regions and access to their administrative data. The latter does not signify that the NSI does not have access to their administrative registers. On the contrary, access is recognized and guaranteed, even though the managerial procedures are more laborious and complex than with other state institutions. In order to facilitate data access, collaboration agreements have been signed with some regional institutions, such as the Tax Agencies of Bizkaia and Gipuzkoa. In other cases, cooperation is established through collaboration agreements signed with the Regional Statistical Institutes.

Although not foreseen in the national Statistics Law, some data owners take the initiative to consult the NSI on issues regarding the design of relevant databases and take the recommendations of the NSI into account.

The NSI always communicates to the data owners, issues related to the errors or inconsistencies in their data. In general, the errors identified are related to the process of extracting the information. The data owners always take the NSI’s input into consideration and correct their data files.

The NSI communicates to the data owners the procedures in place to ensure the confidentiality and security of the data in a few cases since those rely on the national legislation and on the regulation of the institution. When quality-related problems occur, the NSI lacks the power to ask for suitable modifications in administrative databases but, in few cases, the NSI communicates to data owners the inconsistencies identified in their data. Yet, no formal communication procedures have been established to provide administrative data owners with feedback about the quality of their data. During this communication, the NSI takes all necessary measures to protect the confidentiality of the data.

According to the NSI, data owners rarely refuse to provide their data which are mostly provided without delays relatively to the agreed time plan. Bureaucracy is rarely an obstacle in the overall communication.

In general, the NSI reported that the collaboration with the data owners is considered satisfactory. The main difficulty is the set-up of a time plan for data deliverables that would be convenient for the needs and obligations of both parties, given that the time that administrative data become available does not always fit the NSI's statistical needs.

9.3.1 Issues related to the wider institutional environment and cooperation with data owners

The NSI identified the following issues with regard to its cooperation with the data owners:

- Written agreements between NSI and data owners covering each case of data provision are not available in all cases. In such cases, the legal provisions are considered sufficient by both parties.
- The NSI is consulted by the administrative data owners on the design of databases only in a few cases but in those cases the data owners try to take into account the recommendations of the NSI as much as possible.
- Data owners inform the NSI on planned changes in databases only in a few cases.
- When quality-related problems are encountered, the NSI does not have the authority to demand suitable modifications from data owner.

9.4 Quality and Technical preconditions

Quality aspects

The NSI has access to sufficient methodological information on the collection process operated by the data owners. Unique and consistent identifiers are used across data sources in most cases, i.e. for companies and individuals but not for dwellings.

The NSI has sufficient information for linking different data sources but as stated in the peer reviewers' recommendations, "coordination and harmonization of already existing registers should be strengthened to avoid multiplication and facilitate their linkage".

According to the NSI, data owners apply quality checks that are mainly useful for their own purposes and needs.

Technical aspects

There are no difficulties regarding the format used for the exchange of data and metadata.

9.4.1 Quality and technical restrictions

Overall, the NSI reported the following issues:

- Unique identifiers for dwelling are not used across the data sources.
- Existing registers need to be further harmonised to avoid multiplication and facilitate their linkage. Despite that the NSI has sufficient information for linking different data sources.
- Automated data exchange mechanisms for transferring data and metadata are used only in a few cases.

9.5 Some examples of administrative data usage

Business Statistics

The business register is based on data coming from administrative sources, but SBS statistics stem from surveys⁴², although data from tax authorities and the Tax Agency are used as an auxiliary data sources (e.g. editing and prefilling of the questionnaires).

Agricultural Statistics

In the agriculture domain, data from administrative sources are used for the compilation of the sampling frames for the surveys.

Social Statistics

The 2011 population census implementation was a combination of administrative data and a sample survey⁴³. The main source used was the Population Register (PADRON), which is updated monthly with information provided by the municipalities.

In 2011 the NSI was implemented a project where administrative data were used for the compilation of the LFS variable 'wages from the main job'⁴⁴.

Examples of sources used

- Business statistics: (1) Directory of economic activities, (2) P.A.Y.E. Deductions (Employers Register), (3) INTRASTAT and EXTRASTAT register, (4) Social security counts, (5) Tax data from State Tax Administration Agency (Personal Income Tax, Corporation Tax and VAT), (6) Tax data from Tax Administration of Basque Country and Navarra.
- Agricultural statistics: (1) IACS register (Ministry of Agriculture), (2) Register of livestock holdings, (3) Register of holdings with insurance arranged with the State Agency for Agricultural Insurance, (4) Census on taxpayers related to agricultural and livestock activities (Spanish Agency for Tax Administration (AEAT)).
- Social statistics: Population census: (1) Population Register, (2) General Treasury of Social Security (Ministry of Labour and Social Affairs), (3) National identity cards and resident cards (Home Office), (4) Dwelling register Cadaster (Treasury Department), (5) Tax administration (Treasury Department), (6) Public Social Benefits Register (Social Security). LFS: (1) Information on income (State Tax Administration Agency (AEAT) and Navarre), (2) General Treasury of Social Security.

9.5.1 Problematic data access cases

The NSI did not report any administrative data sources for which access is not feasible or is achieved in a considerable problematic way.

9.5.2 Successful data access cases

The following data sources have been identified by the NSI as successful data access cases.

Data source	Data owner	Purpose of access ^[1]	Statistical domain
Tax Authorities data / personal income / VAT / Corporation tax	Tax Agency	5	SBS
Public Social Benefits Register	Social Security	4	Population census

⁴² National Institute of Statistics Spain, Structural Business statistics methodology (2005)

⁴³ National Institute of Statistics Spain, "A general approach to the importance and use of registers in the Spanish Census" (2012)

⁴⁴ National Institute of Statistics Spain, Miguel Ángel García Martínez, Javier Orche Galindo, "Integrating administrative data into the LFS data collection" (2011)

^[1] (1) Main source for the survey frame, (2) Auxiliary source for the survey frame (3) Direct compilation of statistics from administrative aggregated data or microdata, (4) Direct compilation of statistics in combination with other sources (e.g. other administrative sources, surveys), (5) Source of auxiliary data for prefilling, editing / validation, imputation, etc.

Factors contributing to successful access: In view of the NSI, the following factors have contributed to the successful access to the Tax Authorities data source: (a) the EU regulation on the obligation to collect data for a specific purpose, (b) the establishment of collaboration agreements on the exchange of data and (c) the Tax Agency staff's expertise on statistics. Regarding the Public Social Benefits register, the main factors for a successful use of the data source are (a) the establishment of collaboration agreements on the exchange of data, (b) the establishment of effective collaboration mechanisms (e.g. one contact point between the NSI and the Social Security), (c) the acknowledgment on behalf of the data owner of the importance of the data for covering the statistical needs of the NSI.

Obstacles overcome in accessing the data source: Following the information provided in the questionnaire, the most important obstacle overcome when accessing the Tax Authorities data source was to reach an agreement on a timeframe for data deliverables that is convenient for both parties. Concerns on the confidentiality protection of the social security data made the data owner reluctant to provide the NSI access to personal data, without the consent of the data providers. The issue was solved when the Spanish Data Protection Agency granted to the NSI the right to access the data.

Best practice study: The NSI considers that the case of accessing taxation data can be used as a best practice study.

10 France

10.1 Legal framework

The national Statistical Law governing French official statistics is the Parliament Act No. 51-711 of 7th June 1951 (incorporating various amendments until November 2016) on the legal obligation, coordination and confidentiality in the field of statistics. The Parliament Act makes provisions authorising the NSI to access administrative data held by public authorities for national statistical purposes.

More specifically, Article 7 bis of the Parliament Act specifies that upon the advice of the National Council, the NSI has the right to obtain information related to natural persons and legal entities, collected in the framework of the activities of a public service or any other legal entity of public service, unless any specific legal provision contradicts this right.

Legal right to access administrative data at microdata level

The NSI has the right to access administrative microdata from most sources. The legal framework does not require that these are anonymized first before their transmission to the NSI.

Limitations and specific conditions apply to health and sensitive data; which should be provided to the NSI in a format that would not permit the direct identification of personal information, unless there is a need for linking personal data with data from other sources. In the latter case, personal data must be destroyed after their use.

Additionally, the NSI is obliged to request permission from the data protection authority on every instance of obtaining sensitive or personal data from some sources.

Cooperation with data owners in design of administrative databases

On the contrary, the national Parliament Act does not make provisions obliging the administrative data owners to consult the NSI when setting up, changing or discontinuing an administrative data source.

Cost-free access to administrative data

The NSI has the right to access all administrative data sources for free.

Coherence of the legal framework

The mandate of the NSI to use administrative data from public authorities is clearly established in the national Parliament Act. The NSI has the right to access to administrative data under the condition that specific legal provisions do not prevent this access. A government decree might be needed to authorise the NSI to use and process personal health and sensitive data.

10.1.1 Legal restrictions

The NSI identified the following legal restrictions with regard to its access to administrative data:

- Personal health or sensitive data should be anonymized before being transmitted to the NSI.
- For sensitive personal data from some sources (e.g. data on health), a permission from an authority other than the data owner must be requested on every instance of obtaining the data.
- The national Parliament Act does not oblige the data owners to consult the NSI when setting up, modifying or discontinuing the data source.
- The NSI has the right to access administrative data unless specific legal acts do not restrict its access.
- For some sources (e.g. personal health or sensitive data), the passing of specific decrees authorizing the NSI to use and process the data is required.

10.2 Internal institutional aspects**Policy on administrative data**

An organisation-wide policy promoting the use of administrative data is in place. The Quality-Label Committee rejects any proposals for new surveys when existing administrative data can be used instead.

A procedure to monitor developments in the legal framework regarding use of administrative data are partly in place. Systematic practices to ensure confidentiality and security of administrative data have been partly established. In the Workshop on “access to administrative data” it was mentioned that every statistician dealing with (administrative) microdata must sign a confidentiality declaration. A Secrets Committee oversees the protection of confidentiality and privacy

As reported by the NSI, it is essential to apply long and complex processing (e.g. checks on the internal consistency of the data, adjustments for missing units, data coding, etc.) in order to safeguard that the produced statistics are of satisfactory quality. These operations are partly automated⁴⁵.

In 2015, the peer reviewers reported that a quality framework for administrative sources was under development. However, standard quality guidelines or methods to monitor the quality of the data during each stage of the data production process had not been established by the time of the review. Following the recommendations of the peer review report, the NSI’s strategy currently focuses on a generalized and systematic application of quality procedures throughout the statistical production process.

Organisation within the NSI

A specific unit coordinates the NSI’s contacts and cooperation with administrative data owners.

⁴⁵ INSEE, Annual Report (2015).

Additionally, the NSI is responsible by law for regularly updating two registers: SIRENE, the Computerised System for the Register of Companies, used to identify enterprises; the National Register for the Identification of Private Individuals (RNIPP) and the Voter-Registration database.

INSEE has considerable experience in handling large databases. In general, the NSI's staff has the required competences to effectively exploit administrative data for statistical purposes and the required resources to effectively exploit administrative data.

10.2.1 Internal institutional obstacles

In summary, the following issues were identified by the NSI:

- A standard, systematic procedure to identify administrative sources potentially useful for statistical purposes is not in place.
- Standardised and documented data quality criteria are not used across the statistical domains to assess the adequacy of administrative data for statistical purposes are not in place.
- A procedure to monitor developments in the legal framework governing the sharing of administrative data between authorities is only partly in place.
- Systematic practices to ensure confidentiality and security of administrative data are only partly in place.

10.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

According to the NSI, the overall culture of the staff in the country's public sector is favourable to data sharing. Concerns in the general public regarding personal data privacy and confidentiality do not constitute obstacles for data sharing among organisations.

A national strategy on data sharing in the public sector is in place but the NSI could not argue for the effectiveness of its implementation. The strategy promotes the exchange of information in the public sector.

There are also policies for publishing government data in open formats. The new French Digital law adopted in October 2016 asks administrations to share data and makes it possible for the NSI and the Other National Authorities (ONA) to access to data owned by private entities for statistical needs.

Cooperation with data owners

The NSI stated in the questionnaire that written agreements covering each instance of data provision are signed with data owners in all cases. In general, NSI's access to administrative data is negotiated with the respective ministries or authorities, but bureaucracy is rarely an obstacle during this communication.

In most cases, coordination mechanisms between the data owners and NSI are considered effective. Despite that, the NSI is rarely consulted by the data owners on the design of new databases and data owners rarely take the NSI's recommendations into account.

The NSI never communicates to the data owners the procedures in place to ensure the confidentiality and security of data. Inconsistencies identified in the data are communicated to the data owners only when there is no risk of disclosure of personal information. For example, in the Workshop on "access to administrative data" the NSI reported some problems with data obtained from the Ministry of Finance, regarding information for updating the business register. Corrections made by INSEE, for administrative purposes (administration of the national business register) were fed back to the Ministry.

When quality-related problems occur, the NSI lacks the power to obtain suitable modifications in the administrative databases. Moreover, administrative data owners send sometimes their data with delays relative to the agreed timetable.

10.3.1 Issues related to the wider institutional environment and cooperation with data owners

In summary, the NSI reported the following issues:

- The NSI is consulted by the administrative data owners on the design of databases only in a few cases.
- Data owners rarely take into account the recommendations of the NSI when setting up, discontinuing or changing an administrative data source.
- Data owners inform the NSI on planned changes in the structure or design of their databases only in a few cases.
- The NSI communicates to the data owners issues related to the errors or inconsistencies in their data only in a few cases.
- The NSI does not communicate to the administrative data owners the procedures in place to ensure the confidentiality and security of the data.
- When quality-related problems are encountered, the NSI does not have the authority to demand suitable modifications from data owner.
- Administrative data owners sometimes send their data with delays relative to the agreed timetable.

10.4 Quality and Technical preconditions

Quality aspects

As reported in the questionnaire, in most cases the NSI has access to sufficient methodological information on the collection process operated by the data owners. Unique and consistent identifiers are used across data sources in most cases and the NSI has sufficient information for linking different data sources. Additionally, data owners usually apply sufficient quality checks useful for the NSI.

Technical aspects

According to the NSI, there are few difficulties regarding format used for the exchange of data and metadata. Automated data exchange mechanisms for transferring data and metadata are used in a few cases.

10.4.1 Quality and technical restrictions

Difficulties identified by the NSI are summarized below:

- Automated data exchange mechanisms for transferring data and metadata are used only in a few cases.
- There are some difficulties related to the format used for the exchange of data and metadata.

10.5 Some examples of administrative data usage

Business Statistics

In the domain of SBS, data derived from the ESANE (Production of Annual Statistics on Enterprises)⁴⁶ system is used for the compilation of some of the required statistics. The ESANE system has been in place since 2008 and is compiled on the basis of fiscal information extracted from the incorporated industrial and commercial profits for accounting data on firms and from the DADS (Annual Declarations of Social Data) system, which contains information on the workforce size and wages.

Concerning STS, VAT declarations are used to calculate retail sales volume and personal services volume indices.

⁴⁶ INSEE, Annual Report (2015).

Agricultural Statistics

With regard to the agricultural sector, prefilled questionnaires based on information coming from administrative sources were used in the 2010 agricultural census survey⁴⁷. Respondents were asked to confirm or amend the information provided.

Social Statistics

The population census is survey-based, but data from administrative registers are used for compiling the sampling frame and also to estimate the population at the municipality level. Vital statistics are based on administrative registers. Income statistics are based on fiscal data (tax data) for all social surveys as well as earnings statistics (based on DADS-Employers Annual Social Security Returns). Employment statistics are mainly based on administrative data (DADS or DSN-Social Security Returns extracted from payroll software).

Examples of sources used

- Business statistics: (1) Annual Income Returns from Enterprises (TAX Authorities), (2) Monthly declarations of Turnover, (3) Employers annual Social Security returns, (4) Customs Enterprise data, (5) Business Register SIRENE (inter administrative register), (6) ESANE register.
- Agricultural statistics: (1) Administrative Register of Bovine Stock (Ministry of Agriculture), (2) IACS Register.
- Social statistics: (1) Buildings Register of Municipalities, (2) Civil Registers from Municipalities, (3) DADS, (4) DSN.

10.5.1 Problematic data access cases

No information has been provided by the country.

10.5.2 Successful data access cases

No information has been provided by the country.

11 Croatia

11.1 Legal framework

Upon the provisions of the Official Statistics Act (OSA) (consolidated version, OG No. 12/2013)⁴⁸, the NSI has the right to use administrative data for the production of official statistics. Under Article 41 of the OSA, it is stated that the holders of administrative data are bound to provide their data in conformity with the request of the NSI as well as to allow the NSI to assess the content of the data sources that are potentially useful for statistical purposes.

Legal right to access administrative data at microdata level

The NSI has the right to access administrative data at microdata level from all sources. In some cases, the legal framework requires that microdata should be anonymized first before their transmission to the NSI. Additionally, in some cases, the NSI is obliged to request a permission from an authority other than the data owner on every instance of obtaining data.

Cooperation with data owners in design of administrative databases

Administrative data owners are not obliged to notify the NSI for planned changes in their databases except for some sources. For these sources, the recommendations made by the NSI are binding.

Cost-free access to administrative data

⁴⁷ INSEE, "Census of Agriculture 2010 – Explanatory notes" (2010).

⁴⁸ http://www.dzs.hr/default_e.htm

The NSI has the right to access administrative data from all sources for free.

Coherence of the legal framework

The NSI considers that the OSA does not leave room for misinterpretations. Article 46 of the OSA specifies that the NSI is obliged to separate the identifiers from the content variables after imputing, compiling and codifying the data obtained from administrative sources and after using them for the update of the statistical registers. The NSI shall allocate a unique identifier other than that used by the public bodies.

11.1.1 Legal restrictions

In view of the NSI, the legal restrictions are summarized as follows:

- In some cases, personal administrative microdata should be transmitted to the NSI in an anonymized format.
- In some cases, the permission of an authority other than the data owner must be requested by the NSI on each instance of obtaining access to administrative data.
- Data owners are obliged to consult the NSI when setting up, changing or discontinuing the data source already in use only in some cases.
- The recommendations of the NSI regarding the set-up or change of an existing administrative source are binding only for some sources.

11.2 Internal institutional aspects

Policy on administrative data

According to the information provided in the questionnaire, an organization-wide policy promoting the use of administrative data is partly in place.

Following the peer reviewers' assessment, intensive efforts are made by the NSI towards an increased use of administrative data. The Statistics Council, which is the body responsible for the development of the NSI's strategy, has defined as an important working area the development of statistical registers and the use of administrative data for the production of official statistics. One of the obligations of the Council is the provision of its opinion in cases of non-disclosure of data held by the administrative data owners.

A standard and systematic procedure to identify administrative data sources potentially useful for statistical purposes is only partly in place.

With regard to data quality, the NSI stated that standardized criteria across the statistical domains to assess the adequacy of administrative data have been established within the NSI. On the other hand, the NSI added that systematic practices to prevent the disclosure of personal data and ensure security of administrative data are in place.

Organisation within the NSI

In accordance to the information provided in the questionnaire, a specific unit within the NSI to coordinate contacts and cooperation with data owners is not in place. More specifically, there are coordination units for business and national accounts statistics but due to the lack of a population register and a register of buildings and dwellings, it is not yet feasible to establish a central coordination unit that will also cover social statistics. In 2015, the peer reviewers commented that efforts are made towards the compilation of statistical registers and the development of integrated IT solutions so as to standardize the statistical production processes. Both the peer reviewers and the NSI consider that is a growing need for additional and highly qualified staff.

11.2.1 Internal institutional obstacles

In summary, the following issues were identified by the NSI:

- An organisation-wide policy promoting the use of administrative data is only partly in place.
- A procedure to monitor developments in the legal framework concerning the use of administrative data is not in place.
- A standard procedure to identify administrative sources potentially useful for statistical purposes is only partly in place.
- When it comes to the exploitation of administrative data, the capacity of the staff is considered to be partly sufficient.
- The NSI's personnel has only partly the required competences to effectively exploit administrative data for statistical purposes.
- A specific unit within the NSI responsible for the coordination of the contacts and cooperation with the administrative data owners is not in place.

11.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

In view of the NSI, the overall culture of the staff in the country's public sector is favourable to data sharing. A national strategy on data sharing in the public sector has not been adopted. Concerns in the general public regarding privacy and confidentiality do not constitute obstacles for the sharing of data among organisations.

Cooperation with data owners

The NSI reported that, in most cases, written agreements covering each case of data provision are signed between the NSI and the data owners and the coordination mechanisms are considered effective.

As stated in the Workshop on "access to administrative data sources", the NSI has repeatedly tried to create win-win situations by explaining to administrative data owners that it is in their own interest as well to cooperate with the statisticians.

According to the information provided in the questionnaire, in most cases, the NSI is consulted by the data owners on the design of new databases and the data owners often take the NSI's recommendations into account. Moreover, the data owners usually inform the NSI sufficiently in advance of the changes implemented in the structure or design of their databases.

The NSI reported that in most cases, it communicates to the data owners the procedures in place to ensure the confidentiality and security of the data. When quality-related problems occur, it lacks the power to ask for suitable modifications in administrative databases but, in all cases, it communicates to data owners the inconsistencies identified in their data. During this communication, the NSI takes all necessary measures to protect the confidentiality of the data.

The NSI also added that administrative data owners rarely refuse to provide their data, although they sometimes send their data with delays relative to the agreed timetable. Excessive bureaucracy between the organizations is sometimes an obstacle for cooperation.

Even though the NSI has the authority to access all administrative data sources for free, the data owners sometimes request the NSI to pay some fees in order to provide access to their data.

11.3.1 Issues related to the wider institutional environment and cooperation with data owners

Overall, the NSI identified the following issues:

- A national strategy on data sharing in the public sector is not in place.
- When quality-related problems are encountered, the NSI has only in few cases the authority to demand suitable modifications from data owner.
- Sometimes administrative data owners send their data with delays relative to the agreed timetable.

- Data owners sometimes request from the NSI payments not foreseen in the law for providing their data.
- Excessive formality or bureaucracy between organisations is sometimes an obstacle for cooperation.

11.4 Quality and Technical preconditions

Quality aspects

According to the information provided in the questionnaire, the NSI has access to sufficient methodological information on the collection process operated by the data owners for most cases. Unique and consistent identifiers are used across data sources in all cases and the NSI has sufficient information for linking different data sources. Moreover, the data owners apply, in most cases, sufficient quality checks that are useful to the NSI.

Technical aspects

The NSI reported that there are few difficulties related to the format used for the exchange of metadata. However, in most cases automated data exchange mechanisms are used for the exchange of data and metadata.

11.4.1 Quality and technical restrictions

According to the NSI the quality and technical restrictions are summarised as follows:

- For a few cases, there are difficulties related to the format used for the exchange of metadata.

11.5 Some examples of administrative data usage

Agricultural Statistics

The 2010 implementation of the agricultural census was survey-based. Some administrative data were used to update the statistical register of agricultural holdings, which is used as a frame for the survey.

Social Statistics

The population census is conducted through a survey. Some administrative data are used at the stage of data validation. The plan for the next implementation of the census is to conduct a traditional census using electronic questionnaires, using complementarily data from some administrative registers.

During the Workshop on “access to administrative data sources” the NSI presented the methodological and practical benefits of using the register of persons with disabilities in the 2021 census. The work was funded by a Eurostat grant in the framework of the ESS.VIP ADMIN project⁴⁹.

In the 2001 and 2011 censuses, measuring the incidence of disability was based on the statements of respondents. In the government registry of disabilities, on the other hand, registration of disabilities is based on medical records.

The 2011 questionnaire specifically asked for difficulties in performing activities of daily life, due to long-term illness, disability or old age. The answer to this question was given independently from the certificate issued by the competent government institutions confirming a person's difficulties (disability, impairment and handicap). These forms of disability are submitted to the registry electronically by e-card or in writing on the prescribed form.

⁴⁹ Action “Improvement of the use of administrative sources (ESS.VIP ADMIN WP6 Pilot studies and applications)”, Grant Agreement number 07112.2015.002-2015.348).

The registry of persons with disabilities is one of the best registers in Croatia in which the 2001 Act on the Croatian Register of Persons with Disabilities regulates the method of collecting data about the cause, type, degree and severity of health impairment, the rights of persons with disabilities, methods of processing and use of data, as well as the data protection. It covers all persons with disabilities in the country, with geographical detail to the level of settlement. Register data are updated on a daily basis which allows current monitoring of the number of disabled persons, the type and extent of damage as well as their territorial distribution of the persons.

The NSI intends to consider the use of the registry of persons with disabilities to obtain data about the disabled persons and their characteristics for the next census.

Examples of sources used

- Agricultural statistics: (1) Paying Agency for Agriculture, Fisheries and Rural development.

11.5.1 Problematic data access cases

As stated by the NSI a population register and a register of buildings and dwellings does not exist in Croatia. The NSI continuously informs the responsible ministries and other governmental institutions about the benefits of compiling such registers for statistical purposes.

11.5.2 Successful data access cases

The NSI has access to Tax and VAT data, Social Security, Business Register, Agricultural data and other sources.

Factors contributing to successful access: As reported by the NSI, written agreements have been signed with data owners of the above-mentioned data sources. Especially for the tax data, the NSI has created in cooperation with the Tax Administration, a catalogue which keeps record of the following data exchange specifications: purpose of data usage, frequency of data delivery, deadline for data delivery, type of data delivery, data exchange mechanism, NSI's organisational unit in charge for data overtaking, persons entitled for data overtaking within the NSI, persons entitled to use data within the NSI, responsible persons in the Tax Administration, responsible persons in the IT supporting company (APIS), structure to be used for the exchange of data.

Obstacles overcome in accessing the data source: No obstacles have been reported by the NSI in the questionnaire.

Best practice study: No information has been reported by the NSI in the questionnaire.

12 Italy

The Legislative Decree No. 322/1989⁵⁰ lays down the rules governing the functions of the Italian Statistical System (SISTAN). The main actors of the SISTAN are the NSI, the statistical offices of central and local government administrations, and a wide range of other public bodies and private organisations dealing with statistical information. Many members of the SISTAN are only users of statistical data; some institutions in public administration only deliver administrative data for statistical purposes, while others collect statistical data for the production of statistics.

According to Article 15 of the Decree 322, the NSI shall guide and coordinate the SISTAN. Article 7 of the Decree 322 states that "all administrations and organisations are required to provide all the data requested for the surveys included in the National Statistical Programme". The National Statistical Programme is yearly approved.

Separate legal provisions give the power to the NSI to access administrative files of public administration offices, government agencies, and companies controlled by such administration offices.

⁵⁰ <http://en.istat.it/dlgs322.pdf>

12.1 Legal framework

Legal right to access administrative data at microdata level

Article 8 of the Law 681/1996 specifies that administrative authorities should provide the NSI individual data. The Personal Data Protection Code (Legislative Decree No. 196/2003) sets out the rules for accessing and processing personal data and for ensuring the traceability and the accountability of each stage of statistical process.

Although the legal framework does not require that anonymized microdata are transmitted to the NSI, anonymization is undertaken by the NSI once data are integrated in its IT systems. Thus, in most cases, the staff of the NSI can access only anonymized microdata.

Additionally, as stated in the questionnaire, the NSI is obliged to request on every instance of obtaining access to personal data a permission from the data protection authority.

Cooperation with data owners in design of administrative databases

Under the provisions of the Presidential Decree No. 166/2010, the NSI should set the standards and formats of administrative data collections to facilitate the use of the data for statistical production. The NSI reported that the data owners are obliged to consult the NSI when setting-up, changing or discontinuing some data sources.

Cost-free access to administrative data

The NSI has the right to access to all administrative data sources for free.

Coherence of the legal framework

In view of the NSI, the Decree 322 and the general legal framework do not leave any room for misinterpretations. However, the Decree 322 specifies that administrative data should be used only for the needs described in the National Statistical Programme, which must clearly specify the duration of retention of the administrative data as well as the linking process. Moreover, the passing of additional legal acts is required so that the NSI obtains access to sensitive and judicial administrative data.

As mentioned by the peer reviewers, the legal provisions in the field of processing of personal administrative data impose a series of requirements; such as the obligation of the NSI to a-priori inform individuals about the use of their personal data. Measures for making such information publicly available (advertisement on institutional websites, newspapers, etc.) for traditional surveys are adopted in agreement with the Italian Data Protection Authority. However, for projects not yet included in the National Statistical Programme, such requirements impose restrictions towards the use of the required administrative data.

12.1.1 Legal restrictions

According to the NSI, the legal restrictions are summarized as follows:

- The administrative data owners are obliged to provide their data only when their statistical use (e.g. purpose of usage, linking process, duration of data retention) is specified in the National Statistical Programme.
- The reuse of data for statistical purposes other than the ones stated in the National Statistical Programme is not permitted.
- The duration of retention of data must be specified in the National Statistical Programme.
- The NSI should request a permission from an authority other than the data owner on every instance of obtaining the data from some sources.

- Data owners are obliged to inform the NSI when setting up, changing or discontinuing an administrative database already in use only in some cases. For these sources, the recommendations of the NSI are binding.
- The passing for additional acts is required so that the NSI obtains access to sensitive and judicial data.
- The NSI is obliged to a-priori inform individuals on the use of their personal data. For projects not included in the Statistical Programme, the use of personal data is restricted.

12.2 Internal institutional aspects

Policy on administrative data

According to the NSI, an organization-wide policy promoting the use of administrative data is in place. As stated in the NSI's presentation during the Workshop on "access to administrative data sources", in recent years in ISTAT there has been a sharp increase in administrative data acquisition, further enhanced by the ISTAT modernization project. In 2016 more than 300 acquisitions are planned, involving 150 separate administrative datasets and 40 data holders - more than a terabyte of data mainly containing personal data.

In order to facilitate the use of administrative data for the production of statistics, the NSI established in 2011 a Permanent Committee for the Coordination of Administrative Forms. One of the priorities of the Committee is the exploration administrative data sources potentially useful for statistical needs.

The NSI has been also engaged in the organization of its statistical production around main registers covering population, businesses and territorial units. One of the NSI's strategic targets is to promote the coordinated development of the information systems of public administration and their use for statistical purposes.

Research activity has focused on assessing the quality of administrative data and comparing them with survey data. As stated by the NSI, standardised and documented quality criteria are partly used across the statistical domains to assess adequacy of administrative data for statistical purposes. As reported by the NSI during the Workshop on "access to administrative data sources", a generalized quality assessment system that uses the framework defined in the international project Blue-Enterprise and Trade Statistics (ETS)⁵¹ is implemented.

Additionally, standard and systematic practices to ensure the confidentiality and security of the administrative data are in place.

Organisation within the NSI

Following the presentation of the NSI during the Workshop on "access to administrative data sources", a Directorate was created, responsible for data collection of both survey and administrative data. This Data Collection Directorate is also in charge of data integration with the aim of supporting statistics production from Registers. Its task is to acquire, store, integrate, and evaluate the quality of administrative data and make them and their metadata ready for use for statistical purposes. Domain experts do not belong to this centralised unit but are coordinated centrally.

The necessity to design IT processes for the acquisition of administrative data has led to the creation of the AD Acquisition System, ARCAM. It uses different technologies and ISTAT standards and, through a special web site, it allows to acquire data in accordance with current legislation on data confidentiality and to preserve data integrity. This web interface can be a useful tool for communication with the administrative data suppliers in order to share the commitment to the use of data for statistical purposes and to improve usability/quality levels.

The acquired data are stored in a single repository and are made available to internal users in a timely manner through the ARCAM management of permissions for data access.

⁵¹ https://ec.europa.eu/eurostat/cros/content/blue-ets_en

Administrative datasets that include microdata enter into the standardized process of the System of Integrated Microdata (SIM) and each administrative object, identified as a statistical unit (individuals, economic units and places), is integrated. The data integration is performed through record linkage procedures ending with the assignment of unique codes constant over time. Access to integrated data for internal users is also regulated in compliance with the law on data protection.

Additionally, according to the peer review report, the NSI has established a massive documentation system on the metadata of administrative archives, the Documenting Public Administration Archives (DARCAP) system. The segment DARCAP-DOCUMENTA is used for the management of documentation on content and quality of administrative data sources, which is obtained by an analysis carried out by the NSI and the administrative data owners jointly. The segment DARCAP-INNOVA collects information about changes in the administrative sources. DARCAP-CONSULTAZIONE segment contains the collected information about the available administrative databases, their content and a general assessment on their quality. The information recorded in the DARCAP system is accessible by all SISTAN members.

The NSI has also developed a standardized Quality Report Card for administrative data (QRCA), which provides a practical overview of the relevant quality indicators for a given dataset.

Furthermore, following the information provided in the questionnaire, the NSI's personnel has the required competences to effectively exploit administrative data for statistical purposes, but the available resources are considered only partly sufficient.

Also, there is an emerging need for training of the staff on the procedures related to the use of administrative data (Workshop on “access to administrative data sources”).

12.2.1 Internal institutional obstacles

In summary, the following issues were identified by the NSI:

- A procedure to monitor developments in the legal framework governing the sharing of administrative data among authorities is only partly in place.
- A procedure to identify administrative sources potentially useful for statistical use is only partly in place.
- Standardised and documented quality criteria to assess the adequacy of administrative data are only partly used across the statistical units of the NSI.
- The available resources are considered only partly sufficient for the effective exploitation of administrative data for statistical purposes.

12.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

In view of the NSI, the overall culture of the staff in the country's public sector is favourable to data sharing. Concerns in the general public regarding personal data privacy and confidentiality do not essentially constitute an obstacle for the sharing of data among organisations.

A national strategy on data sharing in the public sector exists and is effectively implemented.

Cooperation with data owners

According to the NSI, written agreements covering each case of data provision are signed between the NSI and the data owners in most cases. The coordination mechanisms with the data owners are considered effective by the NSI.

The NSI is rarely consulted by the data owners on the design of new databases and data owners rarely take the NSI's recommendations into account. Data owners consult the NSI on issues such as

specifications or design in their databases only in a few cases, and rarely inform the NSI sufficiently in advance of the changes planned to be implemented in the structure or design of their databases.

Following the information provided in the questionnaire, the NSI always communicate to the data owners the procedures in place to ensure the confidentiality and security of the data. When quality-related problems occur, the NSI lacks the power to ask for suitable modifications in administrative databases.

The NSI communicates to the data owners issues related to the compliance of the transmitted data to the requested ones (e.g. incorrect time period, lack of target variables, missing values) but never informs them about the errors or inconsistencies identified in their data.

Costs are also paid by the NSI in cases that data need to be pre-processed (extract, transform, load (ETL) procedures) by the data owners before their transmission.

Overall, the NSI reported that faces sometimes difficulties in cooperating with the administrative data owners; which may sometimes send their data with delays relative to the agreed timetable or refuse to provide access to their data. According to the information made available during the Workshop on “access to administrative data sources”, a ubiquitous problem regarding NSI’s cooperation with data owners is timeliness.

Excessive formality or bureaucracy is rarely an obstacle in the overall communication.

12.3.1 Issues related to the wider institutional environment and cooperation with data owners

The NSI reported the following problems regarding its cooperation with data owners:

- The NSI is rarely consulted by the data owners on issues such as specifications or design their databases.
- Data owners rarely take the recommendations of the NSI into consideration when setting-up, changing or discontinuing an administrative database.
- Data owners rarely inform the NSI sufficiently in advance on planned changes in databases.
- When quality-related problems are encountered, the NSI lacks the authority to demand suitable modifications from data owners.
- The NSI does not communicate to the data owners issues related to the errors or inconsistencies identified in their data.
- The NSI sometimes faces difficulties in cooperating with data owners.
- Sometimes data owners refuse to provide access to their data.
- Sometimes data owners send their data with delays relative to the agreed timetable.
- When some additional ETL procedures have to be applied by the data owners, the NSI should pay charges.

12.4 Quality and Technical preconditions

Quality aspects

According to the information provided in the questionnaire, in most cases, the NSI has access to sufficient methodological information on the data collection process operated by the data owners. In the view of the NSI, data owners apply sufficient quality checks in their data only in a few cases and the concept of quality adopted by them does not always coincide with the statistical quality concept. However, Italy reported during the Workshop on “access to administrative data sources” that the administrative datasets acquired are generally of a high quality in terms of their statistical usability.

Unique and consistent identifiers are used across most data sources and the NSI has sufficient information for linking different data sources.

Technical aspects

As stated by the NSI, there are a few difficulties regarding the format used for the exchange of data but there are no difficulties regarding the format used for the exchange of metadata. In most cases, the IT tool developed by the NSI, ARCAM, is used for the transferring of data and metadata. ARCAM provides an interface through which the data owner can transmit data and metadata in different ways (HTTPS, SFTP, Web Service).

12.4.1 Quality and technical restrictions

Overall, the NSI reported the following issues:

- The NSI is not aware of the quality checks applied by data owners.
- Data owners apply sufficient quality checks useful for the NSI only in a few cases.
- There are a few difficulties in the format used for the exchange of data.

12.5 Some examples of administrative data usage

Business Statistics

Focusing on the business domain, SBS statistics are based on survey data which are combined with enterprises balance sheets⁵². Under the 2013-2015 strategy of the NSI, an intensive use of administrative data as a primary source for the compilation of SBS data was envisaged.

Agricultural Statistics

In the 2010 census of agriculture, administrative sources were used for forming the sampling frame. The list of agricultural holdings has been obtained by combing administrative and statistical sources, containing information on the agricultural population and its units.

Social Statistics

In social statistics, a population register exists serving as a sampling frame for the population and housing census as well as for social surveys. Tax registers are used complementary to the collected data for the compilation of income components under the SILC survey.

Data on unemployment are collected via the LFS survey, but an attempt has been made to compare survey microdata with those coming from the unemployment register. However, the outcome of this study revealed inconsistencies between the two sources⁵³.

Examples of sources used

- Business statistics: (1) Enterprise Balance sheets provided by enterprises surveyed.
- Agricultural statistics: (1) Integrated Administration and Control System (IACS), (2) System for the Identification and Registration of Bovine Animals and other species (AA.ZZ.), (3) Lands' property Incomes (Tax Agency), (4) Land registry, (5) Chambers of Commerce, (6) VAT and Tax Revenue declarations (Tax Agency).
- Social statistics: (1) Tax Registers, (2) Population Register.

12.5.1 Problematic data access cases

The NSI identified the following administrative data sources for which access is not feasible or is achieved in a considerable problematic way.

⁵² National Institute of Statistics Italy, "Structural Business statistics methodology" (2005).

⁵³ National Institute of Statistics Italy, De Gregorio C., Filipponi D., Martini A., Rocchetti I., "A comparison of sample and register based survey: the case of labour market data" (2014).

Data source	Data owner	Purpose of access	Statistical domain where data are used
Registers on consumption of gas and electricity	Acquirente Unico SPA	N/A	Environment statistics
Wine data source	AGEA	N/A	Agriculture Statistics
Tax Form 770	Agenzia delle Entrate	N/A	Business Statistics

Legal and institutional issues: The NSI pointed out that for the registers on the consumption of gas and electricity, additional specific legal acts need to be passed and a permission from an authority other than the data owner is required to be granted so that the NSI obtains access to the data source. These actions are required since the data provider does not belong to the SISTAN. For the two other above-mentioned sources, no legal obstacles are in place.

Cooperation with data owners: According to the NSI, excessive bureaucracy between the organisations restricts its access to the wine data source. For the two other above-mentioned sources, no cooperation issues have been reported by the NSI.

Quality aspects: No issues have been identified by the NSI for any of the above-mentioned data sources.

Technical aspects: For Tax Form 770 data, the NSI stated that there are difficulties related to the format used for the exchange of data. For the two other above-mentioned sources, no technical issues have been reported.

12.5.2 Successful data access cases

The following data sources are considered by the NSI as the most representative successful data access cases.

Data source	Data owner	Purpose of access	Statistical domain
Tax data on individuals	Agenzia delle Entrate	N/A	Business Statistics
Data on enterprises data sheets	Union Camere - Info camere	N/A	Business Statistics
Social Security data	INPS	N/A	Business Register

Factors contributing to successful access: For tax data, the NSI specified the following success factors for accessing and using the data source: (a) good relationships with the data owners, (b) timely transmission of the data, (c) accuracy of the data. Regarding the data on enterprise sheets, a payment agreement has been signed. Despite that, the timely transmission of the data and the good relationship with the data owner have contributed to a successful use of the data source. Finally, for social security data, the NSI identified the following significant factors that contributed to a successful use of the data: (a) the accuracy of the data and (b) good cooperation mechanisms established with the data owner, e.g. the data owner informs the NSI in advance about planned changes to be implemented in the database.

Obstacles overcome in accessing the data source: No obstacles have been mentioned for any of the three data sources.

Best practice study: According to the information provided in the questionnaire, none of the three data sources could be used as a best practice study.

13 Cyprus

13.1 Legal framework

The Statistical Law No. 15(I) of 2000⁵⁴ lays down the provisions governing NSI's access to administrative data. Article 10.(1) of the above-mentioned Statistical Law states that the NSI has the right to access free of charge the administrative records of the ministries and services of the government of the Republic and of public corporations for the production of statistics.

The ministries, the services of the government and the public corporations have the obligation to provide the NSI any information which is necessary for the production of statistics.

Legal right to access administrative data at microdata level

The NSI has access to administrative microdata from all sources. The national legislation does not require that administrative microdata provided to the NSI be anonymized first. However, in some cases the legislation governing public authorities imposes strict provisions on the protection of the confidentiality of the data. In practice, the NSI requests the permission of the Commissioner for Data Protection on every instance obtaining personal administrative data from some sources.

Cooperation with data owners in design of administrative databases

According to Article 9.(2) of the Statistical Law, the ministries, the services of the government of the Republic and the public corporations shall inform the NSI before setting-up or amending the existing databases and technology systems and should take into consideration the needs of the NSI which are communicated to them from time to time.

Cost-free access to administrative data

The NSI has the right to access to all administrative data sources for free.

Coherence of the legal framework

The legislation applicable to some administrative data owners contradicts the NSI's legal rights to access and use their data. In the past, some departments of the government claimed that their legislation did not permit the provision of their data to any other authority. Therefore, according to the information reported by the NSI, the legal framework specifying NSI's rights to access and use administrative data leaves room for misinterpretations. Passing additional legal acts to access specific administrative data sources is not required.

13.1.1 Legal restrictions

The legal restrictions reported by the NSI are summarized as follows:

- Although the national Statistical Law grants access to all administrative data records, the legislation governing some public authorities imposes strict provisions on the confidentiality and protection of their data.
- A permission from the Commissioner of Personal Data Protection must be requested on every instance of obtaining personal administrative data from some sources.
- The legal framework leaves room for misinterpretations.

13.2 Internal institutional aspects

Policy on administrative data

⁵⁴ http://www.mof.gov.cy/mof/cystat/statistics.nsf/legislation_en/legislation_en?OpenDocument

According to the information provided in the questionnaire, an organization-wide policy promoting the use of administrative data is in place. Standard and systematic procedures to identify administrative data sources potentially useful for statistical purposes are partly in place.

On the other hand, the NSI stated that standard and systematic practices to ensure the confidentiality and security of administrative data are not in place, while standard and documented quality criteria to assess the adequacy of the administrative data are not used across statistical domains.

Organisation within the NSI

The NSI has access to the Government Data Warehouse (GDW), which is central repository of data that enables easy access to accurate, consistent and integrated government data. The GDW is a single cohesive database with a subject-centric approach, optimised for reporting and analysis. In detail, the database contains selective transactions and inter-related information from all Government Information Systems, specifically structured for dynamic queries and analytics. Within the NSI, the Methodology Unit is responsible to coordinate the NSI's contacts and cooperation with the administrators of GDW.

As stated in the questionnaire, the NSI's personnel has the required competences to effectively exploit administrative data for statistical purposes, but the available resources are not sufficient.

13.2.1 Internal institutional obstacles

In summary, the following issues were identified by the NSI:

- A procedure to monitor developments in the legal framework governing the sharing of administrative data among authorities is not in place.
- A procedure to identify administrative sources potentially useful for statistical use is only partly in place.
- Documented quality criteria to assess the quality of administrative data are not used across the statistical units of the NSI.
- Standard, systematic practices to ensure confidentiality and security of administrative data are not in place.
- The available resources are not sufficient for the effective exploitation of administrative data for statistical purposes.

13.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

In view of the NSI, the overall culture of the staff in the country public sector is neutral to data sharing. Concerns in the general public regarding personal data privacy and confidentiality constitute an important obstacle for the sharing of data among organisations.

According to the NSI, the development and implementation of the GDW was an important step towards the establishment of data sharing in the public sector.

Cooperation with data owners

Following the information provided in the questionnaire, written agreements covering each case of data provision have been signed between the NSI and the data owners in a few cases so far. However, mutual agreements with many data owners are in place (e.g. Treasury of the Government, Auditor General, Registrar of Companies, VAT Service, Social Insurance Services, Public Works Department). A Memorandum of Understanding on public finance has been signed among the Fiscal Council, the Central Bank of Cyprus, the University of Cyprus and the Ministry of Finance. Overall, the coordination mechanisms between the NSI and the data owners are considered effective by the NSI.

The NSI reported that it is rarely consulted by the data owners on issues such as specifications or design of their databases. Also, data owners rarely take its recommendations into account when setting-up, changing or discontinuing the administrative database.

Although the Statistics Act obliges the data owners to inform the NSI in advance on the changes planned to be implemented in the design of their databases, this, according to the NSI, never occurs in practice.

The NSI stated that it never communicates to the data owners the procedures in place to ensure the confidentiality and security of the data but has the authority to demand suitable modifications from all data owners when quality-related problems are encountered.

The NSI added that, in most cases, it communicates to the data owners issues related to errors and inconsistencies identified in their data. During this communication, all necessary measures to protect individual confidentiality are always undertaken.

Overall, the NSI reported that it always faces difficulties in cooperating with the administrative data owners. Data owners sometimes send their data with delays relative to the agreed timetable or refuse to provide access to their records. Excessive formality or bureaucracy is sometimes an obstacle for establishing cooperation.

13.3.1 Issues related to the wider institutional environment and cooperation with data owners

The NSI identified the following issues with regard to its cooperation with the data owners:

- The NSI is rarely consulted by the data owners on issues such as specifications or design of their databases.
- Data owners rarely take the recommendations of the NSI into consideration when setting-up, changing or discontinuing an administrative database.
- Data owners never inform the NSI sufficiently in advance on planned changes in the structure or design of the databases.
- The NSI never communicates to the administrative data owners the procedures in place to ensure confidentiality and security of the data.
- The NSI always faces difficulties in cooperating with the data owners.
- Sometimes data owners send their data with delays relative to the agreed timetable.
- In few cases, data owners refuse to provide access to their records due to data protection restrictions imposed by their own legislation and the legislation on the protection of personal data.
- Excessive formality or bureaucracy between organisations is sometimes an obstacle for cooperation.

13.4 Quality and Technical preconditions

Quality aspects

According to the information provided in the questionnaire, the NSI has access to sufficient methodological information on the data collection process operated by the data owners only in a few cases. In practice, metadata are not available but the NSI is informed about the collection process through informal contacts with the data owners.

In most cases, the data owners apply sufficient quality checks in their data that are useful for the NSI.

Unique and consistent identifiers are used across most data sources but, in most cases, the NSI does not have sufficient information for linking different data sources.

Technical aspects

According to the NSI, there are a few difficulties regarding format used for the exchange of data. Automated data exchange mechanisms are used for transferring data only in a few cases. In almost most cases, the NSI does not receive metadata.

13.4.1 Quality and technical restrictions

In view of the NSI the following quality and technical restrictions are in place:

- In all cases, metadata on the collection process operated by the data owners are not available. The NSI asks for methodological information through informal contacts with the data owners.
- There are few difficulties in the format used for the exchange of data.
- Automated data exchange mechanisms for the transferring of data are used only in a few cases.
- The NSI has sufficient information for linking different sources only in a few cases, although unique and consistent identifiers are used across most data sources.

13.5 Some examples of administrative data usage

FIMAS, which is the financial information management accounting system developed by the government, is used by the Sector of Public Finance of CYSTAT. FIMAS is the main source for deriving primary data for the compilation of the accounts of Central Government (budget and extra-budgetary units/funds) and Social Insurance sub-sectors on a monthly basis. The quality of the collected data in the system is considered good. The NSI complementarily uses the data of the National Treasury in order to comply with its statistical requirements for further breaking down accounting data.

Additionally, CYSTAT cooperated closely with the Social Insurance Services for the transition of the Social Insurance Register (SIR) from NACE Rev.1.1 to NACE Rev.2. By December 2010, the change was successfully implemented thus making the SIR data ready for use for statistical purposes.

Moreover, the Business Register is frequently updated from different administrative sources (VAT Register, Social Insurance Register, Registrar of Companies). In order to update the Business Register, the VAT Register is matched with the Register of the Registrar of Companies.

In general, the NSI cooperates with other ministries/services/departments of the government during the design of administrative data sources in order to monitor the quality of the data.

13.5.1 Problematic data access cases

The NSI identified the following administrative data source for which access is not feasible or is achieved in a considerable problematic way.

Data source	Data owner	Purpose of access	Statistical domain where data are used
Income Declarations Database	Tax Department of inland revenue	Update of the Business Register, Compilation of SBS statistics	Business Register, SBS

Legal and institutional issues: The NSI reported that due to confidentiality restrictions imposed by the legislation governing the data source, the Department of Inland Revenue has requested the permission of the Commissioner for Personal Data Protection in order to grant to the NSI access to its data.

Cooperation with data owners: In view of the NSI, the main factor restricting its access to the data source is the lack of effective cooperation mechanisms with the data owner. The Department of Inland

Revenue refuses to provide access to its data due to confidentiality restrictions imposed by the legislation governing the data source.

Quality aspects: According to the NSI, the main issues with regard to the quality of the data is the lack of sufficient methodological information on the data collection process operated by the data owner and for linking the data source with other sources. An additional issue is that the data become available too late for the needs of the NSI.

Technical aspects: The NSI stated that the Government Data Warehouse may be used for the transferring of the data since other automated data exchange mechanisms are not used by the data owners.

13.5.2 Successful data access cases

The following data sources are considered as the most representative successful data access cases.

Data source	Data owner	Purpose of access	Statistical domain
Sales and characteristics of dwellings for a specific time period	Government data warehouse (GDW)	Use data in order to produce statistical figures	House Price Index
Legal units database	Government Data Warehouse (GDW)	Data regarding legal units (shareholders, employment, etc.)	Business Register
Register of all employees with social contributions	Social insurance Services	Use data regarding the gross earnings of employees, demographics of employees, total employment of enterprises etc.	Labour Market Statistics (SES, LCI, Employment statistics, etc.)

Factors contributing to successful access: For the sales and characteristics of dwellings and legal units database, the NSI reported that has direct access to the Government Data Warehouse (GDW), which contains information from all transactions of the Government Information Systems. The GDW provides Civil Service data, which are optimized for reporting and analysis. Regarding the register of all employees with social security contributions, the main factors identified by the NSI that contributed to a successful access to the data source are (a) the personal contacts with the data owner (several meetings have taken place during which the NSI communicated to the data owner its needs), (b) the establishment of a good and continuous cooperation with the data owner and (c) the provision of methodological support to the data owner (e.g. consultation on the classification of new entries to the register, mapping of data from NACE Rev1.1 to NACE Rev.2).

Obstacles overcome in accessing the data source: No obstacles have been mentioned by the NSI for any of the three data sources. In general, the lack of metadata accompanying each data source is an important obstacle not yet overcome.

Best practice study: According to the information provided to the questionnaire, the use of the Government Data Warehouse could be used as a best practice study.

14 Latvia

14.1 Legal framework

According to the Section 17 of the Official Statistics Law of 1997⁵⁵, the NSI has the right to receive,

⁵⁵ http://www.vvc.gov.lv/export/sites/default/docs/LRTA/Citi/Statistics_law.doc

free of charge, the necessary data from the State registers or databases for the compilation of statistics of the National Programme of Statistical Information. This right also extends to individual data.

On 4th June 2015, a new Statistics Law, containing several provisions to ensure compliance with the EC Regulation No 223/2009 was adopted. The Statistics Law came into force on 1st January 2016⁵⁶. Section 15 of the Statistics Law specifies that State authorities and legal persons governed by private law shall provide their data to the NSI, upon its request, for the production of official statistics. The NSI upon requesting data from administrative data sources, shall provide the following information: (a) the legal basis of the data request; (b) scope of data to be provided; (c) data provision form; (d) information regarding ensuring statistical confidentiality.

The NSI shall use administrative data sources for the production of official statistics, except for the cases when the quality of the data does not meet the needs of production of official statistics (e.g. the statistical unit, classifications, concepts used are not compatible with the ones required for statistical purposes).

Legal right to access administrative data at microdata level

The NSI has the right to access to administrative microdata from most sources. The national legal framework does not require that administrative microdata provided are anonymized first before their transmission to the NSI. According to Section 15 of the Statistics Law and the Personal Data Protection Law, the NSI is not obliged to request a permission from an authority other than the data owner in order to access any administrative data source.

Cooperation with data owners in design of administrative databases

Upon the provisions of Section 15 (4) of the new Statistics Law, a State authority, maintaining, planning, implementing and improving the structure and content of an administrative data source, shall produce data that are in line with the needs of the statistical needs of the NSI. Thus, in most cases, administrative data holders are obliged to inform the NSI when the setting-up, changing or discontinuing a database. The recommendations of the NSI are binding.

Cost-free access to administrative data

The NSI has the right to access to most administrative data sources for free. In detail, Statistics Law, Section 15 (2) specifies that data from administrative data sources of a State institution shall be provided free of charge.

Coherence of the legal framework

For some data sources, the legislation applicable to the administrative data owners contradicts the NSI's legal rights to access and use their data. Additionally, the passing of specific additional legal acts is required to access some administrative data sources.

Overall, according to the NSI, the legal framework does not leave room for misinterpretations.

14.1.1 Legal restrictions

According to the NSI the legal restrictions are summarized as follows:

- The Statistical Law grants to the NSI the right to access data only from specific administrative sources.
- For some sources, the NSI does not have the right to access administrative microdata.
- For some data sources the legislation applicable to the administrative data owners contradicts the NSI's legal rights to access and use their data.
- The passing of specific additional legal acts is required to access some administrative data sources.

⁵⁶ <http://vvc.gov.lv/image/catalog/dokumenti/Statistics%20Law.docx>

14.2 Internal institutional aspects

Policy on administrative data

Following the information provided in the questionnaire, an organization-wide policy promoting the use of administrative data is in place. Standard and systematic procedures to identify administrative data sources potentially useful for statistical purposes as well as a procedure to monitor developments in the legal framework governing the sharing of administrative data between authorities are partly in place. Standardised and documented quality criteria to assess the adequacy of the administrative data are partly used across statistical domains.

The NSI has adopted standard and systematic practices to ensure the confidentiality and security of administrative data.

Organisation within the NSI

Within the NSI, the Administrative Data Processing Section coordinates and manages the contacts and cooperation with data owners. Domain experts are assigned to discussion with the administrative data owners for each and every specific issue that may arise (Workshop on access to administrative data sources (2016)).

As stated in the questionnaire, the NSI's personnel partly has the required competences to effectively exploit administrative data for statistical purposes, while the available resources are partly sufficient.

14.2.1 Internal institutional obstacles

In summary, the following issues were identified by the NSI:

- A procedure to monitor developments in the legal framework governing the sharing of administrative data among authorities is only partly in place.
- A standard procedure to identify administrative sources potentially useful for statistical use is only partly in place.
- Documented quality criteria to assess the quality of administrative data are only partly used across the statistical units of the NSI.
- The available resources are only partly sufficient for the effective exploitation of administrative data for statistical purposes.
- The NSI's personnel partly has the required competences to effectively exploit administrative data for statistical purposes.

14.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

In view of the NSI, the overall culture of the staff in the country's public sector is neutral to data sharing. Concerns in the general public regarding personal data privacy and confidentiality do not essentially constitute an important obstacle for the sharing of data among organisations.

A national strategy on data sharing in the public sector is prescribed in the Law on State Information Systems of 5th June 2014 (consolidated version).

Cooperation with data owners

As far as it is stated in the peer review report, the NSI has established good bilateral relationships with the data owners and has few problems in acquiring the required data. In most cases, the NSI has signed cooperation agreements with the administrative data owners, which set the specifications for data use and transmission (e.g. deadlines and format of data file transmission, confidentiality restrictions). Improvements have been reached by agreements between data owners and

statisticians, e.g. about the way quality issues were handled (Workshop on access to administrative data sources (2016)).

In view of the NSI, the coordination mechanisms with the data owners are in most cases effective.

According to the information provided in the questionnaire, the NSI is in most cases consulted by the data owners on issues such as specifications or design their databases and data owners always take the NSI's recommendations into account when setting up, changing or discontinuing the administrative source.

The NSI stated that administrative data owners inform the NSI sufficiently in advance of the changes planned to be implemented in the design of their databases only in a few cases.

As part of an inter-institutional agreement, the NSI always communicates to the data owners the procedures in place to ensure the confidentiality and security of the data. Although the NSI has the authority to demand for suitable modifications from all data owners when quality-related problems are encountered, the Statistics Law does not oblige the data owners to implement the requested changes.

The NSI also reported that, in most cases, issues related to errors and inconsistencies identified in administrative data are communicated to the data owners. During this communication, all necessary measures to protect individual confidentiality are always undertaken.

Overall, the NSI mentioned that sometimes faces difficulties in cooperating with the administrative data owners. Among the difficulties the NSI faces is the lack of data in electronic format. In these cases, the NSI pays charges to the data owners in order to extract the data according to its specifications (e.g. data format or structure).

Finally, according to the peer reviews, a framework of cooperation with the data owners in order to ensure that the quality of data is systematically monitored and assured needs to be established.

14.3.1 Issues related to the wider institutional environment and cooperation with data owners

In summary, the NSI mentioned the following issues:

- Data owners rarely inform the NSI sufficiently in advance on planned changes in the structure or design of the databases.
- The NSI sometimes faces difficulties in cooperating with the data owners.
- Sometimes data owners refuse to provide access to their data.
- The NSI pays charges to the data owners in order to extract the data according to its specifications (e.g. data format or structure).
- Excessive formality or bureaucracy between organisations is sometimes an obstacle for cooperation.

14.4 Quality and Technical preconditions

Quality aspects

Following the information in the questionnaire, the NSI has access to sufficient methodological information on the data collection process operated by the data owners in most cases. The data owners apply in most cases sufficient quality checks in their data that are useful for the NSI.

Unique and consistent identifiers are used across most data sources and the NSI has sufficient information for linking different data sources.

Technical aspects

According to the NSI, there are a few difficulties regarding format used for the exchange of data and metadata. Automated data exchange mechanisms are used for transferring data and metadata in most cases.

14.4.1 Quality and technical restrictions

No issues have been identified.

14.5 Some examples of administrative data usage

Business Statistics

The business register is updated based on data derived from administrative sources and surveys. Structural Business Statistics (SBS) are compiled by combining administrative tax data with small-scale auxiliary surveys.

In the framework of “ESSnet Admin Data (WP1)”, the NSI presented a study⁵⁷ on the use of administrative data for derivation of labour cost as well as STS statistics (Short Term Business Statistics). The study concluded that administrative data can be used for the compilation of the required statistics. Plans were set toward the implemented of the methodology from 2016 onwards.

Agricultural Statistics

An agreement including provisions on the administrative data required for the compilation of agricultural statistics has been signed between the Ministry of Agriculture and the NSI⁵⁸. The NSI receives all required information at microdata level.

Social Statistics

With regard to the 2011 population and housing census, the NSI compiled part of the statistics from administrative registers, while the rest of the data were collected through a survey. The NSI is working towards a wider use of administrative data in the 2021 implementation of the population census. In this work, the NSI is supported by a working group convened by the Ministry of Economics.

Up to 2008, administrative data were used as a secondary source in the quarterly Labour Cost Survey (LCS). From 2008 onwards, data for microenterprises are not collected through surveys, but are imputed using auxiliary data on wages from employers' reports⁵⁹.

The NSI has recently undertaken a feasibility study on the use of administrative data combined with information from sample surveys in order to obtain data on the economic characteristics of the population for the Population and Housing Census.⁶⁰ The following census topics were analysed: current activity status, occupation, industry and status in employment. Data from the States Revenue Service, State Social Insurance Agency, State Employment Agency, National Education Information System, as well as data received from Higher Education Institutions were analysed. It was concluded that these data can be used to acquire information on the activity status of persons for the Census. Currently the NSI is assessing whether administrative sources combined with regular statistical sample surveys can produce the data on the census topic educational attainment⁶¹.

Examples of sources used

- Business statistics: (1) State Enterprise Business Register of Latvia, (2) State Revenue Service Register of Tax Payers (Ministry of Finance), (3) Courts, (information for bankrupts

⁵⁷ EssNET, “Use of administrative data in Industry Statistics in Latvia” (2008).

⁵⁸ Central Statistical Bureau of Latvia, “Agricultural census 2010 and survey on agricultural production methods” (2010).

⁵⁹ Lija Luste, Central Statistical Bureau of Latvia, Wage Statistics Section, “Use of administrative data in wages and labour costs statistics” (2010).

⁶⁰ Eurostat grant agreement 07112.2015.002-2015.352 on the improvement of the use of administrative sources (ESS.VIP ADMIN WP6 Pilot studies and applications).

⁶¹ Eurostat grant agreement 07112.2016.004-2016.591 on the improvement of the use of administrative sources (ESS.VIP ADMIN WP6 Pilot studies and applications).

and insolvency), (4) Official newspaper of Latvia Government, (5) Income Declarations about self-employed.

- Agricultural statistics: (1) State Land Cadastre, (2) Population Register, (3) Agricultural Data Centre, (4) Animal Register, (5) Rural Support Service Database.
- Social statistics: Population census: (1) Population Register, (2) State Revenue Service Register of Tax Payers (Ministry of Finance), (3) State Cadastre Register of Real Estate. LCS, SES and LCI: (1) State Revenue Service.

14.5.1 Problematic data access cases

The NSI identified the following administrative data sources for which access is not feasible or is achieved in a considerable problematic way.

Data source	Data owner	Purpose of access ^[1]	of	Statistical domain where data are used
Databases of buyers	Main supermarket chains in the retail trade	5		Population statistics, Population Census and Price Index
Higher education institutions graduate database	Higher education institutions	3, 4, 5		Education Statistics, Population Census

^[1] (1) Main source for the survey frame, (2) Auxiliary source for the survey frame (3) Direct compilation of statistics from administrative aggregated data or microdata, (4) Direct compilation of statistics in combination with other sources (e.g. other administrative sources, surveys), (5) Source of auxiliary data for prefilling, editing / validation, imputation, etc.

Legal and institutional issues: The NSI stated that the Ministry of Education and Science does not have a register of the higher educational institutions in the country, whereas the latter do not keep in their electronic records the list of graduates. On the other hand, the provision of data from the higher education institutions to the NSI is not mandatory. For the databases of buyers, the NSI did not report any legal issues restricting its access to the data source.

Cooperation with data owners: According to the NSI, the main supermarket chains in the retail trade refuse to provide their data. The same also holds for the higher education institutions. In the latter case, there are additional issues, such that of the lack of a written agreement with the Ministry of Education and Science. The NSI added that, the Ministry of Education and Science does not have the required financial resources to process and provide the data according to its requirements.

Quality aspects: The NSI reported that issues with regard to the quality of the database on higher education institutions graduate are also in place; the data are collected for a different time period than the one required for statistical purposes, while the NSI does not have sufficient methodological information on the data collection process operated by the data owner.

Technical aspects: Regarding the higher education institutions graduate database, data exchange mechanisms for the transferring data and metadata are not in place. No technical issues have been identified by the NSI for the databases of buyers.

14.5.2 Successful data access cases

The following data sources are considered by the NSI as the most representative successful data access cases.

Data source	Data owner	Purpose of access ^[1]	Statistical domain
Database of taxpayers	State revenue service	3, 4, 5	SILC, LFS, Population Census, statistics, Statistics, Population Business

Data source	Data owner	Purpose of access ^[1]	Statistical domain
Social Assistance Administration Information System	Municipalities	3, 4, 5	SILC, Population Census, Population Statistics
Integrated Migration Information System subsystem of Single Information System for Civil Registers (CARIS)	Office of Citizenship and Migration Affairs	3, 4	Population statistics

^[1] (1) Main source for the survey frame, (2) Auxiliary source for the survey frame (3) Direct compilation of statistics from administrative aggregated data or microdata, (4) Direct compilation of statistics in combination with other sources (e.g. other administrative sources, surveys), (5) Source of auxiliary data for prefilling, editing / validation, imputation, etc.

Factors contributing to successful access: According to the NSI, the main factors contributing to a successful use of the database of taxpayers are the signature of bilateral agreements and the establishment of good cooperation mechanisms with the State Revenue Service (e.g. a classification for the occupation of individuals have been introduced in the data source upon the NSI's request). For the Social Assistance Administration Information system, the NSI reported that the signature of bilateral agreements on the exchange of data and the adoption of common technical solutions have contributed to a successful access to the data source. The same also holds for the case of the Integrated migration information system.

Obstacles overcome in accessing the data source: With regard to the Social Assistance Administration Information System, the signature of bilateral agreements with each municipality, in order to comply with the request of the Data State Inspection, was the most significant obstacle to overcome.

Best practice study: According to the information provided in the questionnaire, the use of the database on tax payers could be considered as a best practice case study.

15 Lithuania

15.1 Legal framework

According to the Law on Statistics of 1993, last amended in 2010 (No XI-1085)⁶², the NSI is authorised to obtain information from state and municipal institutions and agencies for the implementation of the official statistics Work Programme (OSWP). The statistical data required for the implementation of the OSWP should be obtained from state registers and information systems free of charge.

Article 12 makes further provisions on the data sources required for producing official statistics, among which accounting data of natural and legal persons, tax, customs, education, health, labour exchange, social security and public utilities registers, registers of the Bank of Lithuania and state registers, as well as data from the administrative regulatory and personal documents accumulated by municipal institutions and agencies are included.

Overall, the NSI has the right to access data from any administrative source and use them for any statistical purpose.

Legal right to access administrative data at microdata level

⁶² <http://www.stat.gov.lt/documents/29256/37926/LAWONSTATISTICS.doc>

The NSI has the right to access administrative microdata from all sources. The national legal framework does not require that administrative microdata from any source are anonymized before their transmission to the NSI. Although not foreseen by the legal framework, data owners sometimes demand the NSI to request the data protection authority's permission in order to grant access to their data.

Cooperation with data owners in design of administrative databases

Administrative data owners are not obliged by the Statistics Law to consult and coordinate with the NSI when setting-up, changing or discontinuing a data source. In most cases, cooperation between the NSI and the data owners on such issues is established through bilateral agreements.

Cost-free access to administrative data

According to the Statistics Law, the NSI has the right to access most data sources for free.

Coherence of the legal framework

Following the information provided by the NSI, there are legal restrictions on the maximum duration of retention of the data coming from some sources.

Additionally, in view of the NSI, the legal framework leaves room for misinterpretations regarding the its right to obtain data from all sources for free. Sometimes the administrative data owners request the NSI to pay for the expenses of the preparation of data according to its specifications.

15.1.1 Legal restrictions

The NSI identified the following legal restrictions:

- There are legal restrictions on the maximum duration of retention of the data coming from some sources.
- Even though not foreseen in the legal framework, the data owners request the NSI to obtain permission from the data protection authority in order to grant access to their data.
- The Law on Statistics does not oblige the data owners to consult the NSI when setting-up, changing or discontinuing a data source.
- Sometimes data owners request payments for the preparation of data in accordance to NSI's specifications.

15.2 Internal institutional aspects

Policy on administrative data

An organization-wide policy promoting the use of administrative data is in place. Statistics Lithuania places high importance on reducing response burden. The Statistics Lithuania's policy prescribes that data from respondents should be collected only if administrative or other statistical data are not available. The Statistical Council, consisting of state and municipal institutions and agencies managing statistics, universities, public organisations, business organisations, and the media, advises the NSI on the key issues relating to its strategy. These include the use of administrative registers for the production of official statistics.

Following the information provided in the questionnaire, the NSI has only partly established standard and systematic procedures to identify administrative data sources potentially useful for statistical purposes. Moreover, a procedure to monitor developments in the legal framework governing the sharing of administrative data between authorities is only partly in place.

According to the information provided by the peer reviewers, in 2015 the Methodology and Quality division of the NSI established a working group, responsible for the proposal of standardised methods that could be applied for editing and imputing survey and administrative data. As mentioned by the NSI, the methodological procedures required for the incorporation of administrative data in the statistical production process are time-consuming.

The NSI stated that standard and systematic practices to ensure confidentiality and security of administrative data in all cases are in place.

Organisation within the NSI

A specific unit responsible for the coordination of NSI's contacts and cooperation with data owners is in place. In view of the NSI, the staff has all the required competences to effectively exploit administrative data for statistical purposes, but the available resources are not sufficient.

However, in recent years, the NSI has managed to reduce significantly the response burden imposed to both businesses and households. The e-Statistika system, developed by the NSI, is increasingly used by businesses for the provision of their data. The questionnaires included in the e-Statistika are prefilled with information from administrative sources.

15.2.1 Internal institutional obstacles

In summary, the following issues were identified by the NSI:

- A procedure to monitor developments in the legal framework governing the sharing of administrative data among authorities is only partly in place.
- A standard and systematic procedure to identify administrative sources potentially useful for statistical use is only partly in place.
- Documented quality criteria to assess the quality of administrative data are not used across the statistical units of the NSI.
- The available resources are not sufficient for the effective exploitation of administrative data for statistical purposes.

15.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

In view of the NSI, the overall culture of the staff in the country's public sector is favourable to data sharing. Concerns in the general public regarding personal data privacy and confidentiality do not constitute an obstacle for the sharing of data among organisations.

Data sharing in the public sector is ordered by the 2012 Law on the reduction of administrative burden. The above-referred Law obliges all institutions to share their data so that to avoid double reporting. The NSI's opinion about the effectiveness of implementation of the Law is neutral.

Cooperation with data owners

The NSI has signed written agreements covering each instance of data provision with all data owners. The NSI stated that the coordination mechanisms with the data owners are in most cases effective.

Following the information provided in the questionnaire, in most cases, the NSI is consulted by the data owners on issues such as specifications or design their databases but data owners rarely take the recommendations into account when setting-up, changing or discontinuing the administrative database. Additionally, data owners rarely inform the NSI sufficiently in advance on the changes planned to be implemented in the design of their databases.

The NSI reported that although it does not have the authority to demand for suitable modifications from all data owners when quality-related problems are encountered, it always communicates to them the procedures in place to ensure the confidentiality and security of the data. As stated by the NSI, it is difficult for the data owners to take into consideration its needs in terms of the quality of the data.

Moreover, in all cases, the NSI communicates to the data owners issues related to errors and inconsistencies identified in their data. During this communication, all necessary measures to protect individual confidentiality are always undertaken.

Data owners rarely refuse to provide access to their data and they usually send their data without delays relative to the agreed timetable.

Overall, the NSI mentioned that sometimes faces difficulties in cooperating with the administrative data owners, since they sometimes request the NSI to pay the expenses for processing the data. Excessive formality or bureaucracy is sometimes an obstacle in the overall communication.

15.3.1 Issues related to the wider institutional environment and cooperation with data owners

In summary, the following issues have been reported:

- Data owners take into account the recommendations of the NSI when setting up, changing or discontinuing an administrative data source only in a few cases.
- Data owners rarely inform the NSI sufficiently in advance on planned changes in the structure or design of the databases.
- When quality-related problems are encountered, the NSI does not have the authority to demand suitable modifications from the data owners.
- The NSI sometimes faces difficulties in cooperating with the data owners.
- Sometimes administrative data owners request the NSI payments not foreseen in the law.
- Excessive formality or bureaucracy between organisations is sometimes an obstacle for cooperation.

15.4 Quality and Technical preconditions

Quality aspects

Following the information in the questionnaire, in most cases, the NSI has access to sufficient methodological information on the data collection process operated by the data owners. Moreover, unique and consistent identifiers are used across all data sources and the NSI has sufficient information for linking different data sources.

Data owners apply sufficient quality checks in their data that are useful for the NSI in a few cases.

Technical aspects

According to the NSI, there are a few difficulties regarding format used for the exchange of data. Automated data exchange mechanisms are used for transferring data and metadata in most cases.

15.4.1 Quality and technical restrictions

Overall, The NSI mentioned the following quality and technical restrictions:

- The data owners apply sufficient quality checks that are useful to the NSI only in a few cases.

15.5 Some examples of administrative data usage

Business Statistics

Up to 2005, the business register was updated using a combination of data from administrative sources and surveys. For the compilation of SBS data, direct surveys but also administrative data are used. A study concerning the calculation of turnover and employment indices (STS) has been published in 2010⁶³, depicting issues with regard to the consistency between administrative and survey data.

Agricultural Statistics

⁶³ Statistics Lithuania, Andrius Čiginas, Daliutė Kavaliauskienė, "Overview of use Administrative Data in STS" (2010).

Agricultural statistics are based on surveys. Administrative data are used as secondary sources for validating the collected data.

Social Statistics

The 2011 population and housing census was survey-based. An electronic data collection was also launched for the first time, including questionnaires prefilled with information from administrative data sources. A preliminary database was developed, including personal data on the individuals who had declared their place of residence in the enumeration districts; as well as data on the characteristics of the dwellings.

In addition, some administrative sources are used for vital and migration statistics. Especially for the migration statistics, the NSI carried out a pilot study in 2009⁶⁴ with the view to calculate the exact number of residents in Lithuania, using data from various administrative sources to estimate undeclared emigration. The results of the study showed that the definitions used for the variables in the administrative sources were substantially different from the ones used for statistical purposes.

Statistics Lithuania has recently undertaken an inventory⁶⁵ of existing administrative sources that could be used for the Population and Housing Census. This included an assessment of coverage, variables, reference period, identifying the problems and solutions for improvement and a preparation of description of usage of the administrative sources. The forthcoming Census will be based on a combination of data from administrative source and regular sample surveys. Currently Statistics Lithuania is working on securing agreements with the owners of administrative data, consolidating data in an integrated data warehouse and evaluating and testing the procedures to use the administrative data⁶⁶.

Examples of sources used

- Business statistics: (1) Balance sheets, Income and VAT declarations, (2) Administrative register of economic entities, (3) Social insurance taxpayers register.
- Agricultural statistics: (1) Integrated Administration and Control System Register, (2) Livestock Register.
- Social statistics: Population census: (1) Address Register of the Republic of Lithuania, (2) Residents' Register of the Republic of Lithuania, (3) Real Estate Register of the Republic of Lithuania, (4) Registers of pupils and students, (5) Database of the State Social Insurance Fund Board (Sodra) (6) Data of the National Health Insurance Fund and the Lithuanian Labour Exchange. Migration statistics: (1) Population Register (Ministry of the Interior of the Republic of Lithuania), (2) State Social Insurance Fund Board (Ministry of Social Security and Labour), (3) State Tax Inspectorate.

15.5.1 Problematic data access cases

The NSI did not identify any administrative data source for which access is not feasible or is achieved in a considerable problematic way.

15.5.2 Successful data access cases

The following data sources have been identified as successful data access cases.

Data source	Data owner	Purpose of access ^[1]	Statistical domain
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⁶⁴ Statistics Lithuania, Vilija LAPÖNIENÖ, "New approach to international migration statistics in Lithuania. Combination of data from labour force survey and population registers" (2009).

⁶⁵ Eurostat grant agreement No 07112.2015.002-2015.351 on the improvement of the use of administrative sources (ESS.VIP ADMIN WP6 Pilot studies and applications).

⁶⁶ Eurostat grant agreement No 07112.2016.004-2015.590 on the improvement of the use of administrative sources (ESS.VIP ADMIN WP6 Pilot studies and applications).

Data source	Data owner	Purpose of access ^[1]	Statistical domain
Number of employees and wages and salaries	Social Security database	4	STS and Labour statistics
Value Added Tax	Tax Inspectorate database	5	STS
Data on persons	Population register	4	Demographic statistics

^[1] (1) Main source for the survey frame, (2) Auxiliary source for the survey frame (3) Direct compilation of statistics from administrative aggregated data or microdata, (4) Direct compilation of statistics in combination with other sources (e.g. other administrative sources, surveys), (5) Source of auxiliary data for prefilling, editing / validation, imputation, etc.

Factors contributing to successful access: The NSI stated that the main factors that contributed to a successful access and use of the Social Security Database are (a) the willingness of the data owners to cooperate and share their data, (b) the persistent requests of the NSI to access the data and (c) the existence of technical solutions for sharing the data. For Value Added Tax data, the constant pressure imposed by the enterprises to the NSI to use data already provided to the Tax authorities was an important factor that made the NSI to insist on obtaining access to the data. Additionally, the fact that the data owner used a similar software to that of the NSI as well as the existence of unique identifiers facilitated NSI's access to the source. In what concerns data on persons from the population register, the NSI reported that the good relationships established with the data owner, the good quality of the data and the established technical preconditions for sharing the data were the most important factors for accessing the data source.

Obstacles overcome in accessing the data source: No obstacles have been confronted to accessing any of the data sources.

Best practice study: According to the information provided to the questionnaire, the use of the Social Security database could be considered as a best practice case study.

16 Luxembourg

16.1 Legal framework

Article 2 of the Law of 10th July 2011⁶⁷ states that the NSI has the right to access individual information contained in the files and databases of administrations and public services, collected as part of their activities.

The NSI has the right to access data from any administrative data source and use them for any statistical purpose.

Legal right to access administrative data at microdata level

The NSI has access to administrative microdata from most sources. The national legal framework does not require that administrative microdata provided to the NSI should be anonymized first except for some sources. The NSI is obliged to request permission from an authority other than the data owner on every instance of obtaining some administrative data and before obtaining most administrative data for the first time.

Cooperation with data owners in design of administrative databases

Administrative data owners are not obliged to consult and coordinate with the NSI when setting-up, changing or discontinuing a data source.

Cost-free access to administrative data

According to the national Law, the NSI has the authority to access all data sources for free.

⁶⁷ <http://www.statistiques.public.lu/en/actors/statec/missions/loistatec.pdf>

Coherence of the legal framework

According to the information provided by the NSI, the legislation governing some administrative data sources, such that of taxes and revenues, contradicts the NSI's legal rights to access and use the data.

In general, the legal framework does not impose and further restrictions with regard to NSI's access to administrative data. In view of the NSI, the legal framework does not leave room for misinterpretations.

16.1.1 Legal restrictions

The legal restrictions identified by the NSI are summarized as follows:

- For some sources, the administrative microdata should be anonymized before they are transmitted to the NSI.
- For most sources, the NSI should request permission from an authority other than the data owner before obtaining the data for the first time.
- For some sources, the NSI should request on every instance of obtaining the data a permission from an authority other than the data owner.
- The Statistics Law does not oblige the data owners to consult the NSI when setting-up, changing or discontinuing a source.
- For some sources, the legislation applicable to the administrative data owners contradicts the NSI's legal right to access and use their data.

16.2 Internal institutional aspects

Policy on administrative data

An organization-wide policy promoting the use of administrative data is in place. Article 12 of the 2011 Law specifies that the NSI should favour the use of administrative files. Surveys or censuses should be undertaken if the use of administrative data files is impossible or is not likely to provide reliable statistical information.

According to the information in the questionnaire, standard and systematic procedures to identify administrative data sources potentially useful for statistical purposes are partly in place, whereas a procedure to monitor developments in the legal framework governing the sharing of administrative data between authorities is not in place. Moreover, standardized and documented quality criteria to assess the adequacy of the administrative data across statistical domains are not used.

The NSI has adopted standard and systematic practices to ensure confidentiality and security of administrative data in all cases.

Organisation within the NSI

According to the NSI, a specific unit responsible for the coordination of NSI's contacts and cooperation with data owners has not been established.

The NSI's staff has all the required competences to effectively exploit administrative data for statistical purposes and the available resources are sufficient for the needs of exploitation of administrative data for statistical purposes.

16.2.1 Internal institutional obstacles

In summary, the following issues were identified by the NSI:

- A procedure to monitor developments in the legal framework governing the sharing of administrative data among authorities is not in place.

- A standard and systematic procedure to identify administrative sources potentially useful for statistical use is only partly in place.
- Documented quality criteria to assess the quality of administrative data are not used across the statistical units of the NSI.
- A specific unit responsible for the coordination of NSI's contacts and cooperation with the administrative data owners has not been established.

16.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

In view of the NSI, the overall culture of the staff in the country's public sector is favourable to data sharing. Concerns in the general public regarding personal data privacy and confidentiality do not constitute an obstacle for the sharing of data among organisations.

A national strategy on data sharing in the public sector does not exist.

Cooperation with data owners

In few cases, the NSI has signed written agreements covering each instance of data provision with data owners. According to the NSI, the coordination mechanisms with data owners are in most cases effective.

Based on the information in the questionnaire, the NSI is consulted by the data owners on issues such as specifications or design of their databases in a few cases and data owners rarely take the recommendations of the NSI into account when setting up, changing or discontinuing the administrative database. Additionally, data owners inform the NSI sufficiently in advance on the changes planned to be implemented in the design of their databases in a few cases.

The NSI has the authority to demand for suitable modifications from most data owners when quality-related problems are encountered and communicates, to the data owners the procedures in place to ensure the confidentiality and security of the data in all cases.

Additionally, in most cases, the NSI communicates to the data owners issues related to errors and inconsistencies identified in their data. During this communication, all necessary measures to protect individual confidentiality are always undertaken.

Overall, as stated in the peer review report, access to administrative data is sometimes problematic in practice. Although the right of the NSI to access data at individual level is clearly stated in the 2011 law, there are cases where the NSI faces difficulties in cooperating with some administrative data owners.

For instance, taxation authorities argue that their obligations in respect to data protection are tighter than NSI's legal provisions on the protection of confidentiality. This issue remains unresolved, restricting the NSI's right to access individual data.

Farm accounting data collected by the Ministry of Agriculture can be made available to the NSI only after being processed by the Rural Economy department of the Ministry under the provisions of a formal cooperation agreement.

According to peer reviewers, such contradictions and constraints imply that data holders do not actually recognize their obligation to provide their data to the NSI for the production of official statistics.

16.3.1 Issues related to the wider institutional environment and cooperation with data owners

In summary, the NSI reported the following issues:

- A national strategy on data sharing in the public sector does not exist.

- Written agreements covering each case of data provision have been signed with the data owners only in a few cases.
- The NSI is consulted by the administrative data owners on issues such as specifications or design of relevant databases only in a few cases.
- Data owners take into account the recommendations of the NSI when setting up, changing or discontinuing an administrative data source only in a few cases.
- Data owners rarely inform the NSI sufficiently in advance on planned changes in the structure or design of the databases.
- The NSI sometimes faces difficulties in cooperating with some data owners.

16.4 Quality and Technical preconditions

Quality aspects

According to the information provided in the questionnaire, in most cases, the NSI has access to sufficient methodological information on the data collection process operated by the data owners. Moreover, unique and consistent identifiers are used across most data sources and the NSI has, in most cases, sufficient information for linking different data sources. In most cases, the data owners apply sufficient quality checks in their data that are useful for the NSI.

Technical aspects

The NSI reported that there are a few difficulties regarding the format used for the exchange of data and metadata. Automated data exchange mechanisms are used for transferring data and metadata only in a few cases.

16.4.1 Quality and technical restrictions

The NSI raised the following quality and technical restrictions:

- Automated data exchange mechanisms are used for transferring data and metadata only in a few cases.

16.5 Some examples of administrative data usage

Business Statistics

As far as it is stated 2005 SBS metadata⁶⁸, the business register is updated from administrative sources, but statistical data on the structure of enterprises come from direct surveys due to the lack of taxation data.

Agricultural Statistics

In the field of agriculture, a large proportion of the Farm Structure Survey (FSS) variables is derived directly from administrative sources. Data available in the databases of the Ministry of Agriculture are provided to the NSI in an aggregated form. The same is the case with the agricultural census statistics, where data provided by the Ministry of Agriculture are combined with the survey data.

Social Statistics

For the time being, the population census is survey-based. Vital statistics are based on administrative data. Plans for an administrative-based population census are in place.

Examples of sources used

⁶⁸ Central Service for Statistics and Economic Studies, "Structural Business statistics methodology" (2005).

- Business statistics: (1) VAT register, (2) Employers register in the social security records, (3) Luxembourg Central Bank, (4) Commissariat aux assurances (insurance authority), (5) Legal persons register of the State Computer Centre.
- Agricultural statistics: (1) Integrated Administration and Control System (IACS), (2) Bovine register (SANITEL), (3) payments supporting rural development (Ministry of Agriculture), (4) Organic farming register.
- Social statistics: Population Register.

16.5.1 Problematic data access cases

The NSI identified the following administrative data sources for which access is not feasible or is achieved in a considerable problematic way.

Data source	Data owner	Purpose of access ^[1]	Statistical domain where data are used
Tax Database	Tax administration	N/A	EU-SILC statistics

^[1] (1) Main source for the survey frame, (2) Auxiliary source for the survey frame (3) Direct compilation of statistics from administrative aggregated data or microdata, (4) Direct compilation of statistics in combination with other sources (e.g. other administrative sources, surveys), (5) Source of auxiliary data for prefilling, editing / validation, imputation, etc.

Legal and institutional issues: The NSI mentioned that the specific legislation applicable to the tax database contradicts the NSI's legal right to access the data.

Cooperation with data owners: According to the NSI, taxation authorities argue that their obligations in respect to the protection of confidentiality of the data are strict and thus refuse to provide access to their data.

Quality aspects: No issues with regard to the quality of the data have been reported by the NSI.

Technical aspects: No technical issues have been identified.

16.5.2 Successful data access cases

The following data sources have been identified as successful data access cases.

Data source	Data owner	Purpose of access	Statistical domain
Employment database	Social security	N/A	LFS
VAT declarations	Customs	N/A	Business register, Business Statistics
Import/Export of fuel	Office of food supplies	N/A	Energy prices

Factors contributing to successful access: According to the NSI, access to the employment database has been established through a written agreement signed with the Social Security. Additionally, the establishment of good relationships with the data owner and the fact that the data do not change over time are some of the most important factors contributing the successful use of the employment database. Similarly, for VAT declarations, the NSI has signed written agreements with the customs and these are always respected. The data are always being transmitted on time relative to the agreed timetable. Regarding imports/exports of fuel data the NSI reported that good relationships with the data owner have been established and that the timeframe that the data are transmitted is in accordance with the NSI's needs for statistical purposes.

Obstacles overcome in accessing the data source: No obstacles have been confronted to accessing any of the above-mentioned data sources.

Best practice study: According to the information provided to the questionnaire, the case of accessing the employment database could be considered as a best practice case study. For the other two data sources, there are still some minor issues that could be further improved.

17 Hungary

17.1 Legal framework

The Statistical Act (No. XLVI) of 1993⁶⁹ authorises the NSI to ask for information from the main organs of the State for statistical purposes and obliges these organs to supply the requested information.

Section 21(4) of the Statistical Act makes provisions on the NSI's the right to receive administrative data, including personal data, from organisations undertaking data collections within the national data collection programme.

The Statistical Act also specifies that the NSI shall inform data suppliers in advance of its official bulletin, its need to obtain personal data and the statistical purpose for which the data will be used.

A new Act on Official Statistics No. CLV of 2016 was entered into force on 1st January 2017. The new act makes provisions regarding the NSI's rights to access administrative datasets for statistical purposes. The new act also includes provisions concerning the involvement of the NSI in the design, set-up or modification of the administrative datasets. It also reinforces the NSI's right to access to these datasets free of charge.

The information reflected in the report stems from the data collection on administrative data sources undertaken in August 2016 and therefore, recent changes in the legal framework are not reflected.

Legal right to access administrative data at microdata level

The NSI has the right to access to administrative microdata from most sources. The national legal framework requires that administrative microdata from some sources should be provided to the NSI in an anonymized format. Upon the provisions of the Statistical Act, the NSI is not obliged to request a permission other than the data owner in order to access any administrative data source.

Cooperation with data owners in design of administrative databases

The Statistical Act makes provisions authorizing the NSI to access administrative data but it does not oblige the administrative data holders to inform the NSI when setting-up, changing or discontinuing a database.

Cost-free access to administrative data

Section 21 (2) of the Statistical Act states that the NSI is authorized to access free of charge the data collected and stored by the data owners. However, the costs for the processing or recording of the data in an electronic format should be covered by the data receiver.

Coherence of the legal framework

In view of the NSI, the legal framework does not leave for misinterpretations, although, in practice, other several sectorial legal acts contradict the NSI's legal right to access and use administrative data from specific sources. Sometimes, the passing of specific legal acts is also required so that the NSI obtains access to specific administrative data sources.

According to the information provided in the questionnaire, there is at least one source for which there is a restriction on the maximum duration of retention of the data. However, the law imposing this restriction is currently under revision.

⁶⁹ https://www.ksh.hu/docs/bemutakozas/eng/act_no_XLVI_of_1993.pdf

17.1.1 Legal restrictions

The legal restrictions identified by the NSI are summarized as follows:

- Although the Statistics Act grants to the NSI the right to access administrative data at personal level, there are several sectorial legal acts that restrict NSI's access to the specific data sources.
- For some sources, administrative microdata should be anonymized before being transmitted to the NSI.
- The Statistics Act does not oblige the administrative data owners to consult the NSI when setting-up, changing or discontinuing an administrative database.
- The passing of specific additional legal acts is required to access some administrative data sources.
- There is at least one source for which there is a restriction on the maximum duration of retention of the data. However, the law imposing this restriction is currently under revision.

17.2 Internal institutional aspects

Policy on administrative data

According to the information provided in the questionnaire, an organization-wide policy promoting the use of administrative data is in place. Standard and systematic procedures to identify administrative data sources potentially useful for statistical purposes are partly in place. Additionally, a procedure to monitor developments in the legal framework governing the sharing of administrative data between authorities is partly in place.

Standard and documented quality criteria to assess the adequacy of the administrative data are not used across statistical domains. However, the adoption of common quality criteria is among the tasks that the NSI is currently working on.

The NSI has established standard and systematic practices to ensure the confidentiality and security of administrative data.

Organisation within the NSI

Within the NSI, a unit or department responsible for coordinating and managing the contacts and cooperation with data owners is not yet in place. Each department is responsible for the cooperation with the data owners that provide their data. Currently, the NSI is taking action to establish such a unit.

According to the peer reviewers, in 2011, a stocktaking exercise was undertaken by the NSI with the view to identify and assess the statistical potential of administrative data sources and record the obstacles for their effective usage in the statistical production chain.

The NSI has developed an Metainformation System⁷⁰, which holds metadata on the data collection operated processes in an organized and structured format. The subsystem "Data sources" covers the main sources for the derivation of statistics (including administrative data) as well as data exchanges among the different statistical departments. However, according to the peer reviewers, the system does not fully and systematically cover all administrative datasets that the NSI currently uses for statistical purposes.

During the period 2013-2014, a new and integrated data transmission system, called KARAT, was developed⁷¹. Through this system, which is operational from January 2015, the NSI receives a

⁷⁰ Hungarian Central Statistical Office, Gizella Baracza, Zsófia Ercsey, Csaba Ábry, "Metainformation System of the Hungarian Central Statistical Office" (2009).

⁷¹ Hungarian Central Statistical Office, Ildikó Györki, Ildikó Szűcs, "KARAT: The new integrated data transmission system of the HCSO", European Conference on Quality in Official Statistics (2016).

number of datasets from secondary sources, which in their majority include data from administrative sources. In parallel with the development of the KARAT system, the NSI redesigned the data source register used to manage the secondary sources. Currently, the data source register contains information on the administrative sources and other sources used in the data collection process and records information with regard to the data transmitted from other organisations.

As stated in the questionnaire, the NSI's personnel partly has the required competences to effectively exploit administrative data for statistical purposes, while the available resources are only partly sufficient.

17.2.1 Internal institutional obstacles

In summary, the following issues were identified by the NSI:

- A procedure to monitor developments in the legal framework governing the sharing of administrative data among authorities is only partly in place.
- A procedure to identify administrative sources potentially useful for statistical use is only partly in place.
- Documented quality criteria to assess the quality of administrative data are not used across the statistical units of the NSI. The adoption of criteria for the assessment of the quality of administrative data is an ongoing task for the NSI.
- NSI's personnel has only partly the required competences to effectively exploit administrative data for statistical purposes.
- A unit responsible for coordinating and managing the contacts and cooperation with data owners is not yet in place. Currently, the NSI is taking action to establish such a unit.
- The available resources for the effective exploitation of administrative data for statistical purposes are only partly sufficient.

17.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

In view of the NSI, the overall culture of the staff in the country's public sector is favourable to data sharing. Concerns in the general public regarding personal data privacy and confidentiality do not essentially constitute an important obstacle for the sharing of data among organisations.

As part of the implementation of the national strategic interoperability objectives, the Hungarian Parliament adopted in 2013 the Act No. CCXX, the so-called interoperability act. The aim of that act is to set the general rules of cooperation of the owners of administrative registers and the national and local governments. One of the objectives of the act is to compile an inventory of registers that will include all administrative data collections in the Hungarian public administration.

Cooperation with data owners

For most cases, the NSI has signed with the data owners written agreements covering each instance of data provision. The NSI stated in the questionnaire that the coordination mechanisms with the data owners in most cases effective. The NSI added that the responsibility for the management of administrative data sources lies with the statistical departments and therefore there is no centralized information on all issues regarding the cooperation with the data owners.

According to the information provided in the questionnaire, the NSI is consulted by the data owners on issues such as specifications or design of their databases only in few cases and data owners rarely take the its recommendations into account when setting up, changing or discontinuing the administrative database. Additionally, data owners rarely inform sufficiently in advance the NSI on the changes planned to be implemented in the design of their databases.

The NSI does not have the authority to demand suitable modifications from all data owners when quality-related problems are encountered. The NSI mentioned that the procedures in place to ensure the confidentiality and security of the data as well as issues related to errors and inconsistencies identified in administrative data are communicated to the data owners only in a few cases. During this communication, all necessary measures to protect individual confidentiality are always undertaken.

Overall, the NSI reported that difficulties in cooperating with the administrative data owners are sometimes faced since data owners sometimes send their data with delays relative to the agreed timetable.

17.3.1 Issues related to the wider institutional environment and cooperation with data owners

Overall the issues pointed out by the NSI with regard to its cooperation with data owners, which are summarized as follows:

- The NSI is rarely consulted by the data owners on issues such as specifications or design of their databases.
- Data owners rarely take the recommendations of the NSI into consideration when setting-up, changing or discontinuing an administrative database.
- Data owners inform the NSI sufficiently in advance on planned changes in the structure or design of the databases only in a few cases.
- The NSI communicates to the administrative data owners the procedures in place to ensure the confidentiality and security of the data only in a few cases.
- When quality-related problems are encountered, the NSI does not have the authority to demand suitable modifications from the data owner.
- The NSI communicates to the administrative data owners issues related to the errors or inconsistencies identified in their data only in a few cases.
- The NSI sometimes faces difficulties in cooperating with the data owners.
- Sometimes data owners send their data with delays relative to the agreed timetable.

17.4 Quality and Technical preconditions

Quality aspects

Based on the information provided in the questionnaire, the NSI has access to sufficient methodological information on the data collection process operated by the data owners only in a few cases. In practice, the NSI is not aware of the quality checks applied by the data owners. The NSI representative informed during the Workshop on “access to administrative data sources” that one persistent problem is the lack of reports on the quality of data.

Unique and consistent identifiers are used for businesses across the data sources. The same does not hold for persons. Therefore, the NSI has sufficient information for linking different data sources only in a few cases.

Technical aspects

The NSI stated that there are no difficulties regarding the format used for the exchange of data and metadata. Automated data exchange mechanisms for transferring data are used only in a few cases. Automated data exchange mechanisms for transferring metadata are not used at all.

17.4.1 Quality and technical restrictions

In summary, the quality and technical restrictions identified by the NSI are presented below:

- Automated data exchange mechanisms for the transferring of data are used in few cases.
- Automated data exchange mechanisms for the transferring of metadata are not used.

- The NSI has sufficient methodological information on the data collection process operated by the data owners in a few cases.
- The NSI is not aware of the quality checks applied by the data owners.
- The NSI has sufficient information for linking various sources in few cases.

17.5 Some examples of administrative data usage

Business Statistics

The business register is updated using administrative and survey data. SBS and other business statistics are compiled on the basis of data derived from surveys.

Currently the Hungarian Central Statistical Office (HCSO) is examining the possibility to substitute business data collections with administrative data on taxes and on housing market prices.⁷²

Agricultural Statistics

In the field of agricultural statistics, administrative data are used as auxiliary source of information, e.g. for estimating or editing the collected data⁷³. With regard to the Farm Structure Survey (FSS)⁷⁴, administrative data, e.g. on organic farming and vineyards, are used.

Social Statistics

The population census is survey-based. In the last implementation of the census, some administrative data were used for the first time during the data processing stage.

With the support of a Eurostat grant⁷⁵, HCSO examined the possibilities of using administrative data sources for a more cost-effective and less burdensome execution the Census 2021. The analysis covered the data content (concepts, reference period), IT issues related to data transfer, legislation (legal restrictions for legal basis to use the data) and methodology for linking sources. Based on the lessons learnt, the HCSO is planning to produce a census based on administrative data in parallel with the 2021 traditional census as a test for future register based census.

An on-going project supported by Eurostat⁷⁶ is conducting an in-depth investigation of the administrative data held by the Central Administration of National Pension Insurance from the perspective of their use for official statistics.

Additionally, the HCSO is also undertaking a general overview and quality evaluation of the administrative sources already used with the view to examine whether they have the potential to be used in accordance to the peer reviews recommendations and the results of the ESSnet on quality of multisource statistics.

Examples of sources used

- Business statistics: (1) Register of companies and partnerships (registry courts), (2) Register of sole proprietorships, (3) Tax Register.
- Agricultural statistics: (1) Integrated Administrative and Control System (IACS) – Central Agricultural Office, (2) Vineyard Register (National Council of Vine Communities), (3) Geo-coordinates provided by the Institute of Geodesy.

⁷² Eurostat grant agreement 07112.2016.004-2016.589 on the Improvement of the use of administrative sources (ES.VIP ADMIN WP6 pilot studies and applications).

⁷³ Census of Agriculture 2010 – Explanatory notes.

⁷⁴ Metadata on Farm Structure Survey 2009/2010 – Survey on agricultural production methods 2009/2010.

⁷⁵ Grant agreement 07112.2015.002-2015.349 on the Improvement of the use of administrative sources (ES.VIP ADMIN WP6 pilot studies and applications).

⁷⁶ Eurostat grant agreement 07112.2016.004-2016.589 on the Improvement of the use of administrative sources (ES.VIP ADMIN WP6 pilot studies and applications).

- Social statistics: (1) Population Register.

17.5.1 Problematic data access cases

The NSI did not identify any administrative data sources for which access is not feasible or is achieved in a considerable problematic way.

17.5.2 Successful data access cases

The NSI did not identify any data source which can be considered as a successful data access case.

Best practice study: According to the information provided to the questionnaire, the KARAT system can be considered as a best practice study for transferring administrative data.

18 Malta

18.1 Legal framework

The Malta Statistics Authority (MSA) Act XXIV of 2000⁷⁷, as amended by Act XXXII of 2007, gives the authority to the NSI to access, inspect and take copies of or extracts from any records. The Director General has the right to request any public authority to consult and cooperate with him for the purpose of assessing the potential of data for statistical purposes and developing its methods and systems. Upon the provisions of the MSA Act, any public authority shall comply with any such request, in so far as resources permit.

Legal right to access administrative data at microdata level

Article 38 of the MSA Act states that the NSI shall be granted access to the records of any person or undertaking for the needs of compilation of statistical information. Also, Article 39 of the MSA Act obliges public authorities to provide to the NSI access to their records.

For some sources, further permission from an authority other than the data owner should be requested by the NSI before obtaining data for the first time. For some administrative microdata (and with the exception of business microdata), the NSI shall request for the permission of the Data Protection Commissioner of Malta on every instance of obtaining them.

Cooperation with data owners in design of administrative databases

Article 39 of the MSA Act states that public authorities that intend to carry out activities with statistical implications shall consult the NSI and accept any recommendations made.

As mentioned by the NSI, in practice, the data owners rarely inform the NSI when setting up, changing or discontinuing a data source. Just 10% of the administrative data providers inform the NSI on changes in the metadata, time coverage or any other issues.

Cost-free access to administrative data

The NSI has the right to access all administrative data sources (except for one data source) for free (see Section on “Cooperation with administrative data owners and wider institutional environment”).

Coherence of the legal framework

The legal framework imposes restrictions for some sources on the maximum duration of retention of the data. As mentioned by the NSI, once data are made available to the NSI, data owners acknowledge the importance of providing their data for covering the statistical needs of the NSI and no further restrictions are imposed.

⁷⁷ https://nso.gov.mt/en/nso/About_NS/Documents/Legislation/MaltaStatisticsAuthorityAct.pdf.

According to the information provided in the questionnaire, in practice, other several sectorial legal acts contradict the NSI's legal right to access and use administrative data from specific sources. Sometimes, the passing of specific legal acts is also required so that the NSI obtains access to specific administrative data sources.

In view of the NSI, the MSA Act is quite powerful in terms of the rights of the NSI and responsibilities of the data owners but the NSI faces in practice difficulties in accessing certain data sources (see also Section on “Cooperation with administrative data owners and wider institutional environment”). The NSI's legal right to access and use some data sources contradicts to the legislation applicable to some data owners. The legal provisions governing some data sources impose strict rules on the protection of confidentiality of the data. This is particularly true for income and tax data sources.

As reported in the questionnaire, on one side, the NSI has the mandate to reduce response burden and on the other side, there is the principle of proportionality in place, which requests the NSI not to exert burden on other bodies, including owners of administrative data.

18.1.1 Legal restrictions

The legal restrictions pointed out by the NSI are summarized as follows:

- For some sources, the NSI should request the permission of the Data Protection Commissioner of Malta on every instance of obtaining administrative microdata. The latter does not hold business microdata that do not fall within the remit of the Data Protection Authority.
- For some data sources the legislation applicable to the administrative data owners contradicts the NSI's legal rights to access and use their data.
- The passing of specific additional legal acts is required to access some administrative data sources.
- The legal provisions governing some data sources impose strict rules on the protection of confidentiality of the data.
- For some sources, there are legal restrictions on the maximum duration of retention of the data.
- The NSI faces in practice difficulties in accessing certain data sources (e.g. income and tax data sources).

18.2 Internal institutional aspects

Policy on administrative data

As reported by the NSI in the questionnaire, an organization-wide policy promoting the use of administrative data is not in place. Standard and systematic procedures to identify administrative data sources potentially useful for statistical purposes as well as a procedure to monitor developments in the legal framework governing the sharing of administrative data between authorities are not in place.

Standard and documented quality criteria to assess the adequacy of the administrative data are only partly used across statistical domains. In 2015, the NSI carried out an internal survey to assess the quality of the administrative data sources in use. The NSI has come up with the need to further standardise existent MoUs with the data owners in order to ensure that all necessary requirements to safeguard data quality are documented.

With the support of a Eurostat grant⁷⁸, the National Statistical Office is undertaking an extensive review of new and existing administrative data sources in an attempt to integrate them in statistical

⁷⁸ Eurostat grant agreement 07112.2016.004-2016.592 on the Improvement of the use of administrative sources (ESS.VIP ADMIN WP6 pilot studies and applications).

production of to improve their use. This will include setting-up or reviewing cooperation agreements with administrative data owners and of quality and metadata aspects of various sources.

Organisation within the NSI

Within the NSI, a unit or department responsible for coordinating and managing the contacts and cooperation with data owners is partly in place.

In 2014, the NSI signed a Memorandum of Understanding with the Inland Revenue Department. Upon the reception of the tax data, the NSI developed custom IT processes for their processing. Within the NSI, sensitive tax data can be accessed only by the personnel who has signed an official confidentiality agreement. As stated by the peer reviewers, data management and processing procedures are not standardized but are rather adapted to each data case. Therefore, the need for a more efficient, automated and standardised production process has been raised.

As stated in the questionnaire, the NSI's personnel partly has the required competences to effectively exploit administrative data for statistical purposes and the available resources are considered partly sufficient.

18.2.1 Internal institutional obstacles

In summary, the following issues were identified by the NSI:

- An organization-wide policy for promoting the use of administrative data is not in place.
- A procedure to monitor developments in the legal framework governing the sharing of administrative data among authorities is not in place.
- A procedure to identify administrative sources potentially useful for statistical use is not in place.
- Documented quality criteria to assess the quality of administrative data are only partly used across the statistical units of the NSI.
- A unit responsible for coordinating and managing the contacts and cooperation with data owners is partly in place.
- The NSI's personnel partly has the required competences to effectively exploit administrative data for statistical purposes.
- The NSI's available resources are considered partly sufficient to effectively exploit administrative data for statistical purposes.

18.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

In view of the NSI, the overall culture of the staff in the country's public sector is not favourable to data sharing. Concerns in the general public regarding personal data privacy and confidentiality constitute an obstacle for the sharing of data among organisations.

The NSI mentioned that a committee consisting of public officials meets on a monthly basis with the view to discuss issues fostering open data and the development of public registers. Although the team has been working systematically on the promotion of the national strategy on data sharing in the public sector for over two years, significant progress has not been made so far.

Cooperation with data owners

The NSI has signed written agreements covering each instance of data provision in a few cases. As stated in the peer review report, in recent years, the NSI has signed Memoranda of Understanding (MoU) with the Inland Revenue Department, for the provision of household and entrepreneurial employment income microdata, the Central Bank of Malta, the VAT Department, the Department of Public Registry for the provision of microdata on deaths, births, marriages, etc. The NSI considers that coordination mechanisms with the data owners are in most cases effective.

On the other hand, access to some administrative data sources is still problematic (e.g. data on enterprises and social security). For instance, the Financial Services Authority has asked the NSI to pay fees in order to obtain access to its data. The fees cover pre-processing the data.

According to the information provided in the questionnaire, the NSI is consulted by the data owners on issues such as specifications or design their databases only in few cases and data owners rarely take the its recommendations into account when setting up, changing or discontinuing the administrative database. Additionally, data owners never inform the NSI sufficiently in advance on the changes planned to be implemented in the design of their databases.

The NSI always communicates to the data owners the procedures in place to ensure the confidentiality and security of the data and has the authority to demand suitable modifications from all data owners when quality-related problems are encountered. However, the NSI commented that these are rarely implemented in practice.

In most cases, the NSI communicates to the data owners issues related to errors and inconsistencies identified in their data. During this communication, the NSI takes always all the necessary measures to protect individual confidentiality.

Overall, the NSI sometimes faces difficulties in cooperating with the administrative data owners. Data owners sometimes refuse to provide access to their data and sometimes send their data with delays relative to the agreed timetable. An example given by the NSI during the Workshop on “access to administrative data sources” was that the tax authority stopped providing data to the NSI when it was made public that it does so, due to potential concerns that the NSI may contribute to identifying the tax evasion.

The peer reviewers and the NSI have stated that the provisions made in the MSA Act are clear and comprehensive. However, some public authorities are reluctant to provide their data since they question or misinterpret the MSA Act. Negotiations with the data owners in these cases usually result in endless discussions.

Excessive formality or bureaucracy is always an obstacle for cooperation.

18.3.1 Issues related to the wider institutional environment and cooperation with data owners

In summary, the following issues have been mentioned by the NSI and the peer reviewers:

- Written agreements that cover each instance of data provision have been signed only in a few cases.
- The NSI is rarely consulted by the data owners on issues such as specifications or design of their databases.
- Data owners rarely take into consideration the recommendations of the NSI when setting-up, changing or discontinuing an administrative database.
- Data owners never inform the NSI sufficiently in advance on planed changes in the structure or design of the databases.
- When quality-related problems are encountered, the NSI has the authority to demand suitable modifications from the data owner, but these are rarely implemented in practice.
- The NSI sometimes faces difficulties in cooperating with the data owners.
- Sometimes data owners refuse to provide access to their data.
- Some public authorities are reluctant to provide their data since they question or misinterpret the MSA Act. Negotiations with the data owners in these cases usually result in endless discussions.
- Sometimes data owners send their data with delays relative to the agreed timetable.

- Excessive formality or bureaucracy between organisations is always an obstacle for cooperation.

18.4 Quality and Technical preconditions

Quality aspects

The NSI reported that it does not have access to methodological information related to the administrative data source. In fact, few data owners have documentation on the data collection process. The NSI plans to undertake an exercise for the evaluation of the quality of metadata related to administrative data sources used under the framework of Eurostat's grant project "Improvement of the use of administrative sources".

Unique and consistent identifiers are used only in a few cases and the NSI rarely has sufficient information for linking different data sources.

Technical aspects

Based on the information in the questionnaire, for some sources there are difficulties regarding the format used for the exchange of data. Administrative data are received in different file formats (Compact Disk Read-Only Memory (CD-ROM), Excel tables) or are derived directly from the data owners' databases using queries.

18.4.1 Quality and technical restrictions

The NSI reported the following quality and technical restrictions:

- The NSI does not have at all methodological information on the data collection process operated by the data owners.
- The data owners apply sufficient data quality checks that are useful to the NSI only in a few cases.
- Unique and consistent identifiers are used across data sources only in a few cases.
- The NSI has sufficient information for linking various sources only in a few cases.
- Automated data exchange mechanisms for the transferring of data are used in few cases.
- In most cases, there are difficulties regarding the format used for the exchange of data.
- There are difficulties regarding the format used for the exchange of metadata.

18.5 Some examples of administrative data usage

Business Statistics

In the business sector, administrative microdata from various sources are used. The primary administrative data sources used for the update of the business register are the VAT department and the Malta Financial Services Authority (MFSA).

The project on "Improvement of the use of administrative sources" is also aiming to identify administrative sources that can be used to update the Business Register and to improve its coverage.

Social Statistics

The population census is survey-based. Administrative data are complementarily used for editing and imputing the missing data (both item and unit non-response).

The Statistical office is also working on improving the updating process of the Persons and Dwellings register by making better use of administrative sources and to ensure the harmonisation of concept with the requirements of EU legislation. Additionally, geocoding processes will be analysed and a GIS-based system will be created that could be used for future data integration based on the Census.

Examples of sources used

- Business statistics: (1) Central Bank of Malta, (2) Inland Revenue Department, (3) VAT Register.

18.5.1 Problematic data access cases

The NSI identified the following administrative data sources for which access is not feasible or is achieved in a considerable problematic way.

Data source	Data owner	Purpose of access ^[1]	Statistical domain where data are used
Maltese Tax authority data	Inland Revenue Department	3, 4, 5	SBS, National Accounts, STS, SILC, Gender Pay Gap
Telephone data	Social providers	1	All telephone and face to face surveys
No official name	Identity Malta	1	Web based and telephone interviewing

^[1] (1) Main source for the survey frame, (2) Auxiliary source for the survey frame (3) Direct compilation of statistics from administrative aggregated data or microdata, (4) Direct compilation of statistics in combination with other sources (e.g. other administrative sources, surveys), (5) Source of auxiliary data for prefilling, editing / validation, imputation, etc.

Legal and institutional issues: For all three sources, the following obstacles have been mentioned by the NSI: (a) the passing of specific legal acts is required to access the data source, (b) the legislation applicable to data owners contradicts the NSI's legal right to access the data, (c) a permission from an administrative authority other than the data owner should be requested, (d) the NSI has the right to use the data only for specific statistical purposes. Especially for telephone data, the NSI is not authorized to access the data for free. As stated during the Workshop on “access to administrative data sources”, the law does not specify clearly whether private owners of administrative data are also obliged to provide them to the NSI. The telephone company refuses to provide them and challenges the law on these grounds.

Cooperation with data owners: As stated by the NSI, excessive formality or bureaucracy is an obstacle for cooperation with all three data owners. A Memorandum of Understanding (MoU) was signed between the NSI and the Inland Revenue department in 2014, specifying the data to be transmitted to the NSI. Written agreements signed with the Inland Revenue Department are not always respected, while Social Service providers refuse to provide their data. On the other hand, the lack of effective cooperation mechanisms between the NSI and Identity Malta restricts NSI's access to the data source.

Quality aspects: The main issues identified by the NSI with regard to the quality of the tax data are the lack of a significant number of data items and the difference between the reference period for which data are collected and the one required for statistical purposes. Issues with regard to the quality of telephone data and data from the Identity Malta are also in place: the statistical unit used is different from the one required for statistical purposes and both sources suffer from a significant number of missing records. Additionally, the NSI stated that the coverage of the data is not in line with its statistical needs. The lack of identifiers and information for linking data with other sources is another issue pertinent to the telephone data source.

Technical aspects: As reported in the questionnaire, for all three sources, there are difficulties related to the format used for the exchange of metadata. Data exchange mechanisms for the transferring data and metadata are not in place.

18.5.2 Successful data access cases

The NSI did not identify any data source which can be considered as a successful data access case.

19 Netherlands

19.1 Legal framework

Section 33 of the Statistics Netherlands (SN) Act of 2003⁷⁹, authorizes the NSI to derive data from governmental sources that are found necessary for statistical purposes. The NSI has the right to derive data from the registers maintained by legal persons (i.e. private entities) designated by Order in Council, in consultation with the Central Commission for Statistics (CCS) provided that those registers result from tasks wholly or partially financed by the State.

As further clarified in the questionnaire, the NSI has the legal right to administrative access data from governmental sources for any statistical purpose and data from the other above-specified data sources for specific statistical purposes.

The SN Act obliges the data owners to provide the NSI their data free of charge and within a period stipulated by an Order Council. It also states that “no duty of confidentiality may be invoked, unless this duty is based on international regulations”. In addition to this, provisions are made to safeguard the use of individual data against individual disclosure.

Legal right to access administrative data at microdata level

The NSI has the legal right to access administrative microdata from all data sources. Section 35 of the SN Act specifies that the Director General of the NSI may process personal data, in accordance with the provisions laid down in Section 16 of the Personal Data Protection Act. Therefore, a permission from an authority other than the data owner should not be requested by the NSI before accessing any data source. Anonymization of the personal data received from the administrative data owners is undertaken by the NSI upon their reception. Direct personal identifiers (e.g. name or civil service number) are replaced by random numbers, thus protecting the data from any violation of confidentiality.

Cooperation with data owners in design of administrative databases

Even though the NSI would like to be timely informed about changes planned to be implemented in the administrative data sources, there is no legal obligation for the data owners to consult the NSI on such issues.

Cost-free access to administrative data

The NSI has the right to access all administrative data from governmental sources for free.

Coherence of the legal framework

According to the SN Act, the NSI does not have the legal right to use registers or transaction type data maintained by private entities (e.g. data held by banks, mobile phone companies, etc.), unless special legal provisions are in place or those private entities are financed by the public sector. However, these data are also considered of interest by the NSI.

Moreover, the legal framework imposes restrictions for all sources with regard to the maximum duration of retention of the data and the reuse of data for statistical purposes other than initially stated.

As reported by the NSI, in some cases, conflicts with the legislation applicable to the administrative data owners (e.g. with the land registry) restrict NSI's access to the data source. The passing of additional legal acts is required in order that the NSI obtains access to non-governmental data sources.

⁷⁹ <https://www.cbs.nl/nr/rdonlyres/bbd8113d-7ee5-4be4-8879-685253b31882/0/statisticsnetherlandsactjune2013.pdf>

19.1.1 Legal restrictions

In summary, the legal restrictions identified by the NSI are presented below:

- The NSI has the right to access data from other non-governmental data sources for specific statistical purposes.
- The reuse of data for statistical purposes other than initially stated is not allowed for all sources.
- The data owners are not obliged to consult the NSI when setting up, changing or discontinuing a data source.
- There are legal restrictions on the maximum duration of retention of all data sources.
- For some data sources the legislation applicable to the administrative data owners contradicts the NSI's legal rights to access and use their data.
- The passing of specific additional legal acts is required to access non-governmental data sources.

19.2 Internal institutional aspects

Policy on administrative data

The NSI has a clear mandate to use administrative data, rather than direct surveys, for the compilation of statistics. Having a strong political pressure to reduce the response burden and an organization-wide policy promoting the use of administrative data, the NSI has committed significant resources to the development of methodologies on the assurance of the quality of data derived from registers, which are used across the statistical domains. It has also invested heavily in establishing a good cooperation framework with the data owners in order to improve the quality of the data (e.g. development of common standards and classifications).

Based on the information provided in the questionnaire, within the NSI, an organization-wide policy for promoting the use of administrative data is in place.

Standard procedures are in place in order to:

- Monitor developments in the legal framework concerning use of administrative data.
- Identify administrative sources with potential statistical use.
- Ensure confidentiality and security of administrative data.
- Use standardised and documented quality criteria across the statistical domains to assess the adequacy of administrative data for statistical purposes.

Organisation within the NSI

Within the NSI, a unit or department responsible for coordinating and managing the contacts and cooperation with data owners is in place. In view of the NSI, the CBS is well resourced and its personnel has the required competences to effectively exploit administrative data for statistical purposes.

19.2.1 Internal institutional obstacles

No issues have been identified by the NSI.

19.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

In view of the NSI, the overall culture of the staff in the country's public sector is favourable to data sharing. Concerns in the general public regarding personal data privacy and confidentiality are obstacles for cooperation although the Personal Data Protection Act imposes very strict rules on data

handling and sharing. The NSI mentioned during the Workshop on “access to administrative data sources” (2016) that CBS is trusted by the public more than, for example, the tax authority.

Based on the information on the questionnaire, in the Netherlands, a national strategy on data sharing in the public sector is in place and is effectively implemented.

Cooperation with data owners

The NSI considers that coordination mechanisms with the data owners are in most cases effective although written agreements covering each instance of data provision have been signed in a few cases. Written agreements on the workload assigned to both organisations are signed with the data owners in cases where there are conflicts with the priorities and obligations of the data owners. These are respected and effectively implemented.

As stated during the Workshop on “access to administrative data sources” (2016), the cooperation between data owners and the NSI is not always effective, since the administrative data owners do not always provide the requested data. The main reason for this is the lack of a common understanding of the NSI’s needs. An example mentioned was the cooperation of the NSI with the Tax Authorities.

The NSI stated that it is consulted by the data owners on issues such as specifications or design their databases in a few cases and data owners rarely take its recommendations into account when setting up, changing or discontinuing the administrative databases. However, in most cases, data owners inform sufficiently in advance the NSI on the changes planned to be implemented in the design of their databases.

According to the NSI, the procedures in place to ensure the confidentiality and security of the data are always communicated to the data owners. Also, in most cases, the NSI communicates to the data owners, issues related to errors and inconsistencies identified in their data at aggregate level⁸⁰. During this communication, the NSI takes always all the necessary measures to protect individual confidentiality.

Based on the information in the questionnaire, when quality-related problems are encountered, the NSI does not have the authority to demand suitable modifications from the data owners.

An example of a win-win situation in the Netherlands was mentioned during the Workshop on “access to administrative data sources” (2016), where the CBS had produced brochures for starting businesses, in which basic statistics for certain industries were presented. These brochures were distributed by the Chambers of Commerce, which is the most important basis for the CBS statistical business register and where all businesses must register.

Overall, the NSI reported that it rarely faces difficulties in cooperating with the administrative data owners. Data owners rarely refuse to provide access to their data and excessive formality or bureaucracy is rarely an obstacle for cooperation.

However, data owners sometimes send their data with delays relative to the agreed timetable since they usually deal with conflicting priorities; internal requirements and obligation to timely transmit data to the NSI.

19.3.1 Issues related to the wider institutional environment and cooperation with data owners

In summary, the NSI identified the following issues:

- Written agreements covering each instance of data provision are signed between the NSI and the data owners only in a few cases.

⁸⁰ Workshop report on access to administrative data sources (2016): https://ec.europa.eu/eurostat/cros/content/workshop-presentations-now-online-0_en

- In some cases, there are conflicts with data owners' priorities and obligations. In these cases, written agreements covering each instance of data provision have been signed with the data owners.
- The NSI is rarely consulted by the data owners on issues such as specifications or design their databases.
- Data owners rarely take the recommendations of the NSI into consideration when setting-up, changing or discontinuing an administrative database.
- When quality-related problems are encountered, the NSI does not have the authority to demand suitable modifications from the data owner.
- Sometimes data owners send their data with delays relative to the agreed timetable.

19.4 Quality and Technical preconditions

Quality aspects

According to the information in the questionnaire, the NSI has access to methodological information for the data collection process operated by the administrative data owners for most cases. Data owners, in most cases, apply sufficient quality checks that are useful for the NSI.

Unique and consistent identifiers are used in most cases and the NSI has sufficient information for linking different data sources.

As reported by the NSI, for the basic public registers, namely, on persons, dwellings, businesses, jobs, earnings, taxes, social security and geographical data, the situation regarding data quality is satisfactory.

Technical aspects

The NSI does not face difficulties related to the format used for the exchange of data and metadata. Data are transmitted to the NSI according to the format agreed with the data owners.

In most cases, automated data exchange mechanisms are used for transferring of administrative data and metadata, although sometimes data may be transferred using CD-ROMs.

19.4.1 Quality and technical restrictions

No issues have been identified.

19.5 Some examples of administrative data usage

Business Statistics

The business register is updated on the basis of data derived from administrative registers and data collected from surveys. In Structural Business Statistics (SBS) and Short-term Business Statistics (STS), administrative data are used for estimation of turnover of enterprises⁸¹.

Agricultural Statistics

In the agricultural domain, the administrative farm register as well as the Integrated Administration and Control System (IACS) are used as a direct data source for the compilation of statistics, whereas an electronic survey is in place for the collection of data not available in administrative sources⁸².

Social Statistics

The population and housing census carried out in 2011 was register-based⁸³. In 2015-2016 the CBS worked on developing improved methodology for producing numerically consistent set of tables based

⁸¹ Statistics Netherlands, Structural Business statistics methodology (2005).

⁸² Statistics Netherlands, Census of Agriculture – Explanatory notes (2010).

on multisource data⁸⁴. This improved methodology can be used to produce estimates for population censuses based on several administrative data sources and sample surveys. The CBS is currently developing an imputation method for the new education register in the Netherlands. With this imputed register more detailed census hyper cubes can be produced with the variable highest level of education attained.⁸⁵

Examples of sources used

- Business statistics: (1) Turnover tax (monthly, quarterly and annual VAT declarations), (2) Income tax (monthly, quarterly and annual declarations), (3) Corporate tax (annual accounts), (4) Profit declarations by entrepreneurs.
- Agricultural statistics: (1) Administrative Farm Register (AFR), (2) Integrated Administration and Control system (IACS).
- Social statistics: (1) Central Population Register, (2) Housing Registers.

19.5.1 Problematic data access cases

The NSI identified the following administrative data source for which access is not feasible or is achieved in a considerable problematic way.

Data source	Data owner	Purpose of access	Statistical domain where data are used
Data from non-governmental organisations (e.g. mobile phone data)	Non-governmental organisations (mobile phone providers)	Estimation of "day time" and tourism statistics	Tourism statistics

Legal and institutional issues: In principle, the NSI is granted access to administrative data from all Dutch government organizations. However, the right of the NSI to access administrative data from non-government organizations and private companies is not established in the SN Act. The NSI should reach an agreement with the data owner in order to obtain access to the data source.

Cooperation with data owners: According to the NSI, the SN Act does not make provisions on its right to access non-governmental sources for free. Therefore, data owners request the NSI to pay charges for the development of tools to process and share their data.

Quality aspects: The NSI identified several issues with regard to the quality of the data: (a) differences in the statistical units, coverage of the data, and definitions of the variables, (b) significant number of missing records, (c) lack of unique and consistent identifiers, (d) lack of metadata.

Technical aspects: The NSI stated that there are difficulties related to the format used for the exchange of metadata.

19.5.2 Successful data access cases

The following data sources are considered as the most representative successful data access cases.

Data source	Data owner	Purpose of access	Statistical domain
VAT Data	Tax Office	Estimation of turnover of enterprises	SBS, STS
Data on Social Security and Income	Employee Insurances implementing Agency	Estimation of social security benefits, income, employment	Statistics on income, social security benefits and employment
Income Tax Data	Tax Office	Estimation of statistics on income	Statistics on income

⁸³ Statistics Netherlands, Dutch Census 2011: Analysis and Methodology (2011).

⁸⁴ Eurostat grant agreement 07112.2015.002-2015.353 on improvement of the use of administrative sources (ESS.VIP WP6 Pilot studies and applications).

⁸⁵ Eurostat grant agreement 07112.2016.004-2016.593 on improvement of the use of administrative sources (ESS.VIP WP6 Pilot studies and applications).

Factors contributing to successful access: As reported by the NSI, the main factors contributing to a successful use of all three sources are the establishment of good relationships with the data owners and the good quality of the data.

Obstacles overcome in accessing the data source: No significant obstacles were confronted except for the fact that it took to the NSI some time to obtain access to the data sources.

Best practice study: According to the information provided to the questionnaire, none of the abovementioned data access cases could be used as a best practice study.

20 Austria

20.1 Legal framework

The Federal Statistics Act (FSA 2000) No. 163/1999 (consolidated version)⁸⁶ states that a survey must be conducted only if data from administrative sources, registers or other databases are not available.

Upon the provisions of Article 10 of the FSA, public registrars and administrative data holders shall provide their data to the NSI, if so provided by an order pursuant to an international or the Federal Statistics Act, or if data are required for keeping statistical registers. Data shall be accompanied by relevant metadata on the method used for data collection, definitions used, and the computation methods applied.

Data shall be transmitted to the NSI free of charge and in an electronic format (if the data are available in electronically readable format). The NSI shall also be given online access to publicly accessible data registers. Online access to personal administrative data may not be given to the NSI without a specific legal provision.

Statutory interest groups and the Austrian National Bank are not obliged to provide administrative or statistical data if this harms their confidentiality rules.

Legal right to access administrative data at microdata level

The NSI has the legal right to access administrative microdata from most data sources. For most sources, the legal framework requires that administrative microdata transmitted to the NSI should be anonymized first. For instance, the NSI receives pseudonymised microdata on physical persons.

A permission from an authority other than the data owner should not be requested by the NSI before accessing any data source but as stipulated in the FSA, the passing of a specific legal act is required so that the NSI obtains access to each data source.

Cooperation with data owners in design of administrative databases

Upon the provisions of the FSA, the NSI should be consulted in the event that public registers are modified. However, the recommendations of the NSI are not binding.

Cost-free access to administrative data

The NSI has the right to access all administrative data sources for free.

Coherence of the legal framework

As mentioned by the peer reviewers, access to administrative data is bound to national statistics laws stating precisely which data can be accessed from the administrative databases. Moreover, Article 26

⁸⁶ http://www.statistik.at/web_en/about_us/responsibilities_and_principles/statistics_act/index.html.

specifies that administrative data can be linked to other registers or prepared for further processing after the deletion of the identity details. The data must be deleted immediately once they are no longer required for the compilation of statistics or preparation of analyses.

20.1.1 Legal restrictions

According to the NSI, the legal restrictions with regard to NSI's access to administrative data are summarized as follows:

- The FSA grants to the NSI access to administrative data only for specific statistical purposes.
- For most sources, the legal framework requires that administrative microdata transmitted to the NSI should be anonymized first.
- In all cases, the passing of additional specific legal acts is required so that the NSI obtains access to the administrative data source.
- Data owners should consult the NSI when modifying the administrative data source but the recommendations of the NSI are not binding.
- The NSI has the right to reuse the data for statistical purposes other than initially stated after the deletion of identity details.
- The data can be linked to other registers or prepared for further processing after the deletion of the identity details.

20.2 Internal institutional aspects

Policy on administrative data

As stated by the NSI an organization-wide policy promoting the use of administrative data is in place. Article 6 of the FSA obliges the NSI to use administrative or register data whenever possible. One of the main tasks of the Statistics Council, which is the advisory board of the NSI consisting of 16 members, is the issuing of recommendations on the design of administrative data used for statistical purposes and the communication of these recommendations to the responsible ministries.

Following the information provided in the questionnaire, standard and systematic procedures to identify administrative data sources potentially useful for statistical purposes are in place. The FSA also specifies that upon NSI's request, data owners should provide information on the availability of data, their organization and structure that may be relevant to a statistical survey already governed by an international or federal regulation.

Additionally, the NSI reported that a procedure to monitor developments in the legal framework governing the sharing of administrative data between authorities is in place. Standard and documented quality criteria to assess the adequacy of the administrative data are only partly used across statistical domains. The NSI has adopted standard and systematic practices to ensure the confidentiality and security of administrative data.

Organisation within the NSI

Within the NSI, a unit or department responsible for coordinating and managing the contacts and cooperation with data owners is partly in place. According to the information provided in the questionnaire, the NSI is well resourced and its personnel has the required competences to effectively exploit administrative data for statistical purposes.

The peer reviewers pointed out that dependence on administrative data makes the production of statistics vulnerable to changes implemented to their structure or content. For this reason, advanced tools for linking databases using a unique identifier, the so-called "Bpin OS", have been developed and data are crosschecked using sophisticated procedures.

20.2.1 Internal institutional obstacles

In summary, the following issues have been identified by the NSI:

- Documented quality criteria to assess the quality of administrative data are only partly used across the statistical units of the NSI.
- A specific unit / department responsible for coordinating NSI's contacts and cooperation with data owners is only partly in place.

20.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

In view of the NSI, the overall culture of the staff in the country's public sector is favourable to data sharing. Concerns in the general public regarding personal data privacy and confidentiality do not create obstacles for the sharing of data among organisations.

According to the NSI, a national strategy on data sharing in the public sector is in place and is effectively implemented.

Cooperation with data owners

According to the NSI, it is not necessary for the NSI to sign written agreements with the data owners for each instance of data transmission since access to all administrative data sources is regulated by relevant specific legal acts. The NSI considers that the coordination mechanisms with the data owners are in most cases effective. As mentioned also by the peer reviewers, the NSI is in close cooperation with the main administrative data owners.

Following the information provided in the questionnaire, the NSI is consulted by the data owners on issues such as specifications or design their databases only in few cases and data owners rarely take its recommendations into account when setting up, changing or discontinuing the administrative database. Although data owners are obliged to inform sufficiently in advance the NSI on the changes planned to be implemented in the design of their databases, they rarely do so in practice.

The NSI reported that it always communicates to the data owners the procedures in place to ensure the confidentiality and security of the data but does not have the authority to demand suitable modifications when quality-related problems are encountered.

In most cases, the NSI stated that it communicates to the data owners issues related to errors and inconsistencies identified in their data at an aggregate level for the protection of individual confidentiality.

Overall, the NSI sometimes faces difficulties in cooperating with the administrative data owners.

20.3.1 Issues related to the wider institutional environment and cooperation with data owners

In summary, the NSI pointed out the following issues:

- Written agreements that cover each instance of data provision are not signed with data owners since NSI's access to each administrative data sources is ordered by a specific legal act.
- The NSI is rarely consulted by the data owners on issues such as specifications or design their databases.
- Data owners rarely take the recommendations of the NSI into consideration when setting-up, changing or discontinuing an administrative database.
- Administrative data owners inform the NSI sufficiently in advance on planned changes in the structure or design of their databases only in a few cases.
- When quality-related problems are encountered, the NSI does not have the authority to demand suitable modifications from the data owner.

20.4 Quality and Technical preconditions

Quality aspects

As reported in the questionnaire, in most cases, the NSI has access to methodological information for the data collection process operated by the administrative data owners. In addition, data owners apply in most cases sufficient quality checks that are useful for the NSI.

Unique and consistent identifiers are used across all data cases and the NSI has sufficient information for linking different data sources.

Technical aspects

The NSI mentioned in the questionnaire that it does not face difficulties related to the format used for the exchange of data and metadata. In most cases, automated data exchange mechanisms are used for transferring of administrative data and metadata.

20.4.1 Quality and technical restrictions

No issues have been identified by the NSI.

20.5 Some examples of administrative data usage

Business Statistics

With regard to the business sector, a reliable business register has been compiled, combining data from Tax Authorities, Security funds, the register of companies⁸⁷, etc. A common identifier for companies did not exist, which made the combination of data an ambitious task, but this problem has been recently resolved.

Agricultural Statistics

In the field of agricultural statistics, data from the Integrated Administration and Control System (IACS), Agramarkt Austria, as well as data derived from other databases (e.g. cattle database, veterinary information system) are used in all phases of the production process (pre-filling of questionnaires, imputation, checks for quality assurance, etc.).

Social Statistics

The 2011 population and dwellings census was completely register-based. In order to assure a high level of data quality, a quality framework has been established based on a set of indicators for assessing data quality at every processing stage. Moreover, in order to protect the personal data received from administrative data providers from any violation of confidentiality, a pseudonymisation technique has been developed.

Examples of sources used

- Business statistics: (1) Tax Authorities Data, (2) Register of employers (Social Security Agency), (3) Register of companies, (4) Register of the Federal Economic Chamber.
- Agricultural statistics: (1) Integrated Administration and Control System (IACS), (2) Veterinary information system, (3) Cattle Database.
- Social statistics: (1) Central population Register, (2) Tax Register, (3) Social Security Register, (4) Unemployment Register, (5) Register of educational attainment, (6) Buildings and dwellings Register, (7) Business Register, (8) Agriculture and forestry Register.

⁸⁷ United Nations Statistical Commission and Economic Commission for Europe, Conference of European Statisticians, Statistics Austria, "Quality of administrative data – A challenge for the maintenance of the statistical business register" (2008).

20.5.1 Problematic data access cases

The NSI did not identify any administrative data source for which access is not feasible or is achieved in a considerable problematic way.

20.5.2 Successful data access cases

The following data sources are considered as the most representative successful data access cases.

Data source	Data owner	Purpose of access ^[1]	Statistical domain
Central Population Register	Ministry of interior	1, 3, 4, 5	Population Statistics, Census, LFS, EU-SILC
Central Social Security Register	Social Security Agency	3, 4, 5	Census, Labour Market Statistics, National Accounts, Business Register, SBS
Tax Data	Tax Authority	1, 3, 4, 5	Business Register, Business Statistics, National Accounts

^[1] (1) Main source for the survey frame, (2) Auxiliary source for the survey frame (3) Direct compilation of statistics from administrative aggregated data or microdata, (4) Direct compilation of statistics in combination with other sources (e.g. other administrative sources, surveys), (5) Source of auxiliary data for prefilling, editing / validation, imputation, etc.

Factors contributing to successful access: The NSI mentioned that the main factors contributing to a successful use of the Central Population Register and Tax data are (a) the well-grounded provisions laid down in the relevant law, (b) the well-coordinated and reliable mechanisms used for data exchange, and (c) the intense cooperation with the data owner. Regular contacts with the Social Security Agency and the use of automated data exchange mechanisms for the transmission of data have contributed to a success use of the Central Social Security Register.

Obstacles overcome in accessing the data source: No obstacles have been reported by the NSI.

Best practice study: According to the information provided to the questionnaire, none of the abovementioned data access cases could be used as a best practice study.

21 Poland

Article 13 of the Law on Official Statistics of June 1995⁸⁸ states that the bodies of public administration, the Social Insurance Institution the National Health Fund, the Financial Supervision Authority as well as other State or local authorities or other entities maintaining administrative registers, shall transmit or make accessible to the NSI the administrative data collected, free of charge, in the format and timeframe specified in the programme of statistical surveys of official statistics. The bodies specified above shall transmit their administrative data along with information explaining the content of the data (metadata).

The Law on Official Statistics grants to the NSI access to administrative data for different statistical purposes. Data can be used for different purposes according to the NSI's statistical needs. The purpose of use of the data shall be defined in the annual programme of statistical surveys of official statistics.

Furthermore, the Law on Official Statistics specifies that the president of the NSI shall be entitled to submit to the bodies specified above motions for the informational content and quality requirements of the transmitted data in order to enable their use in official statistics.

⁸⁸ <http://bip.stat.gov.pl/en/law/law-on-official-statistics/>

21.1 Legal framework

Legal right to access administrative data at microdata level

The NSI has the legal right to access administrative microdata from most data sources. The Law on Official Statistics does not contain any restrictions on obtaining identifiable data. The programme of statistical surveys of official statistics, which is determined annually by the Council of Ministers and adopted by a regulation, includes obligations to transfer data according to research needs. A permission from an authority other than the data owner does not need to be requested by the NSI before accessing any data source.

Cooperation with data owners in design of administrative databases

Upon the provisions of the Law on Official Statistics, the President of the NSI shall be informed on the planned scope of information to be covered by the information systems of the public administration and the official registers, at the stage of their creation or modernization. The President of the NSI shall have the right to submit motions concerning the information contents and requirements as to the quality of administrative data in order to enable their use in official statistics. However, the recommendations of the NSI are not binding.

Cost-free access to administrative data

The NSI has the right to access all administrative data sources for free.

Coherence of the legal framework

According to Article 35d of the Law on Official Statistics, the NSI, upon the compilation of statistics, shall store the data on natural persons in the form that does not allow the identification of the person concerned (anonymisation), with the exception of the personal data used for the creation of survey frames for the statistical surveys referred to in the Article 35f.

Article 10 of the Law on official statistics prevents the usage of identifiable microdata collected in statistical surveys for purposes other than statistical calculations, compilations and analyses, and creation of sampling frames (statistical confidentiality).

According to the peer review report published in May 2015, the NSI had difficulties in accessing and using individual data from administrative authorities, including tax records. The peer reviewers stated that access to administrative data is granted by the law but the obligation of the data owners to submit administrative microdata is not clearly stated.

However, the Law on Official Statistics has been amended on 20.07.2016. Currently the provisions of the law are clearer. Provisions on the types of administrative sources from which data can be accessed and the scope of the data transferred, including the scope of personal data, are clarified. Detailed data scopes obtained from each administrative source are specified in the annual programme of statistical surveys of official statistics.

According to the views of the NSI stated in the questionnaire, the legal framework does not leave now room for misinterpretations.

21.1.1 Legal restrictions

According to the NSI, the legal restrictions with regard to its access to administrative data are summarized as follows:

- Although, the Law on Official Statistics does not contain any restrictions on obtaining identifiable microdata, the programme of statistical surveys prescribes that data should be transferred according to research needs.
- For some sources, the passing of additional specific legal acts is required so that the NSI obtains access to the administrative data sources.

- When data owners plan to set up, change or discontinue an administrative source, the recommendations of the NSI are not binding.

21.2 Internal institutional aspects

Policy on administrative data

Based on the information provided in the questionnaire, an organization-wide policy promoting the use of administrative data is in place. As stipulated in the Law on Official Statistics (Article 13.5), “while selecting the data sources for the purpose of official statistics, administrative data shall be considered in the first place”. Standard and systematic procedures to identify administrative data sources potentially useful for statistical purposes are in place. Additionally, a procedure to monitor developments in the legal framework governing the sharing of administrative data between authorities is in place.

Standard and documented quality criteria to assess the adequacy of the administrative data are only partly used across statistical domains. The NSI has adopted standard and systematic practices to ensure the confidentiality and security of administrative data.

Organisation within the NSI

According to the NSI, a unit responsible for coordinating and managing the contacts and cooperation with data owners is in place. The NSI is well resourced and its personnel has the required competences to effectively exploit administrative data for statistical purposes.

21.2.1 Internal institutional obstacles

In summary, the following issues have been identified by the NSI:

- Documented quality criteria to assess the quality of administrative data are only partly used across the statistical units of the NSI.

21.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

In view of the NSI, the overall culture of the staff in the country's public sector is favourable to data sharing. As stated by the NSI, concerns in the general public regarding personal data privacy and confidentiality are not significant obstacles for the sharing of data among organisations. In general, there are no obstacles in transferring data by data owners to the NSI, while the NSI does not provide and publish identifiable microdata.

Legislation making provisions on the sharing of data in the public sector is in place but the NSI's opinion on its effectiveness of implementation is neutral. Currently, the Ministry of Digital Affairs undertakes an initiative aiming at the collection of information on the IT systems used in the public administration.

Cooperation with data owners

Written agreements covering each instance of data transmission have been signed only in a few cases. The NSI considers that coordination mechanisms with the data owners are in most cases effective.

According to the information provided in the questionnaire, the NSI is consulted by the data owners on issues such as specifications or design of their databases in most cases. The data owners rarely take the recommendations of the NSI into account when setting up, changing or discontinuing an administrative database. However, data owners usually inform the NSI sufficiently in advance on the changes planned to be implemented in the design of their databases.

The NSI stated that it always communicates to the data owners the procedures in place to ensure the confidentiality and security of the data. For most sources, the NSI is authorised to demand suitable modifications when quality-related problems are encountered.

In most cases, the NSI communicates to the data owners issues related to errors and inconsistencies identified in their data. During this communication, the NSI takes always all the necessary measures to protect individual confidentiality.

Overall, the NSI mentioned that it sometimes faces difficulties in cooperating with the administrative data owners. As stated by the NSI during the Workshop on “access to administrative data sources”, the provision of data to the NSI results in additional burden for the data owner in terms of human and financial resources. This creates reluctance of data owners to cooperate, nevertheless, they transmit data to the NSI following the legal grounds. The data owners rarely refuse to provide their data.

21.3.1 Issues related to the wider institutional environment and cooperation with data owners

The problems reported by the NSI with regard to its cooperation with data owners, are summarized as follows:

- Written agreements that cover each instance of data provision have been signed only in a few cases.
- Data owners rarely take the recommendations of the NSI into consideration when setting-up, changing or discontinuing an administrative database, however, the NSI has made recommendations only in a few cases.
- Sometimes administrative data owners send their data with delays relative to the agreed timetable.
- The provision of data to the NSI results in additional burden for the data owners in terms of human and financial resources. This creates reluctance of data owners to cooperate, nevertheless, they transmit data to the NSI, following the legal grounds. Refusal of data owners to provide their data are rare.
- Excessive formality or bureaucracy is sometimes an obstacle for cooperation.

21.4 Quality and Technical preconditions

Quality aspects

According to the information made available in the questionnaire, in most cases, the NSI has access to sufficient methodological information for the data collection process operated by the administrative data owners. Moreover, data owners apply in most cases sufficient quality checks that are useful for the NSI.

Unique and consistent identifiers are used across all most cases and the NSI has sufficient information for linking different data sources.

Technical aspects

The NSI reported that few difficulties related to the format used for the exchange of data and metadata are in place. Automated data exchange mechanisms are used for transferring of administrative data and metadata only in a few cases.

21.4.1 Quality and technical restrictions

In summary, the following issues have been identified by the NSI:

- Automated data exchange mechanisms for transferring data and metadata are used only in a few cases.

21.5 Some examples of administrative data usage

Business Statistics

In 2012, the NSI has investigated the possibility of compiling directly statistics for microenterprises from administrative sources. Administrative data are used for the updating the survey frame and for estimating results with more detailed breakdown⁸⁹ in structural business statistics (SBS).

Agricultural Statistics

In the field of agricultural census, administrative data are used as secondary sources, e.g. for prefilling the questionnaire and updating the sampling frame.

The presentation of the NSI during the Workshop on “access to administrative data sources” (2016) was about the production of agricultural statistics which relies on a variety of administrative data sources.

A recent change in the Law on Official Statistics explicitly mentions the administrative sources to be used by the CSO. This was considered necessary because the legal provisions it is meant to amend were not considered sufficiently important by the administrative source owners. The CSO also tries to initiate revisions, to its favour, of the legal acts regulating specific administrative data sources.

Social Statistics

For the compilation of the National Census of Population and Housing 2011, data derived from 28 registers were used in combination with survey results. In 2015-2016, the Central Statistical Office benefited from a Eurostat grant on improving the use of administrative data sources.⁹⁰ The project concerned obtaining access to several new data sources, assessing the usability of these sources, transforming the administrative data into statistical data, creating identifiers to link the data and developing a methodology to integrate the administrative data in the 2021 Census and to use them for the base frames for the social surveys. The Central Statistical Office is currently running a project⁹¹ that aim to develop solutions for combining administrative data sources and statistical surveys and calibration and imputation methods for the use of data from administrative sources and recommendations for applying these methods to the 2021 Census and other surveys. The project also concerns the development of a methodology for geocoding statistical registers based on an analysis of the available sources for address location data.

Examples of sources used

- Business statistics: (1) National Register of Taxpayers (Ministry of Finance), (2) Tax Information System (Ministry of Finance), (3) Central Register of Contribution Payers (Social Insurance Institution), (4) Central Insurance Register (Social Insurance Institution).
- Agricultural statistics: (1) Agency for Restructuring and Modernisation of Agriculture (ARMA), (2) Land and Buildings Register, (3) the set of Real Property Tax Record, (4) National Official Business Register (REGON), (5) Population register (PESEL) (Ministry of the Interior and Administration).
- Social statistics: (1) Population register (PESEL) (Ministry of the Interior and Administration), (2) Gminas (municipal) registration record, (3) Data from information systems kept by tax authorities and insurance system.

⁸⁹ Central Statistical Office of Poland, Enterprises Department, “The use of administrative data in the annual microenterprise survey conducted by the Central Statistical Office” (2012).

⁹⁰ Eurostat grant agreement 07112.2015.002-2015.354 on the Improvement of the use of administrative sources (ESS.VIPADMIN WP6 Pilot studies and applications).

⁹¹ Supported by the Eurostat grant agreement 07112.2016.004-2016.595 on the Improvement of the use of administrative sources (ESS.VIPADMIN WP6 Pilot studies and applications).

21.5.1 Problematic data access cases

The NSI identified the following administrative data sources for which access is not feasible or is achieved in a considerably problematic way.

Data source	Data owner	Purpose of access ^[1]	Statistical domain where data are used
National Register of Court	Ministry of Justice	1, 2	Business Statistics, Business demography
Databases of Civil Registry Offices	Civil Registry Offices	3	Social Statistics, Demography

^[1] (1) Main source for the survey frame, (2) Auxiliary source for the survey frame (3) Direct compilation of statistics from administrative aggregated data or microdata, (4) Direct compilation of statistics in combination with other sources (e.g. other administrative sources, surveys), (5) Source of auxiliary data for prefilling, editing / validation, imputation, etc.

Legal and institutional issues: According to the NSI, the legislation applicable to the Ministry of Justice contradicts the NSI's legal right to access the national register of court. A change in the legal provisions governing the databases of the Civil Registry Offices has resulted in the assignment of the data collection to a different organization.

Cooperation with data owners: With regard to the national register of court, the main adverse factor for cooperation with the new data owner is the lack of effective communication mechanisms. Moreover, the new data owner does not have the appropriate tools to process and extract the required data. The NSI stated that bureaucracy between the NSI and the Civil Registry Offices constitutes the main obstacle for cooperation.

Quality aspects: The NSI reported that the completeness of the data items in both data sources is poor.

Technical aspects: The NSI mentioned that has access to the data of the national register of court via a publicly available application. However, it should scan the whole database to obtain the data of interest. This process is time consuming and inefficient.

21.5.2 Successful data access cases

The following data sources have been indicated by the NSI as the most representative successful data access cases.

Data source	Data owner	Purpose of access ^[1]	Statistical domain
Central Waste Database	Ministry of the Environment	1	Environment statistics
Educational information system	Ministry of National Education	1	Social and education statistics
Social Assistance in the place of residence	Ministry of Family, Labour and Social policy	1	Living conditions, social assistance

^[1] (1) Main source for the survey frame, (2) Auxiliary source for the survey frame (3) Direct compilation of statistics from administrative aggregated data or microdata, (4) Direct compilation of statistics in combination with other sources (e.g. other administrative sources, surveys), (5) Source of auxiliary data for prefilling, editing / validation, imputation, etc.

Factors contributing to successful access: In view of the NSI, the main factor contributing to a successful use of the Central Waste Database is the good cooperation with the data owner. Representatives of the NSI actively participate in the working groups of the Ministry of Environment and other institutions fostering on the development of the database and are in direct contact with the personnel of the ministry for clarifying issues related to the quality of the data. For the educational information system, the success factors identified by the NSI are (a) the good cooperation established with the Ministry of National Education, (b) the well-educated and experienced staff of the ministry that is willing to provide data that fit in the needs of the NSI and (c) the mechanisms used for the transmission of data. With reference to the social assistance in the place of residence data source,

the NSI stated that the most important success factor for accessing the data source was the readiness of the ministry to share its data and metadata.

Obstacles overcome in accessing the data source: Based on the information in the questionnaire, the main issue that remains still unresolved with regard to the data coming from the educational information system, is the lack of identifiers that will permit the linking of student related data with other databases. The NSI reported that faces difficulties related to the quality of the social assistance in the place of residence data source; the definition used for the statistical unit and the classifications used are different than the ones required for statistical purposes. Additionally, a small proportion of data items and records is missing from the data source and thus imputed by the NSI.

Best practice study: According to the information provided to the questionnaire, none of the abovementioned data access cases could be used as a best practice study.

22 Portugal

According to the National Statistical System's Law No 22/2008⁹², the NSI may require receiving data held by all services or bodies, individuals and enterprises for the needs of production of official statistics. Data should be provided free of charge.

In particular, Article 4.2 of the National Statistical System's Law establishes the possibility of using administrative records by the national statistical authorities. These provisions shall prevail over possible limitations or obligations of statistical secrecy included in special regimes but shall not apply to data subject to security classification, state secret, investigation secrecy, data kept in the data centres of the Portuguese Republic information system's services, genetic or personal data on philosophical or political convictions, party or trade union membership, religious beliefs, private life and racial or ethnic origin and personal data concerning health or sex life.

Data subjects shall be informed on the intended purposes for the collected data as well as on protection measures adopted to ensure the confidentiality.

22.1 Legal framework

Legal right to access administrative data at microdata level

The NSI has the legal right to access administrative microdata from some data sources. Within its fields of competence, the NSI may treat personal data, including sensitive data, and interconnect them, safeguarding the provisions of Article 9(2) of the Personal Data Protection Law No 67/98. Thus, personal and sensitive data are protected by the Data Protection Law and the Constitution of Portuguese Republic. The NSI has the legal right to receive non-anonymised administrative microdata from all sources, but is obliged to request the permission of the Data Protection Authority before obtaining access to some sources for the first time. For instance, the tax authority requested the NSI to apply for authorization from the Data Protection Authority in order to obtain access to the data.

Cooperation with data owners in design of administrative databases

The National Statistics System Law makes references to the possibility of the NSI to issue recommendations for the concepts, definitions and nomenclatures used in the collection of administrative data (Article 13(h)). Additionally, it is stated in the Decree Law no. 136/2012 which defines the Organic Structure of Statistics Portugal (SP) that the Board of SP shall "participate in the design and change of administrative data media aimed at their use for statistical purposes, so as to ensure, where possible, the adoption of statistical definitions, concepts and nomenclatures approved

⁹² https://www.ine.pt/ngt_server/attachfileu.jsp?look_parentBoui=219139456&att_display=n&att_download=y

by the Statistical Council”. As stated by the NSI in the questionnaire, the NSI, through its recommendations, may influence the design and the set-up of some administrative data sources (e.g. as in the case of the Simplified Business Information (IES) – see Section 22.5.2).

Cost-free access to administrative data

The NSI has the right to access all administrative data sources for free.

Coherence of the legal framework

For some sources, the NSI shall comply with the Data Protection Law and the Constitution of Portuguese Republic in order to use and link personal and sensitive data with other sources. Additionally, for some sources, the passing of specific legal acts is required to access specific administrative data sources.

Overall, in view of the NSI, the legal framework leaves room for misinterpretations.

22.1.1 Legal restrictions

According to the NSI, the legal restrictions with regard to its access to administrative data are summarized as follows:

- The NSI may access, use and link personal and sensitive data under the condition that the provisions laid down in the Personal Data Protection law are respected.
- For some sources (e.g. tax data on individuals) the NSI is obliged to request permission from the Data Protection Authority before obtaining them for the first time.
- Data owners are not obliged to consult the NSI when setting up changing or discontinuing a database.
- For some sources, the passing of additional specific legal acts is required so that the NSI obtains access to the administrative data sources.
- For some sources, the legislation applicable to the data owners contradicts the NSI's legal rights to access and use their data.

22.2 Internal institutional aspects

Policy on administrative data

An organization-wide policy promoting the use of administrative data is in place. The NSI is mandated to use administrative data for compiling statistics. In Portugal, the Statistical Council (SC) guides and coordinates the NSI and it is responsible for its administrative modernisation.

According to the NSI, a procedure to monitor developments in the legal framework governing the sharing of administrative data between authorities is only partly in place. Standard and systematic procedures to identify administrative data sources potentially useful for statistical purposes are in place, whereas standard and documented quality criteria to assess the adequacy of the administrative data are partly used across statistical domains. The NSI has adopted standard and systematic practices to ensure the confidentiality and security of administrative data and all NSI's staff has signed a confidentiality commitment.

Organisation within the NSI

Based on the information provided in the questionnaire, within the NSI, a unit responsible for coordinating and managing the contacts and cooperation with data owners is not yet implemented and this responsibility is spread for different units of the NSI. The NSI's personnel has the required competences to effectively exploit administrative data for statistical purposes but the available resources are only partly sufficient for such needs.

According to the peer reviewers, the NSI works on the development of procedures to assess the quality of data, which are guided by the second version of the Statistical Production Processes

Handbook (SPPH, 2010). In view of the peer reviewers' assessment, the handbook does not provide sufficient guidelines on administrative data processing and quality checking.

22.2.1 Internal institutional obstacles

In summary, the following issues have been identified by the NSI:

- A procedure to monitor developments in the legal framework governing the sharing of administrative data between authorities is only partly in place.
- Documented quality criteria to assess the quality of administrative data are only partly used across the statistical units of the NSI.
- A unit responsible for coordinating and managing the contacts and cooperation with data owners is not yet implemented and this responsibility is spread for different units of the NSI.
- The available resources are only partly sufficient to effectively exploit administrative data for statistical purposes.

22.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

In view of the NSI, the overall culture of the staff in the country's public sector is favourable to data sharing. Concerns in the general public regarding personal data privacy and confidentiality are not referred as obstacles for the sharing of data among organizations, at least with NSI.

The Simplex programme on administrative modernization strategy - simplification programme for central and local government aims to promote the sharing of data in the public sector. The NSI's view on the effectiveness of its implementation is neutral, although it has been actively involved in the Simplex programme.

Cooperation with data owners

In most cases, written agreements covering each instance of data transmission have been signed with the data owners. For example, the peer reviewers have mentioned that the NSI has signed a protocol with the Portuguese Tax Authority, as well as the Ministry of Justice, the Ministry of Finance and the National Central Bank (the Simplified Business Information protocol).

The NSI considers that coordination mechanisms with the data owners are in most cases effective, although the peer reviewers claim that the NSI does not always manage to obtain access to administrative data due to difficulties in establishing cooperation with the data owners.

According to the information in the questionnaire, the NSI is consulted by the data owners on issues such as specifications or design of their databases only in a few cases. In some specific statistical areas, the data owners rarely take its recommendations into account when setting up, changing or discontinuing the administrative database and rarely inform the NSI sufficiently in advance on the changes planned to be implemented in the design of their databases.

The NSI stated that it communicates to the data owners the procedures in place to ensure the confidentiality and security of the data. In some cases, errors and inconsistencies identified in the administrative data sources are transmitted to the data owners, in order to increase of data quality. In some cases, such inconsistencies are identified using cross-checking procedures with other statistical sources and thus cannot be transmitted to the administrative data owners due to confidentiality aspects. The NSI takes all the necessary measures to protect individual confidentiality when communicating to the data owners the issues related to the errors or inconsistencies identified in their data, when applicable.

Overall, the NSI reported in the questionnaire that it sometimes faces difficulties in cooperating with the administrative data owners. Data owners sometimes refuse to provide access to their data and

send their data with delays relative to the agreed timetable. Excessive formality or bureaucracy is sometimes an obstacle for cooperation.

22.3.1 Issues related to the wider institutional environment and cooperation with data owners

The problems reported by the NSI with regard to its cooperation with the data owners are summarized as follows:

- The NSI is rarely consulted by the administrative data owners on issues such as specifications or design of relevant databases, except for the cases where the exchange of administrative data with the NSI is already implemented.
- Data owners rarely take the recommendations of the NSI into consideration when setting-up, changing or discontinuing an administrative database, except for the cases where the exchange of administrative data with the NSI is already implemented.
- Data owners rarely inform the NSI sufficiently in advance about the changes planned to be implemented in the structure or design of their databases, except for the cases where the exchange of administrative data with the NSI is already implemented.
- When quality-related problems are encountered, the NSI does not have the authority to demand suitable modifications from the data owner, but nevertheless the errors and inconsistencies are transmitted to the administrative data owner.
- The NSI communicates to the data owners issues related to the errors or inconsistencies identified in their data only in a few cases. Measures for the protection of data from any violation of confidentiality are undertaken.
- Sometimes administrative data owners refuse to provide access to their data.
- Sometimes administrative data owners send their data with delays relative to the agreed timetable.
- Excessive formality or bureaucracy is sometimes an obstacle for cooperation.

22.4 Quality and Technical preconditions

Quality aspects

The NSI reported that in most cases it has access to sufficient methodological information for the data collection process operated by the administrative data owners. However, data owners apply sufficient quality checks that are useful for the NSI only in a few cases.

According to the peer reviewers' assessment, the NSI faces difficulties in linking different datasets, due to the lack of a unique identification code across the National Statistical System. Although in the domain of business statistics, the fiscal id variable is used for linking data from different sources, a relevant unique identifier for households and persons does not exist.

Technical aspects

No issues have been identified by the NSI. Difficulties related to the format used for the exchange of data and metadata are not in place. In most cases, automated data exchange mechanisms are used for transferring data and metadata.

22.4.1 Quality and technical restrictions

In summary, the following issues have been identified by the NSI:

- Data owners apply quality checks that are useful to the NSI only in a few cases.
- Unique and consistent identifiers for households and persons do not exist.
- The NSI has sufficient information for linking different data sources only in a few cases.

22.5 Some examples of administrative data usage

Business Statistics

In the domain of business statistics, a central electronic point has been developed (IES). Through the IES, enterprises submit once the required data for all public authorities, including fiscal ones. The NSI has direct access to the system (see also Section 22.5.2).

Agricultural Statistics

In the 2009 implementation of the agricultural census, data from administrative sources were used as an auxiliary source, e.g. for making comparisons with the collected data⁹³.

Social Statistics

The 2011 implementation of the population census was survey-based. The NSI is currently benefiting from a Eurostat grant⁹⁴ for a project that aims to better integrate different administrative databases and to estimate the resident population in Portugal using administrative sources. This will contribute to moving from a traditional Census to a combined Census.

Examples of sources used

- Agricultural statistics: (1) IACS - Financing Institute for Agriculture and Fisheries (IFAP), (2) Diesel - Directorate General for Agriculture and Rural Development (DGADR), (3) Institute of Vineyard and Wine (IVV), (4) Madeira Wine, Embroidery and Handicraft Institute (IVBAM), (5) Portuguese Geographic Institute (IGP).

22.5.1 Problematic data access cases

The NSI identified the following administrative data sources for which access is not feasible or is achieved in a considerable problematic way.

Data source	Data owner	Purpose of access ^[1]	Statistical domain where data are used
Tax on motor vehicles	Road Vehicle Authority	4	Transport Statistics
Health data	Ministry of Health	3	Health Statistics
Civil Identification Database (BDIC)	Ministry of Justice	1	Population statistics

^[1] (1) Main source for the survey frame, (2) Auxiliary source for the survey frame (3) Direct compilation of statistics from administrative aggregated data or microdata, (4) Direct compilation of statistics in combination with other sources (e.g. other administrative sources, surveys), (5) Source of auxiliary data for prefilling, editing / validation, imputation, etc.

Legal and institutional issues: No legal obstacles have been identified by the NSI for the tax on motor vehicles and health data sources. For accessing the Civil Identification Database (BDIC) data, the NSI stated that the passing of specific legal acts is required since the legislation governing the data source contradicts the NSI's legal right to access the data. Additionally, the NSI shall request a permission from the Data Protection Authority in order to access, use and link the data with other sources.

Cooperation with data owners: As stated by the NSI in the questionnaire, bureaucracy between the NSI and the Road Vehicle Authority constitutes the main obstacle for cooperation. Regarding health data, the Ministry of Health needs time for the development of tools for the processing of the data. The NSI stated that it lacks effective cooperation mechanisms with the Ministry of Justice.

Quality aspects: In view of the NSI, the most important issue with regard to the quality of the tax on motor vehicles data is the lack of sufficient metadata on the data collection process. The same is also

⁹³ Statistics Portugal, "Agricultural Census 2009: National Methodological report" (2011).

⁹⁴ Eurostat grant agreement 07112.2016.004-2016.596 on the Improvement of the use of administrative sources (ESS.VIP ADMIN WP6 pilot studies and applications).

true for the health data source, in which a significant number of data items is missing. Many issues with regard to the quality of the civil register are present: differences in the definitions of the statistical unit used and in the coverage of the data, lack of identifiers and information for linking the data with other sources as well as of metadata on the data collection process.

Technical aspects: The NSI reported that the main issue with the civil register data source is that automated data exchange mechanisms for transferring the data and metadata are not in place.

22.5.2 Successful data access cases

The following data sources are considered as the most representative successful data access cases.

Data source	Data owner	Purpose of access ^[1]	Statistical domain
Simplified Business Information (IES)	Directorate General for the Business registers	2, 3, 4, 5	SBS
Integrated system for civil registration and identification (SIRIC) – Civil Register	Ministry of Justice – Civil Register Offices	3	Vital Statistics, Demography, Population Statistics
Data Sources used for the feasibility study of 2021 census	Ministry of Justice	1	Population statistics

^[1] (1) Main source for the survey frame, (2) Auxiliary source for the survey frame (3) Direct compilation of statistics from administrative aggregated data or microdata, (4) Direct compilation of statistics in combination with other sources (e.g. other administrative sources, surveys), (5) Source of auxiliary data for prefilling, editing / validation, imputation, etc.

Factors contributing to successful access: In view of the NSI, the strong political support of the Justice Secretary of State, the Ministry of Finance and the Ministry of Presidency was crucial for the successful development of the innovative system, the Simplified Business Information (IES), which is a central electronic system for collecting data from businesses. Moreover, the Chamber of Chartered Accounts had an important contribution to the implementation of the IT system. According to the NSI, the success factors for accessing and using the SIRIC data source (Civil Register) are the good quality of the data (variables, classifications and concepts are in line with the ones required for statistical needs), the automated data transmission of data and establishment of good relationships with the data owner (permanent contacts points between the NSI and the data owner). The third case includes a number of data sources, i.e. the Civil Identification database, the Social Security Register, the Educational Register, etc. The institutional cooperation of the NSI with the national data protection authority was a key factor for obtaining access to these data sources. The NSI devoted efforts for communicating to the data owners the importance of obtaining the data for needs of compilation of statistics.

Obstacles overcome in accessing the data source: The main obstacle related to the second data source, namely the SIRIC system, was the time-consuming process of computerization of the data collected from all Civil Register Offices. On the other hand, the NSI should obtain authorisation from the national data protection authority in order to access the data sources used in the 2021 Census feasibility study due to confidentiality restrictions. The NSI reported that these issues were overcome by using methods for encrypting numerical identifiers.

Best practice study: According to the information provided to the questionnaire, the Simplified Business Information (IES) could be used as a best practice study.

23 Romania

The Law No. 226/2009⁹⁵ on the organization and functioning of official statistics in Romania makes provisions authorizing the NSI and its territorial directorates to access administrative records, including individual identification data, maintained by public authorities and institutions. The data transmitted to the NSI by the data owners should be exploited only for statistical purposes.

Article 28(5) of the national law states that administrative data owners must provide the producers of official statistics with information about the coverage of the data, the definitions used, the methods through which the data were collected and the methods of obtaining derived data.

Under the provisions of Article 30, the NSI is obliged to separate the identification data from the rest of the variables when processing and storing the data received by administrative data owners in order to protect them from any violation of confidentiality.

23.1 Legal framework

Legal right to access administrative data at microdata level

The NSI has the legal right to access administrative microdata from most data sources. For some sources, the legal framework requires that administrative microdata transmitted to the NSI should be anonymized first.

A permission from an authority other than the data owner should not be requested by the NSI before accessing some data sources for the first time.

Cooperation with data owners in design of administrative databases

Upon the provisions of the national law (Article 28(7)), the owners of administrative data sources shall be under the obligation to notify the NSI whenever new administrative sources are created or existing ones are modified. Moreover, Article 39 of the national law obliges the owners of administrative registers to periodically inform the NSI on the changes implemented in the registers they manage. The recommendations of the NSI when an administrative data source is set-up, modified or discontinued are binding.

Cost-free access to administrative data

The NSI has the right to access all administrative data sources for free.

Coherence of the legal framework

The NSI considers that the legal framework specifying the NSI's rights to access administrative data does not leave room for misinterpretations.

However, the NSI and the other producers of official statistics shall be entitled to access the data contained in administrative sources, upon the condition that the legal provisions on the confidentiality protection of personal data are respected and on the basis of agreements reached with the owners of the source.

As pointed out by the peer reviewers, the latter provision of the national law gives room to the data owners to question the right of the NSI to access their data. In practice, some data owners claim that the provision of their data to the NSI is in breach of the law on personal data protection or in contradiction with the legislation governing the data source.

⁹⁵ <http://www.insse.ro/cms/en/cadru-legal>.

23.1.1 Legal restrictions

According to the NSI, the legal restrictions with regard to its access to administrative data are summarized as follows:

- For some sources, the legal framework requires that administrative microdata transmitted to the NSI should be anonymized first.
- For some sources, the legislation applicable to the data owners contradicts the NSI's legal right to access and use their data.
- For some sources, the passing of additional specific legal acts is required so that the NSI obtains access to the data source.

23.2 Internal institutional aspects

Policy on administrative data

According to the NSI, an organization-wide policy promoting the use of administrative data is in place. Standard and systematic procedures to identify administrative data sources potentially useful for statistical purposes are only partly in place, while a procedure to monitor developments in the legal framework governing the sharing of administrative data between authorities has not been established.

Standard and documented quality criteria to assess the adequacy of the administrative data are only partly used across statistical domains. Standard and systematic practices to ensure the confidentiality and security of administrative data have been adopted.

Organisation within the NSI

Based on the information provided in the questionnaire, within the NSI, a unit responsible for coordinating and managing the contacts and cooperation with data owners is in place. The NSI is well resourced but the available personnel although having the required competences to effectively exploit administrative data for statistical purposes is not considered sufficiently enough.

23.2.1 Internal institutional obstacles

In summary, the following issues have been identified by the NSI:

- A procedure to monitor developments in the legal framework governing the sharing of administrative data between authorities is not in place.
- A standard, systematic procedure to identify administrative data sources potentially useful for statistical purposes is only partly in place.
- Documented quality criteria to assess the quality of administrative data are only partly used across the statistical units of the NSI.
- The available resources are only partly sufficient to effectively exploit administrative data for statistical purposes.

23.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

In view of the NSI, the overall culture of the staff in the country's public sector is neutral to data sharing. Concerns in the general public regarding personal data privacy and confidentiality are obstacles for the sharing of data among organisations.

A national strategy on data sharing in the public sector is in place. The NSI's view on the effectiveness of its implementation is neutral.

Cooperation with data owners

Written agreements covering each instance of data transmission have been signed with data owners for most data access cases and the NSI considers that coordination mechanisms with the data

owners especially in what concerns administrative data used for producing enterprise statistics are effective.

In practice, the NSI is consulted by the data owners on issues such as specifications or design their databases only in few cases but the data owners usually take its recommendations into account when setting up, changing or discontinuing an administrative database. As stated by the peer reviewers, the possibility of the NSI to influence the design of the administrative databases is limited. The NSI reported that the data owners inform it sufficiently in advance on the changes planned to be implemented in the design of their databases only in a few cases.

According to the information provided in the questionnaire, the NSI communicates to the data owners the procedures in place to ensure the confidentiality and security of the data only in a few cases. For most sources, the NSI lacks the authority to demand suitable modifications when quality-related problems are encountered.

The NSI communicates to the data owners issues related to errors and inconsistencies identified in their data only in a few cases. During this communication, it takes always all the necessary measures to protect individual confidentiality.

During the Workshop on “access to administrative data sources” (2016), the NSI remarked that administrative data sources were often not designed to meet statistical requirements as well. In addition, some data owners are reluctant to give access to their data, e.g. because of privacy considerations. In general, there are fewer problems with data about businesses than with data about persons and households.

As far as it is described in peer review report on improvement actions, the NSI encounters various difficulties: data owners sometimes send their data with delays relative to the agreed timetable or transmit aggregate data instead of microdata. The peer reviewers also mentioned other issues with regard to the quality of the data, e.g. consistency problems, missing variables, outdated information, differences in the classifications and nomenclatures used. Also, as stated by the NSI in the questionnaire, data owners frequently refuse to provide access to their data. Overall, the NSI reported in the questionnaire that it frequently faces difficulties in cooperating with the administrative data owners.

23.3.1 Issues related to the wider institutional environment and cooperation with data owners

In view of the NSI, the problems arising with regard to its cooperation with the data owners are the following:

- Concerns in the general public regarding personal data privacy and confidentiality are obstacles for sharing data among organisations.
- The NSI is consulted by the administrative data owners on issues such as specifications or design of their databases only in a few cases.
- Administrative data owners rarely inform the NSI sufficiently in advance of the changes planned to be implemented in the structure or design of their databases.
- The NSI communicates to the administrative data owners the procedures in place to ensure the confidentiality and security of the data only in a few cases.
- The NSI has the authority to demand suitable modifications from the data owner when quality-related problems are encountered only in a few cases.
- Administrative data owners frequently refuse to provide to the NSI access to their data.
- Administrative data owners sometimes send their data with delays relative to the agreed timetable.
- The NSI sometimes faces difficulties in cooperating with the administrative data owners.

23.4 Quality and Technical preconditions

Quality aspects

The NSI reported that it has access to sufficient methodological information on the data collection process operated by the administrative data owners only in a few cases. Moreover, data owners rarely apply sufficient quality checks that are useful for the NSI.

Unique and consistent identifiers are used across most data sources and the NSI has sufficient information for linking different data sources.

Technical aspects

The NSI stated that it faces few difficulties related to the format used for the exchange of data. The opposite holds for the exchange of metadata. Automated data exchange mechanisms are used only in a few cases for transferring of administrative data and metadata.

23.4.1 Quality and technical restrictions

In summary, the following issues have been identified by the NSI:

- The NSI has access to sufficient methodological information on the data collection process operated by the data owners only in a few cases.
- The data owners apply sufficient data quality checks that are useful to the NSI only in a few cases.
- In most cases, there are difficulties related to the format used for the exchange of metadata.
- Automated data exchange mechanisms for transferring data and metadata are used only in a few cases.

23.5 Some examples of administrative data usage

Business Statistics

The business register is updated based on data obtained through administrative sources, while SBS statistics are compiled through a direct survey⁹⁶.

Social Statistics

According to the peer reviewers, the NSI works towards a register-based population and housing census. In 2015, a “bill of law on demographic statistics”⁹⁷ was being drafted with the view to establish NSI’s right to access any administrative data source useful for the compilation of population statistics without any restriction. The NSI aims at the development of a population register that will contain information on the demographic, social and economic characteristics of the population at personal and household level. Upon the adoption of the law on demographic statistics, the NSI will have the authority to link microdata from different sources for the needs of the compilation of the population register. However, the project on drafting a law on demographic statistics was dropped immediately after the adoption of the Regulation (EU) 2015/759 of the European Parliament and of the Council of 29 April 2015 amending Regulation (EC) No 223/2009 on European statistics. It was considered that the provisions of the new inserted Article 17a on “Access, use and integration of administrative records” would be enough for accessing any administrative data source, including those needed for developing the statistical population register.

The NSI is currently working on a project supported by Eurostat⁹⁸ on the improvement of the use of administrative sources for the future population and housing census. It will undertake a comparative analysis of the filed data collected in the 2011 Census with the data available in the administrative

⁹⁶ National Institute of Statistics, “Structural Business Statistics Methodology” (2005).

⁹⁷ National Institute of Statistics, “Peer review report” (2015).

⁹⁸ Eurostat Grant Agreement 07112.2016.004-2016.597 on the Improvement of the use of administrative sources (ESS.VIP ADMIN WP6 pilot studies and applications).

sources and it will analyse the administrative sources managed by the Ministry of Education in order to identify and extract the education variables needed for the 2021 Census.

Examples of sources used

- Business statistics: (1) Register of Chamber of Commerce, (2) Balance Sheets, (3) VAT Register.

23.5.1 Problematic data access cases

The NSI identified the following administrative data source for which access is not feasible or is achieved in a considerable problematic way.

Data source	Data owner	Purpose access ^[1]	of	Statistical domain where data are used
Registries	Ministry of Health	4		Health Statistics
Registries	Ministry of Internal Affairs			Population and Demographic Statistics

Legal and institutional issues: No issues have been reported by the NSI.

Cooperation with data owners: The NSI reported that the main obstacle that it faces in accessing the abovementioned data sources is that the Ministry of Health and the Ministry of Internal Affairs refuses to provide their data. In fact, the agreements signed between the NSI and the Ministry of Health or Ministry of Internal Affairs are not respected.

Quality aspects: No issues have been reported by the NSI.

Technical aspects: No issues have been reported by the NSI.

23.5.2 Successful data access cases

The following data source is considered as the most representative successful data access case.

Data source	Data owner	Purpose access ^[1]	of	Statistical domain
Fiscal Register	Ministry of Finance	4		Business Register

^[1] (1) Main source for the survey frame, (2) Auxiliary source for the survey frame (3) Direct compilation of statistics from administrative aggregated data or microdata, (4) Direct compilation of statistics in combination with other sources (e.g. other administrative sources, surveys), (5) Source of auxiliary data for prefilling, editing / validation, imputation, etc.

Factors contributing to successful access: As stated by the NSI, the main factor contributing to a successful use of the Fiscal register is the good cooperation with the Ministry of Finance. Moreover, the quality of the data is considered good and any technical issues with regard to the transmission of the data have been resolved in cooperation with the data owner.

Obstacles overcome in accessing the data source: No obstacles have been confronted.

Best practice study: According to the information provided to the questionnaire, the case of accessing the Fiscal register can be used as a best practice study.

24 Slovenia

The Slovenian National Statistics Act No 45/1995 (consolidated)⁹⁹ authorises the NSI to use data from official and administrative sources (registers, databases, etc.) in order to compile the statistics defined

⁹⁹ <http://www.stat.si/dokument/5186/NationalStatisticsAct.pdf>.

in the national statistical programme. Administrative data owners are bound to provide the NSI with all requested data.

Moreover, the Slovenian Statistics Act states that the NSI has the right to maintain its own statistical registers, created by linking different records. Data from statistical registers may be used exclusively for statistical purposes.

24.1 Legal framework

Legal right to access administrative data at microdata level

According to Article 34 of the National Statistics Act and in order to implement the programme of statistical surveys, the NSI shall have the right to collect data from all existing sources. Moreover, Article 32 precisely provides that, for the purpose of rational implementation of the national statistics, the NSI and other authorized producers make use of identifiable individual data from various official and other administrative data collections of the public and private sectors (records, registers, databases, etc.) which are kept on the basis of law or written consent of the individual. In compliance with law, register holders must, free of charge, submit to the NSI and to authorized producers all the requested information.

A permission from an authority other than the data owner should not be requested by the NSI before accessing any data source.

Cooperation with data owners in design of administrative databases

According to Article 28 of the National Statistics Act, administrative owners are obliged to consult the NSI in order to define the methodological basis for their own data collections. Additionally, they should inform the NSI and ask for its opinion prior to defining new or supplementing existing administrative data sources. However, the recommendations of the NSI are not binding.

Cost-free access to administrative data

The NSI has the right to access all administrative data sources on a cost-free basis.

Coherence of the legal framework

The NSI considers that the legal framework specifying its right to access administrative data does not leave room for misinterpretations.

Additionally, Article 39 of the National Statistics Act specifies that the NSI is authorized to use the data in a form in which it is possible to identify the reporting unit for up to fifty years after the final data processing.

24.1.1 Legal restrictions

According to the NSI, the legal restrictions are summarized as follows:

- The NSI is authorized to access data from any source for the production of statistics listed in the annual statistical programme.
- The National Statistics Act specifies that the maximum duration of retention of the data should not exceed fifty years after the final data processing.

24.2 Internal institutional aspects

Policy on administrative data

According to the NSI, an organization-wide policy promoting the use of administrative data is in place. Standard and systematic procedures to identify administrative data sources potentially useful for statistical purposes are partly in place. A procedure to monitor developments in the legal framework governing the sharing of administrative data between authorities as well as to identify administrative

data sources potentially useful for statistical purposes are in place. However there are some difficulties in practice to detect recent developments.

As reported by the NSI, standard and documented quality criteria to assess the adequacy of the administrative data are only partly in place. Standard and systematic practices to ensure the confidentiality and security of administrative data have been adopted.

The NSI has a clear mandate to use administrative data to the maximum possible extent. The peer reviewers mentioned that a governmental programme on the reduction of administrative burden gives to the NSI the opportunity of promoting the use of administrative data and setting common actions with the administrative data owners aiming at the reduction of response burden.

Organisation within the NSI

Based on the information in the questionnaire, within the NSI, a unit responsible for centralized technical coordination and technical aspects for accessing the administrative data is in place. The managing of the contacts, methodological matters and cooperation with data owners is decentralized under the responsibility of methodologists. As reported by the peer reviewers, cooperation between the NSI and the administrative data providers is partly achieved through the advisory committees operated by the NSI and through bilateral meetings held between the heads of NSI and the data providers when the need arises. The main task of the Statistical Advisory Committee on administrative data sources is to monitor the developments in the legal framework and to promote the exchange of experiences, good practices and information among organisations. Moreover, domain specific information is exchanged among subject-matter statistical advisory committees.

Finally, according to the NSI, the available resources are sufficient to effectively exploit administrative data and its personnel has the required competences.

24.2.1 Internal institutional obstacles

In summary, the following issues have been identified by the NSI:

- Standard and systematic procedures to identify administrative data sources potentially useful for statistical purposes are only partly in place.
- Documented quality criteria to assess the quality of administrative data are only partly used across the statistical units of the NSI.
- A specific unit / department responsible for coordinating NSI's contacts and cooperation with administrative data owners is only partly in place.

24.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

In view of the NSI, the overall culture of the staff in the country's public sector is favourable to data sharing. Concerns in the general public regarding personal data privacy and confidentiality definitely do not constitute obstacles for the sharing of data among organisations.

A national strategy on data sharing in the public sector is in place. The NSI's view on the effectiveness of its implementation is neutral.

Cooperation with data owners

Written agreements covering each instance of data provision have been signed with data owners for in most cases. The NSI considers that coordination mechanisms with the data owners are effective in all cases.

In practice, the NSI is consulted by the data owners on issues such as specifications or design of their databases in most cases and the data owners usually take the its recommendations into account

when setting up, changing or discontinuing an administrative database. Moreover, the NSI reported that, most cases, data owners inform it sufficiently in advance on the changes planned to be implemented in the design of their databases.

As stated by the peer reviewers, the NSI is consulted and represented in discussions when any changes in administrative procedures that may have an impact on source data are to be implemented. The NSI seeks to influence the design of administrative databases through several means; mainly through governmental coordination procedures, a special Statistical Advisory Committee on Administrative Data Sources and bilateral agreements and protocols signed with the administrative data providers.

The NSI communicates to the data owners the procedures in place to ensure the confidentiality and security of the data in all cases. When quality-related problems are encountered the NSI has, in all cases, the authority to demand suitable modifications from the data owners. Improvements in the quality of administrative data sources are gradually made through the establishment of permanent cooperation with the data owners.

Moreover, the NSI communicates to the data owners issues related to errors and inconsistencies identified in their data in most cases. During this communication, it takes always all the necessary measures to protect individual confidentiality.

Overall, the NSI reported that sometimes faces difficulties in cooperating with the administrative data owners, since they are not always aware of the statistical legal basis or statistical processes. The NSI reported that such difficulties are overcome through proper communication and cooperation with the data owners. Data owners rarely refuse to provide their data and rarely send their data with delays relative to the agreed timetable. Bureaucracy is not an obstacle for cooperation.

24.3.1 Issues related to the wider institutional environment and cooperation with data owners

According to the NSI, the problems arising with regard to its cooperation with the data owners are the following:

- The NSI sometimes faces difficulties in cooperating with the administrative data owners since they are not always aware of the statistical legal basis or statistical processes. The NSI reported that such difficulties are overcome through proper communication and cooperation with the data owners.

24.4 Quality and Technical preconditions

Quality aspects

The NSI reported that it has access to sufficient methodological information for the data collection process operated by the administrative data owners in all cases. Moreover, in most cases, data owners apply sufficient quality checks that are useful for the NSI.

According to the information in the questionnaire, unique and consistent identifiers are used across all cases and the NSI has sufficient information for linking different data sources. In detail, three public identifiers have been defined at state level and widely used to facilitate the use of administrative data: the personal identification number, the tax number and the business identification number¹⁰⁰.

Technical aspects

According to the information in the questionnaire, the NSI does not face any difficulties related to the format used for the exchange of data and metadata. Automated data exchange mechanisms are used in a few cases for transferring administrative data, while such mechanisms are not in place for the exchange of metadata.

¹⁰⁰ Statistical Office of the Republic of Slovenia, "The Slovenian National Statistics" (2004).

24.4.1 Quality and technical restrictions

In summary, the NSI identified the following issues:

- Automated data exchange mechanisms for transferring data are used only in a few cases.
- Automated data exchange mechanisms for transferring metadata are not in place.

24.5 Some examples of administrative data usage

Business Statistics

The business register is updated from various administrative sources¹⁰¹. In 2012, the NSI studied how the standard concepts of the quality assessment framework can be adjusted for the purposes of the quality assessment of the registers and large administrative data sets. The Slovenian business register was used as a pilot case¹⁰².

Agricultural Statistics

Based on the data collected from the 2000 agricultural census, the Statistical Farm Register (SFR) was established in Slovenia in 2004¹⁰³. The SFR is updated based on data collected from statistical surveys and reliable administrative data. In the 2010 Farm Structure Survey (FSS) implementation, Slovenia replaced part of the data collected directly from agricultural holdings with data obtained from administrative sources. Moreover, in the 2010 agricultural census, data from administrative sources were used in combination with data collected directly by the statistical units for the compilation of statistics.

Social Statistics

The 2011 population census was register-based¹⁰⁴. Furthermore, in the context of SILC survey, income-related variables are derived from administrative registers¹⁰⁵.

The NSI has recently benefited from Eurostat support¹⁰⁶ in the framework of the ESS.VIP ADMIN project in order to improve the use of administrative sources. The suitability of a central register on participants in education was assessed for potential use in education statistics. An administrative source on wages in the public sector was also analyzed with a view to producing labour market statistics.

Examples of sources used

- Business statistics: (1) Administrative Business Register (held by Agency for Public Legal Records and Related Services (AJPES), (2) Balance Sheets, (3) VAT Register.
- Agricultural statistics: (1) System for the Identification and Registration of Bovine Animals, (2) Organic Farming Register, (3) Register of Genetically Modified Crops, (4) Rural Development Measures, (5) Information from the Integrated Administration and Control System (IACS).
- Social statistics: Population census: (1) Central Population Register (Ministry of Interior), (2) Household Register (Ministry of Interior), SILC: (1) Tax Authority, (2) Ministry of Labour, (3)

¹⁰¹ Statistical Office of the Republic of Slovenia, Aleksandra Lešnjek, "Administrative sources used in the field of statistical business register in Slovenia".

¹⁰² Statistical Office of the Republic of Slovenia, Rudi Seljak, "Quality assessment of the registers and large administrative datasets" (2012).

¹⁰³ Statistical Office of the Republic of Slovenia, "Census of Agriculture – Explanatory notes" (2010).

¹⁰⁴ United Nations, Conference of European Statisticians, Note by the Statistical Office of the Republic of Slovenia, "2011 register-based census in Slovenia" (2012).

¹⁰⁵ United Nations, Conference of European Statisticians, Rudi Seljak, "New application for the Slovenian EU-SILC" (2009).

¹⁰⁶ Eurostat grant agreement 07112.2015.002-2015.356 on the Improvement of the use of administrative data sources (ESS.VIP ADMIN WP6 Pilot studies and applications).

Ministry of Family and Social Affairs, (4) Pension and Disability Insurance Institute, (5) Employment Service of Slovenia, (6) Health Insurance Institute, (7) Ministry of the Interior.

24.5.1 Problematic data access cases

The NSI did not identify any administrative data source for which access is not feasible or is achieved in a considerable problematic way.

24.5.2 Successful data access cases

The following data sources are considered as the most representative successful data access cases.

Data source	Data owner	Purpose of access ^[1]	Statistical domain where data are used
Information from the Integrated Administration and Control System (IACS)	Ministry of Agriculture (MAFF)	3	Agricultural statistics
Balance sheet and profit and loss statement (income statement)	Agency for Public Legal Records and Related Services (AJPES)	3, 4, 5	Business Statistics (SBS, STS, ICT), National Accounts
Central Population Register	Ministry of Interior	1, 4	Demography, Census, Labour Market, Living conditions, Social and Health statistics

^[1] (1) Main source for the survey frame, (2) Auxiliary source for the survey frame (3) Direct compilation of statistics from administrative aggregated data or microdata, (4) Direct compilation of statistics in combination with other sources (e.g. other administrative sources, surveys), (5) Source of auxiliary data for prefilling, editing / validation, imputation, etc.

Factors contributing to successful access: According to the NSI, the main factors contributing to successful use of the IACS data source are: (a) the Slovenian National Statistics Act establishing NSI's right to access the data for statistical purposes, (b) the establishment of close (daily) cooperation with the MAFF and (c) the existence of unique identifiers in the data source. Regarding the income statement data source, the NSI identified the following success factors: (a) the Slovenian National Statistics Act but also the Companies Act establishing NSI's right to access the data for statistical purposes, (b) the signature of bilateral agreements with data owner, (c) the possibility of the NSI to influence the content of the annual accounts, (d) the fact that the variables in the data source are in line with the concepts used in the national accounting standards, and (e) the use of electronic forms for collecting the data. The central population register has been developed by the NSI in 80's. Since 1996, the Ministry of Interior took the responsibility for its update and maintenance. Thus, the NSI has long experience in dealing with the data, which are of high quality. Additionally, the NSI has signed an agreement with the Ministry of Interior specifying the content of the data to be transmitted and the timeliness of (monthly) data deliveries.

Obstacles overcome in accessing the data source: With reference to the IACS data source, the NSI pointed out that at the beginning it was crucial that both parties recognized the necessity of the collaboration. For the two other sources, no issues have been identified.

Best practice study: According to the information provided to the questionnaire, the case of accessing the IACS data source can be used as a best practice study.

25 Slovak Republic

25.1 Legal framework

In Slovak Republic, the Act on State Statistics No. 540/2001¹⁰⁷ constitutes the legal basis authorizing the NSI to use data from any administrative source and for any statistical purpose. The abovementioned State Statistics Act specifies that any ministry, state agency, municipal body or public institution shall provide to the NSI, upon its request, data collected and processed under the framework of their activities. The scope and use of administrative sources for the purposes of State statistics shall be specified in the State Statistical Survey Schedule. Data owners should transmit their data following the established timetable.

Article 13 of the State Statistics Act makes reference to specific data sources for which access should be provided to the NSI for its statistical needs; namely tax data, custom declarations, data on sickness insurance and pension security scheme, mandatory health insurance and social security insurance, data from the register of social benefits and on the provided social services, data from the job applicant register, as well as data and information from the Cadastral Register.

Legal right to access administrative data at microdata level

The NSI has the right to obtain administrative data at micro level from most administrative sources. For instance, the NSI is authorized to access the data of the Ministry of Health at aggregated level only. The legal framework does not require that the NSI requests the approval of an authority other than the data owner in order to access personal administrative data. Additionally, the national legal basis does not require that data transmitted to the NSI are anonymized first for any data source.

Cooperation with data owners in design of administrative databases

Article 19 of the State Statistics Act states that the NSI, in cooperation with the ministries and state agencies, shall create classifications and statistical codes that shall be binding for bodies gathering State statistics. Moreover, the NSI shall manage and supervise the collection of statistical data by the ministries and state agencies and comment on the content and structure of the data (State Statistics Act, Article 8). The recommendations provided by the NSI are binding.

Cost-free access to administrative data

The NSI has the right to access all administrative data sources on a cost-free basis.

Coherence of the legal framework

According to the information provided in the questionnaire, the legislation applicable to the administrative data owners contradicts the NSI's legal right to access some administrative data sources. Additional legal acts are not required to be passed for accessing any specific administrative data source.

Overall, in view of the NSI, the national legal framework specifying the NSI's right to access and use administrative data does not leave room for misinterpretation.

25.1.1 Legal restrictions

In view of the NSI, the restrictions imposed by the legal framework in place are summarized as follows:

- Although the NSI has the legal right to access administrative microdata, it is authorized to access data from the Ministry of Health at aggregated level only.

¹⁰⁷ https://slovak.statistics.sk/wps/wcm/connect/938bf3c4-f9f2-450d-80e1-18f0bedcb8f0/act_540_2001_en.pdf?MOD=AJPERES&CVID=jY9MleC

- Legislation applicable to the administrative data owners contradicts the NSIs legal right to access some administrative data sources.

25.2 Internal institutional aspects

Policy on administrative data

Within the NSI, an organization-wide policy for promoting the use of administrative data is in place. According to the NSI, standard procedures are in place in order to:

- Monitor developments in the legal framework concerning use of administrative data.
- Identify administrative sources with potential statistical use.
- Ensure confidentiality and security of administrative data.
- Use standardised and documented quality criteria across the statistical domains to assess the adequacy of administrative data for statistical purposes.

Organisation within the NSI

Within the NSI, a specific unit/department responsible for coordinating NSI's contacts and cooperation with administrative data owners is in place.

According to the presentation of the NSI during the Workshop on "access to administrative data sources" (2016)¹⁰⁸, a specific department, the Department of Administrative Data Sources, has been established in order to liaise with and compile administrative data from the public authorities of the Slovak Republic. The NSI has the right to access data from any administrative source and use them for any statistical purpose with the exception of the data of the Ministry of Health, which is provided only in aggregated form. The department:

- has in place a standardised set of procedures for identifying administrative data sources, interacting with their owners, documenting and using the data;
- despite its legal powers, puts emphasis on its informal relations with source owners;
- tries to give things in return to the source owners, e.g. data from its statistical registers so that they improve their registers or aggregated data useful for their operations;
- tries to be involved in the design of new administrative data sources.

The SOSR tried to insert additional clauses in its favour in the recent revision of the national statistical law, e.g. the obligation of administrative data source owners to inform the SOSR one year before discontinuing any source. It was not successful in this respect. The revised law obliges the owners to inform before discontinuing their sources, but not as early as one year in advance.

It should also be pointed out that the SOSR's work on administrative data was partly funded by a Eurostat grant¹⁰⁹ in the framework of the ESS.VIP ADMIN project.

According to the peer reviewers, the NSI is working on the development of an Integrated Statistical Information System, which will store all historical data integrated to the information systems of public administration (registers and administrative sources).

As stated in the questionnaire, the NSI's staff has partly the required competences to effectively exploit administrative data for statistical purposes. Also, the NSI has partly the required resources to effectively exploit administrative data for statistical purposes.

25.2.1 Internal institutional obstacles

In summary, the following obstacles were identified by the NSI:

- The NSI partly has the required competences to effectively exploit administrative data for statistical purposes.

¹⁰⁸ https://ec.europa.eu/eurostat/cros/content/workshop-presentations-now-online-0_en.

¹⁰⁹ Action "Improvement of the use of administrative sources (ESS.VIP ADMIN WP6 Pilot studies and applications)", Grant Agreement number 07112.2015.002-2015.357).

- The NSI's personnel partly has the required competences to effectively exploit administrative data for statistical purposes.

25.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

Based on information provided by the NSI, the overall culture of the staff in the country's public sector is favourable to data sharing. Concerns in the general public regarding personal data privacy and confidentiality are considered to be an obstacle for the sharing of data among organisations.

Moreover, a national strategy on data sharing in the public sector does not exist.

Cooperation with data owners

Written agreements covering each instance of data provision have been signed between the NSI and data owners for most cases. Furthermore, the NSI considers that the coordination mechanisms between the NSI and data owners are effective in most cases. During the Workshop on "access to administrative data sources", the NSI underlined the importance of being in close contact with data owners at the stage when they start to prepare the changes.

As stated by the peer reviewers, the Memorandum of Understanding (MoU) signed between the NSI, the National Central Bank as well as the Ministry of Finance, provides a good coordinating framework for the production and use of Excessive Deficit Procedure (EDP) data and Government Finance Statistics. As stated by the NSI representative in the Workshop on "access to administrative data sources", in Slovakia, although MoUs have been signed with data owners, these are not considered adequate. In this respect, any formal agreements are usually accompanied with informal bilateral ones between experts on the field.

Additionally, the NSI is consulted by the data owners on issues such as specifications or design of databases in most cases, although they take the NSI's recommendations into account when setting-up, changing or discontinuing the data source only in a few cases. According to the NSI, in most cases, administrative data owners inform the NSI sufficiently in advance about changes planned to be implemented in their databases.

The NSI always communicates to the administrative data owners the procedures in place to ensure the confidentiality and security of data as well as issues related to the errors identified in their data. During this communication, the NSI undertakes all measures to protect individual confidentiality.

Data owners rarely send their data with delays relative to the agreed timetable and rarely refuse to provide their data. The NSI has also added that, in a few cases, data owners do not send their data according to the agreed structure.

Sometimes, excessive formality or bureaucracy constitutes an obstacle for cooperation.

Overall, the NSI faces sometimes difficulties in cooperating with data owners.

25.3.1 Issues related to the wider institutional environment and cooperation with data owners

In summary, the following issues have been identified by the NSI with regard to its cooperation with administrative data owners:

- There are concerns in the general public regarding personal data privacy and confidentiality.
- A national strategy on data sharing in the public sector has not been established.
- Administrative data owners take into account the recommendations of the NSI when setting up or changing an existing database only in a few cases.

- In a few cases, the structure of the data provided by the data owners is not in accordance with the agreed structure.
- The NSI sometimes faces difficulties in cooperating with the administrative data owners.
- Excessive formality or bureaucracy between organisations is sometimes an obstacle for cooperation.

25.4 Quality and technical preconditions

Quality aspects

Based on the information in the questionnaire, in most cases, the NSI has access to sufficient methodological information on the data collection processes operated by the data owners, although they apply sufficient quality checks that are useful to the NSI only in a few cases. Unique and consistent identifiers are used across data sources in most cases and the NSI has sufficient information for linking various sources.

Technical aspects

The NSI stated that in most cases, automated data exchange mechanisms are used for transferring data and metadata.

25.4.1 Quality and technical restrictions

With regard to quality and technical aspects, the NSI reported the following issues:

- The data owners apply sufficient data quality checks that are useful to the NSI only in a few cases.

25.5 Some examples of administrative data usage

Business Statistics

The Business Register is updated based on data derived from administrative sources in combination with survey data.

Agricultural Statistics

Until 2009, farm structure survey statistics were entirely based on survey data¹¹⁰.

Social Statistics

In the 2011 implementation of the census, the population register was used in course of the preparatory and imputation phases. The peer reviewers mentioned that negotiations were in place with the administrative data owner in order to obtain administrative data useful for the compilation of all demographic statistics. Despite the signature of an agreement with the Ministry of Interior, the population register data could not be transmitted due to technical restrictions, which required additional resources in order to overcome them.

In the framework of the ESS.VIP ADMIN project, the SORS was supported¹¹¹ in its effort to get access to new administrative data sources, to develop standard agreements with administrative data owners and to get access to metadata. An important goal of the project was to integrate new administrative data sources in statistical production or better exploit already used administrative sources with a special for the 2021 Census.

Examples of sources used

¹¹⁰ Statistical Service of Slovak Republic, "Farm Structure Survey 2009/2010 Survey on Agricultural Production Methods" (2009/2010).

¹¹¹ Eurostat grant agreement 07112.2015.002-2015.357 on the Improvement of the use of administrative data sources (ESS.VIP ADMIN WP6 Pilot studies and applications).

- Business statistics: (1) Business register (Ministry of Justice), (2) Register of natural persons (Ministry of Interior), (3) Tax register (Ministry of Finance), (4) Social Security Insurance company registers (Ministry of Finance).
- Social statistics: (1) Population register.

25.5.1 Problematic data access cases

The NSI did not report any issues about administrative data sources for which access is not feasible or is achieved in a considerable problematic way.

25.5.2 Successful data access cases

Data source	Data owner	Purpose of access ^[1]	Statistical domain
Policy holder database	Health Care Surveillance Authority	4	Demography, census
Policy holder database	Social Insurance Agency	4	Demography, social statistics
Register of natural persons	Ministry of Interior	4	Demography, census

^[1] (1) Main source for the survey frame, (2) Auxiliary source for the survey frame (3) Direct compilation of statistics from administrative aggregated data or microdata, (4) Direct compilation of statistics in combination with other sources (e.g. other administrative sources, surveys), (5) Source of auxiliary data for prefilling, editing / validation, imputation, etc.

Factors contributing to successful access: In view of the NSI, the factors contributing to successful access to policy holder databases of both the Social Insurance Agency and Health Care Surveillance Authority are the following:

- Good relationships established with the data owners;
- Authority of the NSI to access the data granted by the legal framework in place;
- Scope and structure of data collected in accordance with NSI's requirements.

With regard to the register of natural persons, the second and third success factor has been mentioned by the NSI.

Obstacles overcome in accessing the data source: The main obstacle to overcome with regard to the register of natural persons was the harmonization of the data with the data from the register of legal persons administered by the NSI. The latter issue was overcome in cooperation by the Ministry of Interior. For the other two sources, no obstacles have been confronted.

Best practice study: According to the information provided to the questionnaire, none of the abovementioned data sources could be used as a best practice study.

26 Finland

26.1 Legal framework

According to the provisions of the Statistics Finland Act 280/2004¹¹² State authorities, notwithstanding the provisions on secrecy, are obliged to provide Statistics Finland with the administrative data in their possession that are necessary for the production of statistics. More specifically, the Finnish Statistics Act specifies that the provisions laid down in the Regulation (EC) No 223/2009 concerning the statistics included in the statistical programme of the European Community are into force.

Section 4 of the Statistics Finland Act prescribes that “when data are collected for statistical purposes the primary exploited sources shall be data accumulated in administering the tasks of general

¹¹² http://www.stat.fi/meta/lait/tilastolaki_en.html

government and those produced as a consequence of the normal activities of employers, self-employed persons, corporations and foundations”.

Legal right to access administrative data at microdata level

The NSI has the legal right to obtain administrative data at microdata level from all administrative sources. The NSI is not obliged to request permission from an authority other than the data owner in order to access administrative data. Additionally, the national legal framework does not require for any data source that data owners transmit to the NSI anonymized microdata.

Cooperation with data owners in design of administrative databases

As specified in the Finnish Statistics Act, the provisions laid down in the Regulation (EC) No 223/2009 are in force. For most sources, data owners are obliged to consult the NSI when setting up, changing and discontinuing a data source. The recommendations of the NSI are binding. The latter holds only for administrative data used for the compilation of European statistics.

Cost-free access to administrative data

The NSI has the right to access all administrative data that are used for the compilation of European statistics on a cost-free basis.

Coherence of the legal framework

In view of the NSI, the national legal framework specifying the NSI's right to access and use administrative data does not leave room for misinterpretation.

Following the peer reviewers' assessment, the legal framework does make provisions obliging the data owners to consult the NSI when setting up, changing or discontinuing a data source used for the production of official statistics (other than European ones).

26.1.1 Legal restrictions

No legal issues have been identified by the NSI restricting its access to administrative data used for the compilation of European statistics.

According to the peer reviewers, the legal framework does not oblige the data owners to consult the NSI when setting up, changing or discontinuing a data source used for the production of official statistics (other than European ones).

26.2 Internal institutional aspects

Policy on administrative data

An organization-wide policy for promoting the use of administrative data is in place. According to the provisions laid down in Section 4 of the Statistics Finland Act, the NSI has a strong mandate to use administrative data in preference to direct surveys for the compilation of statistics.

The NSI reported in the questionnaire that standard procedures are in place in order to:

- Monitor developments in the legal framework concerning use of administrative data.
- Identify administrative sources with potential statistical use.
- Ensure confidentiality and security of administrative data.
- Use standardised and documented quality criteria across the statistical domains to assess the adequacy of administrative data for statistical purposes.

According to the peer reviewers, the Finnish statistical system relies heavily on the use of administrative sources, thus increasing cost-effectiveness and reducing the response burden. However, the model leaves the organisation highly dependent on the quality, the stability and the completeness of the administrative data, which makes the system vulnerable to changes implemented in the data sources.

Organisation within the NSI

Within the NSI, a unit / department responsible for coordinating NSI's contacts and cooperation with administrative data owners is only partly in place. As mentioned by the peer reviewers, the data collection, including the reception of administrative data, is progressively incorporated to the Data Collection Department.

The NSI presented Statistics Finland's Havas project during the Workshop on "access to administrative data sources"¹¹³. The project started in April 2013 and ended in March 2015. The main goals of the project were:

- To find and record all the administrative data that are collected and used at Statistics Finland
- To define and build a centralised IT system for receiving administrative data by line transfer
- To define and build a SAS system for pre-controlling the data received
- To describe all the data and variables in a centralised metadata system
- To organise a team to whom the centralised administrative data collecting was handed over after the project.

Statistics Finland uses 150 different registers of administrative data to collect and compile statistics. Now a system is in place that utilises process metadata to control and inspect the received administrative data.

All data are initially received on a Transfer Data Server, which is outside Statistics Finland's own data network. The group responsible for this data collection system handles about 65% of all administrative data files suitable for the centralised system. The remaining 35% of data files are collected by other means (e.g. encrypted emails).

Also, as stated in the questionnaire, the NSI is well-resourced and its staff has the required competences to effectively exploit administrative data for statistical purposes.

26.2.1 Internal institutional obstacles

The NSI identified the following issues:

- Within the NSI, a unit responsible for coordinating and managing the contacts and cooperation with data owners is only partly in place.

26.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

In view of the NSI, the overall culture of the staff in the country's public sector is favourable to data sharing. Concerns in the general public regarding personal data privacy and confidentiality are definitely not an obstacle for the sharing of data among organisations.

Moreover, the NSI reported that a national strategy on data sharing in the public sector is in place and is effectively implemented.

Cooperation with data owners

Based on the information in the questionnaire, written agreements covering each instance of data provision have been signed between the NSI and data owners for all cases. The NSI considers that the coordination mechanisms with data owners are effective in all cases.

Additionally, the NSI reported that it is consulted by the data owners on issues such as specifications or design of databases only in a few cases, although, in most cases, data owners take its recommendations into account when setting-up, changing or discontinuing the data source.

¹¹³ https://ec.europa.eu/eurostat/cros/content/workshop-presentations-now-online-0_en

As stated in the questionnaire, in most cases, administrative data owners inform the NSI sufficiently in advance about changes planned to be implemented in their databases. In 2015, the peer reviewers mentioned that the NSI has started revising its data sharing agreements with the data providers in order to include specific provisions on the timeframe when the data owners should notify the NSI on planned changes to be implemented in the data source.

The NSI mentioned in the questionnaire that it always communicates to the administrative data owners the procedures in place to ensure the confidentiality and security of data but it does not have the authority to demand suitable modifications from the data owners when quality-related problems are encountered.

In most cases, the NSI communicates to the data owners issues related to the errors identified in their data. During this communication, the NSI always undertakes measures to protect individual confidentiality.

Overall, the NSI reported that it rarely faces difficulties in cooperating with data owners.

26.3.1 Issues related to the wider institutional environment and cooperation with data owners

In view of the NSI, the following issues have been identified with regard to its cooperation with data owners:

- The NSI is consulted by the data owners on issues such as specifications, design of administrative databases only in a few cases.
- When quality-related problems occur, the NSI does not have the authority to ask suitable modifications from the data owners.

26.4 Quality and technical preconditions

Quality aspects

According to the information in the questionnaire, in all cases, the NSI has access to sufficient methodological information on the data collection processes operated by the data owners. In most cases, data owners apply sufficient quality checks that are useful to the NSI. Unique and consistent identifiers are used across data sources in all cases and the NSI has sufficient information for linking different data sources.

Technical aspects

The NSI reported in the questionnaire that it faces difficulties related to the format used for the exchange of data only in a few cases. In practice, the use of some data formats (e.g. JSON files, conditional flat files) may cause difficulties or require extra effort during the data processing stage, i.e. data transformation or validation. That is the reason why text flat files, SAS and xml file formats are preferred.

The NSI also reported that in a few cases, metadata or updates implemented in the data source have not been transmitted or have been delivered with delays.

In most cases, automated data exchange mechanisms are used but some data files (e.g. small-sized Excel tables) are still transmitted via protected/coded email. Additionally, data owners accompany their data with structural metadata (e.g. number of rows, date, file size). These are either attached to the data file or transmitted in a separate document file.

26.4.1 Quality and technical restrictions

Concerning quality and technical restrictions, the NSI identified the following issue:

- Automated data exchange mechanisms for transferring metadata are used only in a few cases.

26.5 Some examples of administrative data usage

Business Statistics

In the business sector, dwelling statistics are derived using information available from different administrative registers, while in the case of SBS (i.e. the business register and SES), administrative data are mainly used in combination with small-scale sample surveys. For the compilation of STS (i.e. wages and salaries, turnover and production index), administrative data are used in combination to a small-scale survey to less 1% of the enterprises.

Agricultural Statistics

With reference to the agricultural sector, the 2010 census relied heavily on administrative registers while data not covered in administrative registers data have been collected via surveys.¹¹⁴

Social Statistics

Focusing upon the social statistics domain, since 1990, the population census statistics are compiled by combining data stemming from 30 registers. The same applies in the case of vital statistics. Additionally, data collected through surveys (e.g. LFS) are used for assessing the quality of administrative registers.^{115,116}

Examples of sources used

- Business statistics: (1) VAT Register, (2) Register of Buildings and Dwellings, (3) Information system on building costs maintained by a private enterprise.
- Agricultural statistics: (1) Farm Register, (2) Horticultural Enterprise Register, (3) IACS.
- Social statistics: (1) Register of the Central Government Employees, (2) Register of the local government employees of the Municipal Pension Institution, (3) Register of employees by the Social Insurance Institution's, (4) National Church Board's Register of Employees, (5) Registers of the Employer Organisations, (6) Registers of the Taxation authorities (Taxation form), (7) Population Information System of the Population Register Centre, (8) Register of Job-seekers (Ministry of Labour).

26.5.1 Problematic data access cases

The NSI did not identify any administrative data source for which access is not feasible or is achieved in a considerable problematic way.

26.5.2 Successful data access cases

Data source		Data owner		Purpose of access ^[1]	Statistical domain	
Population system	information	Population Centre	Register	1, 2, 3, 4, 5	Population and vital statistics, population census	
Data on personal taxation		Tax Administration		3, 4	Statistics on income distribution, taxable incomes, population census	
The state data	bookkeeping	State Treasury		4	National Accounts	

^[1] (1) Main source for the survey frame, (2) Auxiliary source for the survey frame (3) Direct compilation of statistics from administrative aggregated data or microdata, (4) Direct compilation of statistics in combination with

¹¹⁴ Statistics Finland, "Census of Agriculture – Explanatory notes" (2010).

¹¹⁵ Statistics Finland, Kaija Ruotsalainen, "Administrative sources in Population and Housing Censuses in Finland" (2007).

¹¹⁶ Statistics Finland, "Use of Registers and Administrative Data Sources for Statistical Purposes: Best Practices of Statistics Finland" (2004).

other sources (e.g. other administrative sources, surveys), (5) Source of auxiliary data for prefilling, editing / validation, imputation, etc.

Factors contributing to successful access: The NSI identified the following factors that contributed to successful access and use of the population information system data source: (a) existence of unique and uniform identifiers and links between the different units (i.e. person, building, dwelling), (b) the NSI's right to access the data established by the legal framework, (c) the good quality and coverage of the register. With regard to the data on personal taxation source, the success factors mentioned by the NSI are: (a) existence of unique and uniform identifiers, (b) the NSI's right to access the data established by the legal framework and (c) the comprehensive data content of the register and the long period of using the data. For the state bookkeeping data source, the NSI stated that the good relationships established with the State Treasury over the years was an important success factor. Additionally, the State Treasury constantly tried to take NSI's needs into consideration as far as data quality is concerned. From the legal point of view, the Finnish Statistics Act gives the NSI the right to receive data that are produced as part of the normal activities of the State authorities. The NSI and the State Treasury agreed on the content of the data source and the State Treasury accepted to collect the agreed data as part of its activities.

Obstacles overcome in accessing the data source: No obstacles have been confronted.

Best practice study: According to the information provided to the questionnaire, none of the abovementioned data sources could be used as a best practice study.

27 Sweden

The Official Statistics Ordinance (2001:100)¹¹⁷ stipulates that the NSI shall receive data from government agencies for the production of official statistics. Section 6 of the Official Statistics Ordinance specifies that data shall be submitted to the NSI at the time and format agreed with the concerned authorities.

27.1 Legal framework

Legal right to access administrative data at microdata level

The NSI has the legal right to access administrative microdata from all sources. The legal framework does not require that administrative microdata transmitted to the NSI should be anonymized first. Moreover, a permission from an authority other than the data owner should not be requested by the NSI before accessing any data source.

Cooperation with data owners in design of administrative databases

The Official Statistics Ordinance governing NSI's access to administrative data for the production of official statistics does not contain provisions obliging the administrative data owners to inform the NSI when setting-up, changing or discontinuing a source. However, the NSI reported that, in practice, there is a long-standing tradition of cooperation and consultation among the organisations of the Swedish government administration. Also, a formal consultative process takes place when proposals for changes in the legislation are introduced in the parliament.

Cost-free access to administrative data

The NSI does not have the legal right to access any administrative data source on a cost-free basis, unless these are used for the production of European statistics. As reported by the NSI, usually the NSI obtains data for free. In some cases, administrative data owners charge the NSI in order to process and prepare the data according to its specifications.

¹¹⁷ <https://unstats.un.org/unsd/dnss/docViewer.aspx?docID=255#start>

Coherence of the legal framework

The NSI considers that the legal framework specifying its right to access administrative data does not leave room for misinterpretations and does not impose any other restrictions (e.g. linking of microdata with microdata from other sources, reuse of the data for statistical purposes other than initially stated, etc.).

27.1.1 Legal restrictions

In view of the NSI, the legal restrictions with regard to its access to administrative data are summarized as follows:

- The Official Statistics Ordinance does not contain provisions obliging the administrative data owners to inform the NSI when setting-up, changing or discontinuing a source.
- The NSI does not have the right to access administrative data on a cost-free basis, unless these are used for the production of European statistics. In practice, the NSI obtains data from most sources for free, whereas in some cases, data owners charge the NSI in order to process and prepare the data according to its specifications.

27.2 Internal institutional aspects

Policy on administrative data

Based on the information in the questionnaire, within the NSI, an organization-wide policy promoting the use of administrative data is in place. As mentioned by the peer reviewers, Sweden has a long tradition of exploiting administrative data for statistical purposes. Section 4 of the Official Statistics Ordinance (2001:100) requires statistical agencies “...to the greatest extent possible use information from existing registers for the production of official statistics”.

The NSI has adopted standard and systematic procedures to identify administrative data sources potentially useful for statistical purposes are in place, while a procedure to monitor developments in the legal framework governing the sharing of administrative data between authorities is only partly in place.

Standard and documented quality criteria to assess the adequacy of the administrative data are used across statistical domains. As stated by the peer reviewers, the NSI has invested substantially on the development and use of new methodologies and quality assurance procedures in respect of its statistical processes and outputs including the integration of administrative data in the statistical production chain. In 2011, the NSI issued a publication on the quality assessment of administrative data¹¹⁸.

Finally, the NSI has adopted standard and systematic practices to ensure the confidentiality and security of administrative data.

Organisation within the NSI

According to the information in the questionnaire, within the NSI, a unit responsible for coordinating and managing the contacts and cooperation with data owners is only partly in place. The NSI is well-resourced and its personnel has the required competences to effectively exploit administrative data for statistical purposes.

27.2.1 Internal institutional obstacles

In summary, the following issues have been identified by the NSI:

¹¹⁸ Statistics Sweden, Thomas Laitila, Anders Wallgren, Britt Wallgren, “Quality assessment of administrative data” (2011).

- A standard, systematic procedure to identify administrative data sources potentially useful for statistical purposes is only partly in place.
- A specific unit / department responsible for coordinating NSI's contacts and cooperation with administrative data owners is only partly in place.

27.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

In view of the NSI, the overall culture of the staff in the country's public sector is favourable to data sharing. Concerns in the general public regarding personal data privacy and confidentiality do not essentially constitute obstacles for the sharing of data among organisations.

The NSI reported that a national strategy on data sharing in the public sector is not in place. A government commission is responsible for monitoring the information exchange among different authorities.

Cooperation with data owners

According to the NSI, written agreements covering each instance of data provision have been signed with data owners only in a few cases. The NSI considers that coordination mechanisms with the data owners are effective in a few cases.

In practice, the NSI is consulted by the data owners on issues such as specifications or design their databases only in a few cases, while data owners never take its recommendations into account when setting up, changing or discontinuing an administrative database. Moreover, the NSI reported that data owners inform the NSI sufficiently in advance on the changes planned to be implemented in the design of their databases only in a few cases.

The NSI always communicates to the data owners the procedures in place to ensure the confidentiality and security of the data. It does not have the authority to demand suitable modifications from the data owners when quality-related problems are encountered.

Moreover, the NSI stated that it communicates to the data owners issues related to errors and inconsistencies identified in their data only in a few cases. During this communication, it takes always all the necessary measures to protect individual confidentiality.

Overall, the NSI reported that it rarely faces difficulties in cooperating with the administrative data owners, since data owners rarely refuse to provide their data and rarely send their data with delays relative to the agreed timetable. Bureaucracy is rarely an obstacle for cooperation.

27.3.1 Issues related to the wider institutional environment and cooperation with data owners

The problems arising with regard to its cooperation with the data owners reported by the NSI, can be summarized as follows:

- A national strategy regarding data sharing in the public sector does not exist.
- Written agreements between NSI and data owners covering each instance of data provision exist only in a few cases.
- The coordination mechanisms between data owners and the NSI are effective only in a few cases.
- The NSI is consulted by data owners on issues such as specifications or design of new databases, adoption of definitions, etc. only in a few cases.
- Data owners never take into consideration the NSI's recommendations when setting-up, changing or discontinuing an administrative data source.
- Data owners inform the NSI sufficiently in advance about changes planned to be implemented in their databases only in a few cases.

- When quality-related problems occur, the NSI does not have the authority to ask for suitable modifications from the data owners.
- The NSI communicates to the data owners issues related to the inconsistencies identified in their data only in a few cases.

27.4 Quality and Technical preconditions

Quality aspects

According to the information in the questionnaire, the NSI has access to sufficient methodological information for the data collection process operated by the administrative data owners only in a few cases. Data owners apply sufficient quality checks that are useful for the NSI only in a few cases.

Unique and consistent identifiers are used across all data sources and the NSI has sufficient information for linking different data sources.

Technical aspects

The NSI reported that it does not face difficulties related to the format used for the exchange of data and metadata. Automated data exchange mechanisms are used in most cases for transferring of administrative data, while such mechanisms are in place in a few cases for the exchange of metadata.

27.4.1 Quality and technical restrictions

In summary, the following issues have been reported by the NSI:

- The NSI has access to methodological information regarding data collection process operated by the data owner only in a few cases.
- Data owners apply sufficient quality checks useful for the NSI only in a few cases.
- Automated data exchange mechanisms for transferring metadata are in place only in a few cases.

27.5 Some examples of administrative data usage

Business Statistics

For the compilation of SBS and STS statistics, the NSI combines administrative data with the data collected directly by the enterprises. Additionally, the business register is updated once a week with information from the tax authorities and once a year from special questionnaires¹¹⁹.

Agricultural Statistics

In the agricultural sector, data are collected by the Swedish Board of Agriculture and the Ministry of Agriculture. In the 2010 agricultural census¹²⁰ and FSS implementation¹²¹, various administrative data sources were used supplementing the collected data. Moreover, data from administrative registers were used in order to update the survey frame.

Social Statistics

In 2011, the population census was register-based.

Examples of sources used

- Business statistics: (1) Tax Authorities.
- Agricultural statistics: (1) Integrated Administrative Control System (IACS), (2) Bovine Register, (3) Organic Farming Register, (4) Register on Genetically Modified Crops, (5)

¹¹⁹ Statistics Sweden, "Structural Business Statistics methodology" (2005).

¹²⁰ Statistics Sweden, "Census of agriculture 2010 – Explanatory notes" (2010).

¹²¹ Statistics Sweden, "Farm Structure Survey 2009/2010, Survey on agricultural production methods" (2010).

Register of Support for Rural Development, (6) Bovine Register, (7) Poultry Register, (8) Sheep Register, (9) Pig Register.

- Social statistics: (1) Swedish Tax Agency Register, (2) Property Register, (3) Annual Pay Register.

27.5.1 Problematic data access cases

The NSI did not identify any administrative data source for which access is not feasible or is achieved in a considerable problematic way.

27.5.2 Successful data access cases

The following data sources are considered as the most representative successful data access cases.

Data source	Data owner	Purpose of access ^[1]	Statistical domain where data are used
National Population Registration	Tax Agency	1	Social statistics and especially population statistics
Real Estate register	National Land Survey	1	Real Estate and regional statistics
Income Statement	Tax Agency	3	Labour Market statistics

^[1] (1) Main source for the survey frame, (2) Auxiliary source for the survey frame (3) Direct compilation of statistics from administrative aggregated data or microdata, (4) Direct compilation of statistics in combination with other sources (e.g. other administrative sources, surveys), (5) Source of auxiliary data for prefilling, editing / validation, imputation, etc.

Factors contributing to successful access: The success factors identified by the NSI for all three above-mentioned data sources are the good and long-term cooperation mechanisms established with the data owners. The data in the data sources are of high quality and linkage information is available.

Obstacles overcome in accessing the data source: No obstacles have been reported by the NSI.

Best practice study: According to the information provided to the questionnaire, the case of accessing the national population registration data source can be used as a best practice study.

28 United Kingdom

28.1 Legal framework

The UK statistical system is defined as all organisations responsible for producing official statistics. It comprises (a) the Statistics Board, also known as the UK Statistics Authority, responsible for promoting and safeguarding the production and publication of all UK official statistics, (b) the Office for National Statistics (ONS) which is the executive office of the UK Statistics Authority and the UK's National Statistical Institute, and (c) the Government Statistical Service (GSS), which is the community of all government departments, agencies and devolved administrations involved in the production of official statistics in the UK.

Under the Statistics and Registration Service Act of 2007¹²², the ONS is allowed to obtain information relating to births and deaths and NHS registration and some HM Revenue and Customs (HMRC) information. It also makes provisions permitting the creation of new data sharing gateways, Information Sharing Orders, through secondary legislation for the purpose of authorising a public authority to disclose information to the Statistics Board.

¹²² <http://www.legislation.gov.uk/ukpga/2007/18/contents>

Currently, there are ten Information Sharing Orders allowing public authorities to share particular datasets with the ONS for particular purposes only¹²³. These involve the Department for Work and Pensions, HMRC, the Higher Education Statistics Agency, the Department for Education, the Welsh Government and the Valuation Office Agency.

- The [Census Act 1920](#) makes provision for the taking of a Census and obtaining statistical information in relation to the population of Great Britain.
- The [Statistics of Trade Act 1947](#) allows ONS to run mandatory surveys of businesses and in limited circumstances to share the data received with other government departments.
- The [Value Added Tax Act 1994](#) allows ONS to obtain VAT data from HMRC and in limited circumstances to disclose that data onward to other government departments.
- The [Finance Act 1969](#) allows ONS to receive employer information from HMRC and in limited circumstances to disclose that information onward to other government departments.
- The [Social Security Information Act 1992](#) allows ONS to receive information relating to pay contributions held by HMRC.
- The [Agricultural Statistics Act 1979](#) allows ONS to obtain information on agricultural matters.

The Statistics and Registration Service Act 2007 empowered the UK Statistics Authority to determine, and assess compliance with a Code of Practice (CoP) for official statistics¹²⁴. The UK CoP establishes a set of common standards regarding the production and publication of official statistics. Bodies producing statistics are required to ensure that the principles laid down in the CoP are respected. The main requirements are set out in the third Protocol attached to CoP. Amongst other things, the third Protocol requires all producers of official statistics to publish, a 'Statement of Administrative Sources' (SoAS) which lists: (a) the administrative systems they currently use to produce official statistics; (b) information about other administrative sources that are not currently used for statistical purposes but which have the potential to be used; (c) the arrangements they have put in place to provide statistical staff with appropriate access to such sources; to take account of changes to such systems; to audit the quality of the administrative data used for statistical purposes; and to ensure the security of the resultant statistical processes.

In April of 2017 the Digital Economy Act was passed into UK law, making significant amendments¹²⁵ to the Statistics and Registration Service Act 2007, though some do not come into effect until January 2018. In summary the amendments make the following changes:

- Providing a permissive power for all UK public authorities to voluntarily share the information they hold with the Statistics Board. This power overcomes any other legislative block or obligation of confidence. All such data shares must still be in accordance with data protection legislation.
- Provides the Statistics Board with a right of access to information held by UK Crown bodies. The Statistics Board may serve a notice on a Crown body, failure to comply with the notice may result in the correspondence being laid before Parliament. All such data shares must still be in accordance with data protection legislation.
- Provides the Statistics Board with a right of access to information held by all non-Crown public authorities. The Statistics Board may serve a notice on a public authority (with appropriate permissions should the authority be in Wales, Scotland or Northern Ireland), failure to comply with the notice is a criminal offence. As well as requiring disclosure of

¹²³ Office for National Statistics:

<https://www.ons.gov.uk/aboutus/transparencyandgovernance/onsdatapolicies/legislationondata>

¹²⁴ UK Code of Practice for Official Statistics (2009): <https://www.statisticsauthority.gov.uk/archive/assessment/code-of-practice/code-of-practice-for-official-statistics.pdf>

¹²⁵ <http://www.legislation.gov.uk/ukpga/2017/30/part/5/chapter/7/enacted>

information the notice may also require the public authority to consult the Statistics Board in advance of making any changes to its data processing systems. All such data shares must still be in accordance with data protection legislation.

- Provides the Statistics Board with a right of access to information held by private undertakings (charities and businesses, other than small or micro). The Statistics Board may serve a notice on an undertaking, failure to comply with the notice is a criminal offence. As well as requiring disclosure of information the notice may also require the undertaking to consult the Statistics Board in advance of making any changes to its data processing systems. All such data shares must still be in accordance with data protection legislation.

Since the Digital Economy Act has not been yet entered into force, the information in the present report illustrating the legal and policy situation does not reflect those recent changes.

Legal right to access administrative data at microdata level

The NSI has the right to access administrative microdata from some sources. According to the peer reviewers' assessment, a number of administrative datasets (e.g. data on national accounts) could be used by the NSI for the production of statistics, but most of them are only made available in aggregate form. According to the peer reviewers, the lack of access to unit-level records hinders the capacity of the NSI to integrate these data with its own survey results. The NSI reported in the questionnaire that the legal framework requires that the NSI requests authorization from a third party authority before obtaining access to any administrative data source for the first time.

Cooperation with data owners in design of administrative databases

In the UK's statistical system, with the exception of the NSI, the production of statistics is an activity carried out by other organisations alongside policy-making and other general administrative tasks. The Heads of Profession, i.e. the senior statistical advisers in government departments, and the Chief Statisticians of the devolved administrations are responsible for ensuring that the UK CoP is followed within the departments and administrations. Continuous monitoring by the UK Statistics Authority also aims at ensuring that the statistics in question are produced in line with the UK CoP.

According to the UK CoP, the Head of Profession has "the sole responsibility for deciding on statistical methods, standards and procedures, and on the content and timing of statistical releases".

As stated by the NSI in the questionnaire, the NSI does not have the authority to influence the administrative databases and the data owners are not obliged to consult the NSI when setting-up, changing or discontinuing an administrative data source.

Cost-free access to administrative data

The NSI has the right to receive administrative data on a cost-free basis from some sources. In practice, access is negotiated on a cost recovery basis only.

Coherence of the legal framework

The legislation applicable to the data owners does not contradict the NSI's right to access administrative data for none of the sources. However, the passing of additional legal acts is required in order to access some administrative data sources. Legal restrictions on the maximum duration of retention of data or on linking microdata with microdata from other sources are not in place for none of the data sources.

Upon the peer reviewers' recommendations, the UK Statistics Authority and the ONS should continue to seek agreements on new legislation which would authorise, encourage and facilitate the use of administrative data for statistical purposes, subject to proper governance and confidentiality arrangements. As stated by the NSI in the Workshop on administrative data sources (2016), the statistical law is under revision. The proposed new version would give the NSI much stronger rights.

28.1.1 Legal restrictions

Currently, the NSI has the right to access data from some administrative sources, which can be used for specific statistical purposes. Additionally, the NSI has the authority to access administrative microdata from some sources. Instead, other organisations, i.e. government departments, agencies and administrations produce statistics alongside their other administrative tasks. The passing of additional legal acts is required in order to access some administrative data sources. Additionally, data owners are not obliged to consult the NSI when setting-up or discontinuing a data source. Moreover, the NSI has the right to access data from some administrative data sources for free.

28.2 Internal institutional aspects

Policy on administrative data

An organization-wide policy promoting the use of administrative data is in place. Protocol 3 of the UK CoP states that “administrative sources should be fully exploited for statistical purposes subject to adherence to appropriate safeguards”. It requires that all producers of official statistics should (a) base statistics on administrative data where the definitions and concepts are good approximations to those appropriate for statistical purposes, (b) avoid duplicating requests for information, (c) use common information technology and managements systems that facilitate the flow of information among producers of statistics, (d) ensure that no action is taken that might undermine confidence in the independence of the statistics when released.

Standardised criteria to ensure the quality of administrative data are partly in place. The Quality Assurance for Administrative Data¹²⁶ standard developed by the UK Statistics Authority is used to ensure that the quality of administrative source data is assured. The Administrative data quality assurance toolkit embeds actions to provide an appropriate level of quality assurance and to manage risks to data quality.

According to the information made available to the NSI's website, where administrative information for statistical use is already available, the quality of the source data is assessed as part of the regular reviews of the wider statistical system.

With regard to new data obtained, the NSI's staff ensures that they are of sufficient quality for the intended statistical outputs, before a formal request is submitted to the data providers for the data to be made available to ONS.

The NSI has adopted security measures designed to ensure that administrative data are accessible only by authorised staff.

Organisation within the NSI

According to information provided by the NSI in the Workshop on access to administrative data sources (2016), in the UK, administrative data collection is coordinated centrally in the NSI. A dedicated unit deals with all issues regarding administrative data exploitation.

The use of administrative data sources is covered by the CoP, which requires all producers of statistics, including the NSI, to publish a SoAS¹²⁷ that lists the administrative data currently used for producing official statistics or the data sources that have the potential to be used for that purpose.

¹²⁶ Quality assurance of administrative data: <https://www.statisticsauthority.gov.uk/monitoring-and-assessment/monitoring/administrative-data-and-official-statistics/>

¹²⁷ Office for National Statistics, List of administrative data sources spreadsheet (2016): <https://www.ons.gov.uk/file?uri=/methodology/methodologytopicsandstatisticalconcepts/admindatasources/soasoct2016v0.1.xls>

The NSI reported in the questionnaire that the available resources are only sufficient to exploit administrative data but the NSI's personnel has the required competences to effectively exploit administrative data for statistical purposes.

28.2.1 Internal institutional obstacles

Following the NSI's responses to the questionnaire, the issues identified are summarized below:

- A procedure to monitor developments in the legal framework governing the sharing of administrative data between authorities is only partly in place.
- Standardised procedures to identify administrative data sources potentially useful for statistical purposes are only partly in place.
- Standardised and documented data quality criteria are only partly used across statistical domains to assess the adequacy of administrative data for statistical purposes.
- The NSI's personnel is partly sufficient to effectively exploit administrative data for statistical purposes.

28.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

A national strategy in the public sector promoting the sharing of data among organisations is in place. The NSI's view on the effectiveness of its implementation is neutral.

Based on the peer reviewers' comments, the use of administrative microdata by the NSI for statistical purposes is relatively limited due to cultural and legal obstacles. Upon NSI's comments during the Workshop on access to administrative data sources (2016) and as reflected in the workshop report¹²⁸, "usually is not the public but certain politicians or journalists that stir public opinion against the sharing of administrative data between authorities". According to the NSI, concerns in the general public regarding personal data privacy and confidentiality are obstacles for the sharing of data among organizations.

Cooperation with data owners

Written agreements covering each case of data provision have been signed for all data sources. The NSI considers that the coordination mechanisms with the data owners are effective in most cases. As stated by the NSI in the Workshop on access to administrative data sources (2016), the ONS has created a single point of contact module and specific Supplier Management team in order to communicate what the ONS uses administrative data for. Moreover, during the two-year public consultation of a proposed new statistical law that would give it stronger rights to access administrative data, the ONS was extensively involved in dialogue with politicians, data privacy lobbies, business associations, citizen groups, etc.

Additionally, in the UK, employees of ministries, working on a secondment basis in the NSIs act as mediators between NSIs and ministries (data owners).

The procedures applied by the NSI to ensure the confidentiality of the data are communicated to the data owners for all sources.

Overall the NSI sometimes faces difficulties in cooperating with administrative data owners, since they sometimes send their data with delays relative to the agreed timetable and request payments not foreseen by the law.

¹²⁸ https://ec.europa.eu/eurostat/cros/system/files/adda-workshop_technical_report_0.pdf

28.3.1 Issues related to the wider institutional environment and cooperation with data owners

In view of the NSI the following issues with regard to its cooperation with the administrative data owners have been identified:

- Concerns in the general public regarding personal data privacy and confidentiality are obstacles for the sharing of data among organizations.
- The NSI is consulted by the administrative data owners on issues such as specifications or design of relevant databases only in a few cases.
- Administrative data owners inform the NSI sufficiently in advance of the changes in the structure or design of their databases only in a few cases.
- For none of the cases, administrative data owners take into account the recommendations of the NSI when setting-up, changing or discontinuing an administrative data source.
- When quality related problems are encountered, the NSI does not have the authority to demand suitable modification from the data owners for none of the cases.
- Administrative data owners sometimes send their data with delays relative to the agreed timetable.
- Administrative data owners request payments not foreseen by the law.
- Excessive formality and bureaucracy sometimes constitutes an obstacle for cooperation.

28.4 Quality and technical preconditions

Quality aspects

The NSI has sufficient methodological information on the data collection process operated by the data providers belonging to the GSS. According to the UK CoP, such information should be reflected in the SoAS published by the latter organisations. In most cases, sufficient data quality checks applied by the data owners that are useful to the NSI.

Unique and consistent identifiers are not used across data sources in most cases. In most cases, the NSI has information for linking the microdata with the data obtained from various sources.

Technical aspects

According to the NSI, there are few difficulties related to the format used for the exchange of data and metadata. However, the format used for the exchange of metadata is not always proper. Automatic data exchange mechanisms for transferring data and metadata are in place only for a few cases.

28.4.1 Quality and technical restrictions

Based on the information provided by the NSI, the following restrictions have been identified:

- Unique and consistent identifiers are used across data sources only in a few cases.
- Automated data exchange mechanisms for transferring data and metadata are in place only in a few cases.

28.5 Some examples of administrative data usage

The ONS relies heavily on data collection by conventional surveys. This applies to the collection of both social and business data.

Business Statistics

For business data collection, the common form of obtaining data is paper-based. The peer reviewers stated that many variables from company tax records would be useful for structural business statistics to replace the data currently collected by ONS through direct surveys. Until 2015, a pilot of extraction

of data directly from company files using 'eXtensible Business Reporting Language' (XBRL) has been implemented.

For the compilation of the business register, the NSI uses both data derived from administrative sources and direct surveys.

Social Statistics

Data collection from households mainly takes place by using either computer-assisted personal interviewing (CAPI) or computer-assisted telephone interviewing (CATI) methods. For the compilation of population census, some administrative data on migration are used.

Examples of sources used

- Business statistics: (1) VAT data, (2) PAYE data, (3) Companies House.
- Social statistics: (1) Data on migrant workers, (2) School Census data, (3) National Health system data (4) Higher Education Students data.

28.5.1 Problematic data access cases

The NSI did not provide any information.

28.5.2 Successful data access cases

The NSI did not provide any information.

29 Iceland

29.1 Legal framework

The Act on Statistics Iceland and official statistics of 2007¹²⁹ specifies that the NSI may require public authorities, institutions, businesses and self-employed persons to provide data and information for the production of statistics. These must supply the information in a format specified by the NSI or agreed between the parties and within the agreed time limits. According to Articles 5 of the Act on Statistics Iceland, the NSI must always provide information in advance on the purpose of data collection, the conditions of processing, the safekeeping of data and the dissemination of results.

Article 6 specifies that the NSI shall seek to obtain data from administrative and other public registers in order to reduce, where possible, response burden. Upon the request of the NSI, public authorities which collect and maintain registers for their operations shall furnish the NSI with their data free of charge.

For the processing of data and generation of statistics, the NSI is authorised to link, on the basis of identification numbers or other identifiers, its own registers and registers from other public authorities containing information on private persons and legal entities (Act on Statistics Iceland, Article 9).

Legal right to access administrative data at microdata level

The NSI has the legal right to obtain administrative microdata from all sources. For some sources, administrative microdata should be anonymized first before their transmission to the NSI. Moreover, the legal framework requires that the NSI requests permission from an authority other than the data owner before obtaining access to some administrative sources for the first time.

Cooperation with data owners in design of administrative databases

Upon the provisions of Article 6 of the Act on Statistics Iceland, state institutions and municipal authorities which operate registers for their activities or plan to establish such registers shall consult

¹²⁹ http://www.statice.is/media/43948/Lög_ensk_útg_4.pdf.

the NSI on the organization of new registers and the changes in existing registers. The NSI is authorized to request changes but its recommendations are not binding.

Cost-free access to administrative data

The NSI has the right to access all administrative data sources on a cost-free basis.

Coherence of the legal framework

According to the NSI, the national legal framework specifying the NSI's right to access and use administrative data leaves room for misinterpretations. The passing of specific additional legal acts is required so that the NSI obtains access to some specific data sources. As specified in the notes on Article 6 of the Act on Statistics Iceland, the NSI's general mandate to obtain administrative data is established in the national Act, but provisions on submission of data and information to the NSI are contained in the national Registry and Civil Registration Act, the Register of Enterprises Act, the tax law, customs law, etc.

Additionally, the Act on Statistics Iceland specifies that data shall be destroyed after their utilization or their identifiers should be erased or obscured. Also, the reuse of data from some sources for statistical purposes other than initially stated is restricted.

29.1.1 Legal restrictions

The restrictions imposed by the legal framework as identified by the NSI are summarized as follows:

- The legal framework requires that the NSI requests permission from an authority other than the data owner before obtaining access to some administrative sources for the first time.
- For some sources, administrative microdata should be anonymized first before their transmission to the NSI.
- For some sources, the reuse of administrative data for statistical purposes other than the ones initially stated is not permitted.
- The recommendations of the NSI when data owners set-up, change or discontinue a data source are not binding.
- There are restrictions on the maximum duration of retention of data from all sources.
- The passing of additional legal acts is required so that the NSI obtains access to some data sources.
- The existing legal framework leaves room for misinterpretations.

29.2 Internal institutional aspects

Policy on administrative data

Within the NSI, an organization-wide policy for promoting the use of administrative data is only partly in place. The NSI stated that standard procedures to monitor developments in the legal framework concerning use of administrative data and to identify administrative sources with potential statistical use are only partly in place. Moreover, the NSI has only partly established standard practices to ensure confidentiality and security of administrative data.

According to the NSI, standardised and documented quality criteria across the statistical domains to assess the adequacy of administrative data for statistical purposes are not used within the NSI.

Organisation within the NSI

Within the NSI, a specific unit/department responsible for coordinating NSI's contacts and cooperation with administrative data owners is in place. As stated in the questionnaire, the NSI's staff has the required competences to effectively exploit administrative data for statistical purposes but the available resources are only partly sufficient.

29.2.1 Internal institutional obstacles

The NSI identified the following issues:

- An organization-wide policy for promoting the use of administrative data is only partly in place.
- A procedure to monitor developments in the legal framework governing the sharing of administrative data between authorities is only partly in place.
- Standard and systematic procedures to identify administrative data sources potentially useful for statistical purposes have been only partly established.
- Standardised quality criteria are not used across statistical domains to assess the adequacy of administrative data for statistical purposes.
- Standard and systematic practices to ensure confidentiality and security of administrative data are only partly in place.
- The NSI's personnel only partly has the required resources to effectively exploit administrative data for statistical purposes.

29.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

In view of the NSI, the overall culture of the staff in the country's public sector is neutral to data sharing. The NSI considers that concerns in the general public regarding personal data privacy and confidentiality are obstacles for the sharing of data among organisations.

Moreover, a national strategy on data sharing in the public sector does not exist.

Cooperation with data owners

Written agreements covering each instance of data provision have been signed between the NSI and data owners for most cases. According to the peer reviewers' assessment, the existing agreements are of a technical nature and are largely outdated. An important exception is the Agreement with the Central Bank which covers, for example, the shared responsibilities for the production of Financial Accounts statistics and the supply of firm-level data for Balance of Payments statistics.

The coordination mechanisms with the data owners are considered by the NSI effective only in a few cases. According to the peer reviewers, the legislative basis is strong, but there is a clear need to strengthen coordination and cooperation with the owners of administrative data.

Although foreseen by the national statistics act, in practice the NSI is consulted by the data owners on issues such as specifications or design of databases only in a few cases. Administrative data owners rarely inform the NSI sufficiently in advance about changes planned to be implemented in their databases. In most cases, the NSI's recommendations are taken into account when setting-up, changing or discontinuing a data source.

The NSI never communicates to the administrative data owners the procedures in place to ensure the confidentiality and security of data. Moreover, issues related to the errors identified in the administrative data source are communicated to the data owners in a few cases. During this communication, the NSI undertakes all measures to protect individual confidentiality.

Overall, the NSI reported that it faces sometimes difficulties in cooperating with data owners. In practice, data owners sometimes refuse to provide their data or send their data with delays relative to the agreed timetable.

Sometimes, excessive formality or bureaucracy constitutes an obstacle for cooperation.

29.3.1 Issues related to the wider institutional environment and cooperation with data owners

In summary, the NSI identified the following issues with regard to its cooperation with the administrative data owners:

- A national strategy on data sharing in the public sector does not exist.
- There are concerns in the general public regarding personal data privacy and confidentiality.
- The coordination mechanisms between the NSI and the administrative data owners are considered effective only in a few cases.
- Although foreseen by the national statistics act, in practice, the NSI is rarely consulted by the data owners on issues such as specifications or design of administrative databases.
- Administrative data owners inform the NSI sufficiently in advance of the changes planned to be implemented in the data source only in a few cases.
- The NSI does not communicate to the data owners the procedures in place to ensure the confidentiality and security of the data.
- When quality-related problems are encountered, the NSI does not have the authority to demand suitable modifications from the data owner.
- The NSI sometimes faces difficulties in cooperating with the administrative data owners.
- Administrative data owners sometimes refuse to provide access to their data.
- Sometimes administrative data owners send their data with delays relative to the agreed timetable.
- Excessive formality or bureaucracy between organisations is sometimes an obstacle for cooperation.

29.4 Quality and technical preconditions

Quality aspects

Based on the information in the questionnaire, the NSI has access to sufficient methodological information on the data collection processes operated by the data owners in a few cases. Additionally, data owners rarely apply sufficient quality checks that are useful to the NSI. Unique and consistent identifiers are used across data sources in most cases and the NSI has sufficient information for linking various sources.

Technical aspects

The NSI reported that it rarely faces difficulties related to the format used for the exchange of the data. The opposite holds for the exchange of metadata. Moreover, in most cases, automated data exchange mechanisms are used for transferring data.

29.4.1 Quality and technical restrictions

According to the NSI, the following quality and technical restrictions are in place:

- The NSI has access to sufficient methodological information on the data collection process operated by the data owners only in a few cases.
- Data owners rarely apply data quality checks that are useful to the NSI.
- In most cases, the NSI faces difficulties related to the format used for the exchange of metadata.
- Automated data exchange mechanisms for transferring metadata are used only in a few cases.

29.5 Some examples of administrative data usage

Agricultural Statistics

In the 2010 agricultural census implementation¹³⁰, data were collected using a mixed mode of data collection directly from the reporting units (web and paper questionnaire), since a farm register does

¹³⁰ Statistics Iceland, “Census of agriculture 2010 – Explanatory notes” (2010).

not exist. Administrative data were used as an auxiliary source; for the compilation of some variables as well as for validating data and imputing missing values. Unique identification numbers, available for both holders and legal units were used to link data from different data sources.

Social Statistics

The 2011 population census was register based¹³¹. Effort has been devoted in linking of data on persons and dwelling units from the key registers; namely the national register of persons (NRP) and the real estates' register (RER). The available registers still lack data on educational attainment, occupation and local unit (establishment). The NSI has recently undertaken a project¹³² building an educational attainment statistical register based on data from various sources (administrative sources, surveys of immigrants, internet) in order to use it for the census 2021.

The NSI combines survey data and administrative ones in order to compile labour cost statistics. The Pay as You Earn (PAYE) register is used for complementing the survey with data on employees and wages in the Icelandic labour market¹³³.

Examples of sources used

- Agricultural statistics: (1) Address Register, (2) Property Register, (3) Agricultural Tax Returns, (4) VAT Returns, (5) Land Register, (6) Livestock Surveillance Reports, (7) Pay as You Earn Register, (8) Tourism Accommodation Statistics, (9) certified Organic Growers.
- Social statistics: Population census: (1) National Register of Persons, (2) National Register of Real Estates. Labour costs: (1) Tax Authorities, (2) Directorate of Customs and Registers Iceland, (3) Pay as You Earn (PAYE) register.

29.5.1 Problematic data access cases

The NSI did not report any administrative data source for which access is not feasible or achieved in a considerable problematic way.

29.5.2 Successful data access cases

The NSI did not report any administrative data source which can be considered exemplary success case or best practice study.

30 Norway

30.1 Legal framework

The Statistics Act of 16/6/1989 No. 54 (§2-2, §3-2)¹³⁴ and the Ministry of Finance (MoF) regulation no.105, 1990 (Chapter 1) state that Statistics Norway shall have the right to use data from administrative systems and from nationwide municipal organizations for the production of official statistics.

Statistics Norway has the main responsibility for coordinating statistics produced by administrative agencies.

Legal right to access administrative data at microdata level

¹³¹ Statistics Iceland, Ómar S Harðarson, Paper presented at the Nordic address meeting in Myvatn, "Census in Iceland 2011" (2009).

¹³² Supported by the Eurostat grant 07112.2015.002-2015.350 on the Improvement of the use of administrative sources (ESS.VIP ADMIN WP6 Pilot studies and applications).

¹³³ Statistics Iceland, Anna S. Halldórsdóttir, Workshop on Labour Cost Data, Italy, "Use of administrative data to calculate Labour Costs" (2015).

¹³⁴ <https://www.ssb.no/en/omssb/styringsdokumenter/lover-og-prinsipper/the-statistics-act-of-1989>

The NSI has the legal right to obtain administrative microdata from all sources. The legal framework does not require that the administrative microdata are anonymised first with the exception of data from personal health registers, which can be accessed only in an anonymized format or at an aggregated level.

The legal framework does not require that the NSI requests permission from an authority other than the data owner in order to access any administrative data source. However, the NSI's data protection officer should be notified each time that a dataset is transmitted to the NSI.

In general, Statistics Norway has to comply with the Personal Data Act (14 April 2000, no. 31) and the rules set out by the Norwegian Data Protection Authority with regard to the processing and disseminating of personal data.

Cooperation with data owners in design of administrative databases

According to the provisions of the Statistics Act (§3-2) and the MoF regulation (Chapter 1) the state bodies or nationwide municipal organizations shall notify in advance the NSI when establishing or changing an administrative data source. The NSI may seek additional information and put forward proposals concerning the design of the data source (e.g. statistical units, definition of variables, adoption of classifications, etc.) so that it may also be used for statistical purposes. The proposals made by the NSI are not binding.

Cost-free access to administrative data

The NSI has the right to access all administrative data sources on a cost-free basis.

Coherence of the legal framework

According to the NSI, the national legal framework specifying the NSI's right to access and use administrative data does not leave any room for misinterpretations. However, for some source (e.g. data in personal health registers) the legislation applicable to the data owners contradicts the NSI's legal rights to access the data.

30.1.1 Legal restrictions

The restrictions imposed by the legal framework as identified by the NSI are summarized as follows:

- The NSI has the legal right to access administrative microdata from all sources except for health data which are obtained either in an anonymized format or at aggregate level.
- The recommendations of the NSI when data owners set-up, change or discontinue a data source are not binding.
- For some sources (e.g. data from personal health registers) the legislation applicable to the data owners contradicts the NSI legal rights to access their data.

30.2 Internal institutional aspects

Policy on administrative data

Based on the information provided in the questionnaire, an organization-wide policy for promoting the use of administrative data is in place within the NSI. The NSI has adopted standard procedures:

- To monitor developments in the legal framework governing the sharing of administrative data between authorities;
- To identify administrative data sources potentially useful for statistical purposes;
- To ensure confidentiality and security of administrative data.

According to the peer reviewers, in 2004, the NSI established the Statistics Council, with the view to strengthen the coordination among the producers of statistics. This consultancy body meets once a

year and consists of the 25 major producers of statistics or central register owners. Its role is to coordinate the production and dissemination of official statistics and to prepare common rules and practices with regard to the quality assessment of the data and the protection of confidentiality. Until 2015 the mandate of the Statistics Council is not governed by any specific regulation.

The NSI reported that standardised and documented quality criteria across the statistical domains to assess the adequacy of administrative data for statistical purposes are used within the NSI. The NSI applies quality checks based on a set of predefined criteria to all data, including those from administrative sources. The quality of administrative data is cross-checked with data collected through sample surveys.

Organisation within the NSI

Within the NSI, a specific unit/department responsible for coordinating NSI's contacts and cooperation with administrative data owners is in place. As stated in the questionnaire, the NSI's staff has the required competences to effectively exploit administrative data for statistical purposes but the available resources are partly sufficient.

30.2.1 Internal institutional obstacles

The NSI identified the following issues:

- The NSI partly has the required resources to effectively exploit administrative data for statistical purposes.

30.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

In view of the NSI, the overall culture of the staff in the country's public sector is favourable to data sharing. Concerns in the general public regarding personal data privacy and confidentiality are not considered to be an obstacle for the sharing of data among organizations.

According to the NSI, a national strategy on data sharing in the public sector exists and is effectively implemented.

Cooperation with data owners

Written agreements covering each instance of data provision have been signed between the NSI and data owners for all cases. The NSI considers that the coordination mechanisms with the data owners are effective in all cases. According to the peer reviewers, close cooperation has been established between the NSI and the producers of administrative data. The NSI obtains data from about 110 administrative registers owned by 29 institutions.

In most cases, the NSI is consulted by the data owners on issues such as specifications or design of databases. Administrative data owners usually inform the NSI sufficiently in advance about changes planned to be implemented in their databases and, in most cases, they take into account the NSI's recommendations when setting-up, changing or discontinuing a data source.

According to the peer reviewers, Statistics Norway regularly applies quality checks to the main administrative sources, following the set of indicators defined under Work Package 4 of the Blue-Enterprise and Trade Statistics (BLUE-ETS) project¹³⁵. Quality reports are being drafted by the NSI and consulted by the register owners.

Based on the information reported in the questionnaire, in most cases the NSI communicates to the administrative data owners the procedures in place to ensure the confidentiality and security of data. Issues related to the errors identified in the administrative data source are communicated to the data owners in most cases.

¹³⁵ Blue-Enterprise and Trade Statistics (BLUE-ETS) project: <https://www.blue-ets.istat.it>.

The peer reviewers mention that the NSI offers to the data owners IT tools that have been developed by the NSI in order to detect inconsistencies in the administrative data.

Overall, the NSI stated that it rarely faces difficulties in cooperating with data owners. Data owners rarely send their data with delays relative to the agreed timetable and bureaucracy rarely constitutes an obstacle for cooperation.

30.3.1 Issues related to the wider institutional environment and cooperation with data owners

In summary, the NSI did not identify any significant issues that hamper its cooperation with the administrative data owners.

30.4 Quality and technical preconditions

Quality aspects

As stated in the questionnaire, the NSI has access to sufficient methodological information on the data collection processes operated by the data owners in most cases. Additionally, data owners usually apply sufficient quality checks that are useful to the NSI. Unique and consistent identifiers are used across data sources in most cases (e.g. same personal identification number, organization numbers and addresses) and the NSI has sufficient information for linking various sources.

Technical aspects

The NSI mentioned that it rarely faces difficulties related to the format used for the exchange of the data and metadata. Moreover, in most cases, automated data exchange mechanisms are used for transferring data and metadata.

30.4.1 Quality and technical restrictions

No quality or technical restrictions have been identified by the NSI.

30.5 Some examples of administrative data usage

Business Statistics

The Business Register is compiled on the basis of data coming from different administrative registers¹³⁶. Concerning STS statistics, these are derived from data available from the business register, the balance sheets of the enterprises and small-scale surveys covering variables that cannot be derived from administrative registers.

Agricultural Statistics

The structural agricultural survey is mainly based on data coming from administrative registers which are complemented by data collected directly by the agricultural holdings¹³⁷.

Social Statistics

In 2011, the population and housing census was for the first time based solely on register data. The basic source used for the compilation of statistics was the central population register¹³⁸.

Income statistics are also compiled based on the data derived by linking different registers using the unique personal identification number. The main data providers are tax authorities and the Norwegian labour and welfare administration.

¹³⁶ Statistics Norway, "Structural Business Statistics Methodology" (2005).

¹³⁷ http://ec.europa.eu/eurostat/statistics-explained/index.php/Archive:Farm_structure_in_Norway_-_2007_results, http://ec.europa.eu/eurostat/statistics-explained/index.php/Agricultural_census_in_Norway

¹³⁸ Statistics Norway, "Population and Housing 2011 Census without questionnaire" (2011).

In respect to wealth statistics, data on financial wealth are collected from tax registers, while data on non-financial wealth (private dwellings) are estimated on the basis of a model which uses information on the characteristics of the dwelling in order to calculate its market value¹³⁹.

The NSI is currently working¹⁴⁰ on improving the register-based household and dwelling statistics by producing population estimates of households and dwellings using multiple administrative datasets. Associated statistical uncertainty measures will be provided in order to fulfil the quality reporting requirements of the next census round.

Examples of sources used

- Business statistics: (1) Central Coordinating Register for Legal Entities (Enhetsregisteret), (2) Value Added Tax Register of the Directorate of Taxes, (3) Register of Employers and Employees of the National insurance system.
- Agricultural statistics: (1) Deliveries of cereals (Ministry of Agriculture), (2) Administrative Farm Register (Ministry of Agriculture).
- Social statistics:
 - Population and housing census: (1) Central Population register, (2) Register of dwellings (Cadastre), (3) Register of Tax Administration, (4) Register of Welfare Service, (5) Register on the Population's Highest Attained Education.
 - Income statistics: (1) Tax Return Register, (2) Tax Register, (3) Labour and Welfare Administration, (4) State Housing Bank, (5) State Educational Loan Fund.
 - Wealth statistics: (1) Directorate of Taxes.

30.5.1 Problematic data access cases

The NSI did not identify any administrative data source for which access is not feasible or is achieved in a considerable problematic way.

30.5.2 Successful data access cases

The NSI did not identify any administrative data source which can be considered exemplary success case or best practice study.

31 Switzerland

31.1 Legal framework

The Federal Statistics Act (FStatA) of 1992¹⁴¹ states that the organisations, agencies and public legal entities must make the data available to the Federal Statistical Office free of charge. The FStatA further specifies that insofar as the Confederation has the required data available, separate surveys need not be conducted.

Based on the provisions of the FStatA, the NSI has the legal right to access data from any administrative data source and use them for any statistical purpose.

Legal right to access administrative data at microdata level

The NSI has the right to obtain all administrative microdata if there are not explicit legal restrictions which is the case only for very few data sources. The NSI receives administrative microdata in a non-anonymized format. Upon their reception, the NSI anonymizes the data and then makes them available to the production units in anonymized format with the exception of few cases.

¹³⁹ Statistics Norway, Jon Epland, Mads Ivar Kirkeberg, "Wealth distribution in Norway. Evidence from a new register-based data" (2012).

¹⁴⁰ Project supported by Eurostat grants 07112.2016.004-2015.594 on the Improvement of the use of administrative data (ESS.VIP ADMIN WP6 Pilot studies and applications).

¹⁴¹ <https://www.admin.ch/opc/en/classified-compilation/19920252/201601010000/431.01.pdf>

The legal framework does not oblige the NSI to request permission from the data protection authority in order to obtain data from any data source as soon as the data owners consent to provide their data.

Cooperation with data owners in design of administrative databases

Article 9 of the Ordinance on the organisation of federal statistics states that the NSI must be consulted before the creation, modification or discontinuation of an administrative data source or of a federal register that is useful for federal statistical purposes. The NSI, for the purpose of coordination and harmonization of federal statistics, may issue recommendations, technical and methodological guidelines, after consulting with the parties concerned and upon the agreement of the Statistics Committee.

Cost-free access to administrative data

The NSI has the right to access all administrative data sources on a cost-free basis.

Coherence of the legal framework

According to the NSI, the national legal framework specifying the NSI's right to access and use administrative data does not leave room for misinterpretations. The passing of specific additional legal acts and agreements is required so that the NSI obtains access to some specific data sources.

Additionally, for some sources there are legal restrictions on the reuse of data for statistical purposes other than initially stated as well as on the maximum duration of retention of the data. For some sources, the NSI is not authorized to link microdata with microdata from other sources.

According to the peer reviewers' assessment, the Swiss law includes provisions permitting the usage of data collected for statistical purposes to be also exploited for administrative purposes. The issue is related to the NSI's mandate to operate administrative registers. Following the provisions of the FStatA, the NSI is obliged, based on the Federal Council's decision, to disclose Business and Enterprise Register (BER) data. The federal Register of Buildings and Dwellings (RBD) can be exploited by the Swiss Confederation for statistical, research and planning purposes. Moreover, the NSI is responsible for collecting data from hospitals (Health Act (1993)) which are submitted to the Federal Office of Public Health (FOPH).

31.1.1 Legal restrictions

The restrictions imposed by the legal framework as identified by the NSI are summarized as follows:

- For some sources, the reuse of administrative data for statistical purposes other than the ones initially stated is not permitted.
- For some sources, there are restrictions on the maximum duration of retention of the data.
- For some sources, the NSI is not authorized to link microdata with microdata from other sources.
- The passing of additional legal acts is required so that the NSI obtains access to some data sources.

In view of the peer reviewers' assessment, the following issues have been identified:

- The borderline between the NSI's mandate to collect data for statistical and administrative purposes is not clear.
- Data collected for statistical purposes are also used for administrative purposes.

31.2 Internal institutional aspects

Policy on administrative data

According to the information provided in the questionnaire, within the NSI, an organization-wide policy for promoting the use of administrative data is partly in place. The NSI has adopted standard procedures:

- To monitor developments in the legal framework governing the sharing of administrative data;
- To identify administrative data sources potentially useful for statistical purposes. A register strategy has been established, based on which administrative data sources potentially useful for the compilation of statistics are recorded.
- To ensure the confidentiality and security of administrative data. As specified by the NSI, data production units, before obtaining access to the data, should sign an agreement in which the scope of usage of data for statistical purposes is clearly stated. Moreover, some sensitive data, e.g. VAT data are only made available to specific units following an agreement with the VAT administration.

The NSI also reported that standardised and documented quality criteria across the statistical domains to assess the adequacy of administrative data for statistical purposes are partly in place.

Organisation within the NSI

Based on the information provided in the questionnaire, within the NSI, a specific unit/department responsible for coordinating NSI's contacts and cooperation with administrative data owners is in place. As mentioned by the peer reviewers, the Registers Division of the NSI is responsible for the collection of administrative data and for monitoring the extent to which data from administrative sources can be used for the compilation of statistics. The processing of the data is undertaken by the different statistical department of the NSI.

As stated in the questionnaire, the NSI is well-resourced and its staff has the required competences to effectively exploit administrative data for statistical purposes.

31.2.1 Internal institutional obstacles

The NSI identified the following issues:

- An organization-wide policy for promoting the use of administrative data is only partly in place.
- Standardised and documented quality criteria are partly used across the statistical domains to assess the adequacy of administrative data.

31.3 Cooperation with data owners and wider institutional environment

Impact of the wider environment on the exploitation of administrative data by the NSI

In view of the NSI, the overall culture of the staff in the country's public sector is neutral to data sharing. Concerns in the general public regarding personal data privacy and confidentiality are considered to be definitively an obstacle for the sharing of data among organisations.

Moreover, a national strategy on data sharing in the public sector does not exist.

Cooperation with data owners

As stated by the NSI, written agreements of data provision have been signed between the NSI and data owners for most cases. Following the NSI's perception, the coordination mechanisms between the NSI and the administrative data owners are in all cases effective. For instance, cooperation with the data owners of economic data (e.g. VAT, customs, etc.) and Old-age and insurance data, is efficient and quite transparent.

However, the NSI reported that even if its right to access administrative data is granted by the FStatA, it faces significant difficulties in obtaining the required administrative data. As further elaborated by the NSI, there are data owners that refuse to provide access to their data (e.g. tax data on natural persons).

Although foreseen by the Swiss law, the NSI mentioned in the questionnaire that, in practice, it is consulted by the data owners on issues such as specifications or design of databases only in part of the cases. Administrative data owners inform the NSI sufficiently in advance about changes planned to be implemented in their databases in most cases but they take the NSI's recommendations into account when setting-up, changing or discontinuing a data source only in part of the cases.

Based on the information provided in the questionnaire, the NSI always communicates to the administrative data owners the procedures in place to ensure the confidentiality and security of data. When quality-related problems are encountered, the NSI has, in most cases, the authority to demand suitable modifications from the data owner. In order to foster cooperation with data owners on data quality issues, the NSI makes efforts in providing them with concrete feedback. During this communication, the NSI always takes the necessary measures to protect individual confidentiality.

Overall, the NSI faces sometimes difficulties in cooperating with data owners. Sometimes administrative data owners send their data with delays relative to the agreed timetable. Excessive formality or bureaucracy is sometimes an obstacle for cooperation.

31.3.1 Issues related to the wider institutional environment and cooperation with data owners

In summary, the NSI identified the following issues with regard to the wider institutional environment and the cooperation with the administrative data owners:

- A national strategy on data sharing in the public sector does not exist.
- There are concerns in the general public regarding personal data privacy and confidentiality.
- Although foreseen by the Swiss law, in practice, the NSI is consulted by the data owners on issues such as specifications or design of administrative databases only in part of the cases.
- Administrative data owners take the NSI's recommendations when setting-up, changing or discontinuing a data source only in part of the cases.
- The NSI sometimes faces difficulties in cooperating with the administrative data owners.
- Sometimes administrative data owners that refuse to provide access to their data.
- Sometimes administrative data owners send their data with delays relative to the agreed timetable.
- Excessive formality or bureaucracy between organisations is sometimes an obstacle for cooperation.

31.4 Quality and technical preconditions

Quality aspects

Based on the reported information in the questionnaire, the NSI has access to sufficient methodological information on the data collection processes operated by the data owners in most cases. Data owners apply sufficient quality checks that are useful to the NSI only in part of the cases. Unique and consistent identifiers are used across data sources in all cases and the NSI has sufficient information for linking various sources.

Technical aspects

The NSI stated that it rarely faces difficulties related to the format used for the exchange of the data and metadata. Moreover, automated data exchange mechanisms are used for transferring data in all cases.

31.4.1 Quality and technical restrictions

According to the NSI, the following quality and technical restrictions are in place:

- Data owners apply data quality checks that are useful to the NSI only in a few cases.

- Automated data exchange mechanisms for transferring metadata are used only in a few cases.

31.5 Some examples of administrative data usage

Agricultural Statistics

In the 2010 agricultural census implementation¹⁴², data were collected using a mixed mode data collection. Data on bovine animals were derived directly from administrative registers.

Social Statistics

The 2011 population census was register based¹⁴³. Data not available in administrative registers were collected through direct surveys.

Examples of sources used

- Agricultural statistics: No sources have been identified.
- Social statistics: (1) Registers of Persons of the Confederation, (2) Population Registers of the cantons.

31.5.1 Problematic data access cases

The NSI identified the following administrative data source for which access is not feasible or is achieved in a considerable problematic way.

Data source	Data owner	Purpose of access ^[1]	Statistical domain
Tax data	Tax authorities	1, 2, 5	Business statistics, population statistics

Legal and institutional issues: No legal issues have been reported by the NSI.

Cooperation with data owners: The major obstacle faced by the NSI in accessing the data source is that the data owners refuse to provide their data. In addition, excessive bureaucracy is an obstacle for cooperation between the NSI and the tax authorities.

Quality aspects: No issues have been reported by the NSI.

Technical aspects: No issues have been reported by the NSI.

31.5.2 Successful data access cases

The NSI identified the following administrative data sources which can be considered exemplary success access cases.

Data source	Data owner	Purpose of access ^[1]	Statistical domain
Old-age and survivors insurance	OASI organisations	1, 2, 5	Business, Social and education Statistics
Population Registers of Municipalities	Municipalities	1, 2, 3, 4, 5	Business, Social, population and education statistics
Customs data (imports/exports)	Swiss Customs	1, 2, 5	Business statistics, Price statistics

^[1] (1) Main source for the survey frame, (2) Auxiliary source for the survey frame (3) Direct compilation of statistics from administrative aggregated data or microdata, (4) Direct compilation of statistics in combination with other sources (e.g. other administrative sources, surveys), (5) Source of auxiliary data for prefilling, editing / validation, imputation, etc.

Factors contributing to successful access: With regard to the old-age and survivors insurance data source, the NSI identified the following success factors: (a) the legal framework establishing the

¹⁴² Swiss Federal Statistical Office, "Census of agriculture 2010 – Explanatory notes" (2010).

¹⁴³ Swiss Federal Statistical Office, "Metadata on 2011 population and housing census".

NSI's right to obtain the data from the 89 different OASI organisations, (b) the close cooperation with the data owners regarding technical and quality issues and (c) the establishment of good relationships with the 89 OASI organisations. Moreover, the clear provisions provided in the legal framework and the good structure of the data transmitted to the NSI were two of the most important factors that contributed to a successful access and use of the population register of municipalities. The NSI has established close cooperation with the central administration of Swiss customs. That has led to the development of common IT tools for the processing and exchange of customs data.

Obstacles overcome in accessing the data source: Concerning the old-age and survivors' insurance data source, the implementation of changes in the collected variables and the adoption of new standards by the 89 different OASI organisations was a time-consuming process. For the population registers of municipalities, the issue that NSI still faces is that some municipalities send their data too late relatively to the agreed timetable.

Best practice study: According to the NSI, the old-age and survivors' insurance data source and the customs data source can be used as best practice studies.

32 Lichtenstein

The information for Lichtenstein stems solely from the publicly identified documentation as well as from the national peer review report.

32.1 Legal framework

According to the Law on Statistics (StatA) of 17 September 2008¹⁴⁴, the NSI may use (personal and non-personal) administrative data from for the production of statistics. Offices of the national public administration as well as legal entities regulated by public law have to provide the NSI the required data upon a Government decision.

As stipulated in Article 11 of the StatA, the NSI may use administrative data instead of survey data if the required quality standards are met. Additionally, the NSI may set up registers that can be used for statistical purposes. The Government decides through ordinances about the purpose, content and the disclosure of data in the statistical registers.

Moreover, the StatA regulates the participation of the municipalities in the collection of data. Upon the provisions of Article 15, the government should consult the municipalities before ordering them to participate in a statistical data collection or to provide their administrative data to the NSI.

Legal right to access administrative data at microdata level

As stated in the StatA, the NSI has the right to access administrative microdata. However, separate laws may rule out the use of administrative data for statistical purposes due to confidentiality restrictions (StatA, Article 14). The legal framework does not require that the NSI requests permission from an authority other than the data owner in order to access any administrative data source.

Cooperation with data owners in design of administrative databases

According to the provisions of Article 14 of the StatA, the offices of the national public administration as well as legal entities regulated by public law have to inform the NSI about the data collections undertaken upon its request. Additionally, they should inform the NSI in advance about the set-up or modifications in their information systems as well as about changes in the data source (e.g. classifications, definitions) (StatA, Article 7). The NSI may make proposals with regard to the data

¹⁴⁴ http://www.llv.li/files/as/Statistikgesetz_E_2009.pdf.

collection process operated by the offices to ensure that the collected data meet the required data quality standards. However, the recommendations made by the NSI are not binding.

Cost-free access to administrative data

The NSI has the right to access all administrative data sources on a cost-free basis.

Coherence of the legal framework

Upon the provisions of the StatA, the NSI is entitled to use administrative data for statistical purposes upon the government's consent. According to the peer reviewers' assessment, in practice, the government's approval is required only in cases where the NSI's legal right contradicts with the legislation governing a data source.

Moreover, the peer reviewers consider that the right of the NSI to be involved in the design of administrative data should be strengthened.

The legal framework also imposes restrictions on the duration of retention of personal data (e.g. name and address lists); they must be destroyed as soon as they are no longer required for statistical purposes.

Finally, Article 16 (§1 and 2) of the StatA indicate that data collected for statistical purposes can also be used for other purposes, if there is a legal basis governing such use. Article 5 and 8 of the Statistics Ordinance, issued by the government on 7 July 2009 specifies that the NSI may disclose to other national public authorities and municipalities information contained in the statistical business register, insofar as this is required for the fulfilment of their activities.

32.1.1 Legal restrictions

The restrictions imposed by the legal framework based on the collected information are summarized as follows:

- The NSI can access and use administrative data for statistical purposes upon government's approval.
- Separate laws may rule out the use of administrative data for statistical purposes due to confidentiality restrictions.
- The recommendations of the NSI when data owners set-up, change or discontinue a data source are not binding.
- The legal framework specifies that personal data should be destroyed as soon as are no longer required for statistical purposes.
- The StatA specifies that data collected for statistical purposes can also be used for administrative purposes.

32.2 Internal institutional aspects

Policy on administrative data

In 2015, the peer reviewers mentioned in their report that the NSI faces difficulties in monitoring recent developments or changes implemented in the administrative data sources not yet used for statistical purposes due to the lack of sufficient human resources. Consequently, it is not possible for the NSI to identify administrative data sources potentially useful for statistical purposes.

According to the peer reviewers, the NSI applies standard procedures for assessing the quality of administrative data before using them as data source for the production of statistics. In general, the procedures for assessing the adequacy of administrative data are specified in the quality guidelines. Specific quality checks are applied for assessing the quality of the statistical business register, national accounts and population data. Differences in concepts and definitions between administrative and statistical data are examined under the framework of specific statistical projects.

As described in the peer review report, the NSI's statistical information system constitutes part of the IT infrastructure of the national administration, which is under the authority of the Office of Information Technology (OIT). The IT Security Division of the OIT is responsible for safeguarding the security of the NSI's data during all steps of the statistical production chain. The security policy of the statistical database systems and IT networks is strict. A logging system, tracking the actions performed when accessing the data is in place, and the log files are regularly checked.

Organisation within the NSI

As stated by the peer reviewers, the NSI has drafted handbooks which contain detail methodological information on all issues that should be treated by statisticians within the NSI. However, it is not further specified whether that handbooks provide information on the statistical treatment and processing of administrative data.

The NSI does not have the required resources to effectively exploit administrative data for statistical purposes, considering that the peer reviewers commented that the NSI needs additional resources to strengthen its professional capacity.

32.2.1 Internal institutional obstacles

Based on the collected information, the following issues have been identified:

- The NSI faces difficulties in monitoring recent developments or changes implemented in the administrative data sources.
- The NSI faces difficulties in identifying administrative data sources potentially useful for statistical purposes.
- The NSI does not have the required resources to effectively exploit administrative data for statistical purposes.

32.3 Cooperation with data owners and wider institutional environment

The NSI is responsible for the statistical processing of administrative data for producing European statistics. The quality of the statistics outputs depends heavily on the cooperation of the NSI with the administrative data owners. The NSI has signed written agreements or has made implicit arrangements with the offices of the national administration. A signed agreement is in place with the Office of Economic Affairs that establishes the NSI's right to obtain data directly from the unemployment database. In all other cases, e.g. the Fiscal Authority for data on national accounts, salary and tax statistics, implicit arrangements govern the sharing of data among the NSI and the data owners.

According to the peer reviewers the cooperation mechanisms between the NSI and the administrative data owners are good. In practice, the NSI has established direct contacts with the administrative owners. For instance, a working group, comprising representatives from both the NSI and the municipalities, has been established when setting up the building and housing register.

Based on Article 7 of the StatA, the owners of administrative data are obliged to inform the NSI in advance when setting-up, changing or discontinuing an administrative data source. The peer reviewers mentioned that a formal procedure for informing the NSI about planned changes in the data collection has not been adopted by the administrative owners.

The NSI communicates to the administrative data owners issues related to the errors and inconsistencies identified in their data. During this communication, the NSI does not undertake measures to protect individual confidentiality.

As stated in the peer review report, the NSI has difficulty in monitoring the recent developments implemented in the IT systems of the National Administration. Focus is given only on the changes

made in the IT systems which are already used for statistical purposes. The peer reviewers mention that the NSI may miss information on the recent additions made in the National Administration's databases.

The peer reviewers also mention that there are no formal provisions and no written way of informing the OSL about changes implemented in the administrative data collections, apart from the legal provisions in the Statistics Act.

32.3.1 Issues related to the wider institutional environment and cooperation with data owners

In summary, the issues identified with regard to NSI's cooperation with the administrative data owners are the following:

- Written agreement covering each instance of data provision have been signed for a few cases.
- The NSI communicates to the administrative data owners issues related to the errors or inconsistencies identified in their data. During this communication, the NSI does not take measures to protect individual confidentiality.
- There are no formal provisions and no written way for informing the NSI about changes implemented in the administrative data collections.

32.4 Quality and technical preconditions

Quality aspects

No information has been identified.

Technical aspects

The NSI has direct access to the administrative databases of some administrative data owners, e.g. data on tourism or social insurance, and the unemployment database of the Office of Economic Affairs.

No other information has been identified.

32.4.1 Quality and technical restrictions

Based on the information collected, no quality or technical restrictions have been identified.

32.5 Some examples of administrative data usage

Business Statistics

A statistical business register is maintained by the NSI, which is updated based on data obtained from different sources (regular business register survey, administrative business register). Also, the business register includes information on the employees working in enterprises.

Social Statistics

In 2011, the population census statistics have been compiled on the basis of survey data in combination with data derived from the central population register of Liechtenstein.

Examples of sources used

- Business statistics: Administrative business register.
- Social statistics: Central population register (ZPR) of Liechtenstein national administration.

32.5.1 Problematic data access cases

No information has been provided by the NSI.

32.5.2 Successful data access cases

The population and housing census has been cited by the peer reviewers as a good example of cooperation between the NSI and the municipalities. No further information has been provided by the NSI.