



PONS

**Project for the Operation and development of New Statistics
in the LM&SP DWH**

SILKE LAENEN (CeSO, KU Leuven) – BART SCHOLIER (Steunpunt Werk,
KU Leuven) – ANNE-LAURE MATHY (METICES, ULB)

Axis 6: Management of collections



NETWORK PROJECT

PONS

**Project for the Operation and development of New Statistics
in the LM&SP DWH**

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PROMOTORS: Wim van Oorschot (CeSO, KU Leuven)
Luc Sels (Steunpunt Werk, KU Leuven)
Pierre Desmarez (METICES, ULB)

AUTHORS: Silke Laenen (CeSO, KU Leuven)
Bart Scholiers (Steunpunt Werk, KU Leuven)
Anne-Laure Mathy (METICES, ULB)

**STEUNPUNT
WERK**





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Avenue Louise 231
Louizalaan 231
B-1050 Brussels
Belgium
Tel: + 32 (0)2 238 34 11 - Fax: + 32 (0)2 230 59 12
<http://www.belspo.be>
<http://www.belspo.be/brain-be>

Contact person: Aziz NAJJ
Tel: + 32 (0)2 238 36 46

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ABSTRACT

Context

The Crossroads Bank for Social Security (CBSS), a public institution for social security, has been developing the Belgian Labour Market and Social Protection Data Warehouse (LM&SP DWH) since 2001. The goal of the LM&SP DWH is the disclosure of administrative data for scientific and policy preparatory research. Since the data are derived from administrative data bases, it is necessary to study the source data for the creation and optimisation of statistical concepts for scientific and policy preparatory research. The greatest added value of the LM&SP DWH is its ability to provide combined and longitudinal (anonymised) data on individuals.

Objectives

The PONS project aims at the further development, enlargement and deepening of the LM&SP DWH. This will be done by sustaining and expanding the LM&SP DWH, as well by developing new variables. These objectives will be realised by three work packages: general support (1), support enlargement (2) and deepening (3) of the LM&SP DWH.

Conclusions

The aforementioned activities improved the quality, accessibility and strategic position of the LM&SP DWH for research purposes and policy assessment.

Keywords (5)

Labour market (1), social protection (2), administrative data (3), social policy (4), scientific research (5).

1. INTRODUCTION

Context

The Crossroads Bank for Social Security (CBSS), a public institution for social security, has been developing the Belgian Labour Market and Social Protection Data Warehouse (LM&SP DWH) since 2001. The goal of the LM&SP DWH is the disclosure of administrative data for scientific and policy preparatory research. Since the data are derived from administrative data bases, it is necessary to study the source data for the creation and optimisation of statistical concepts for scientific and policy preparatory research.

In this respect, the Belgian Science Policy Office (Belspo) decided to finance the “Project for the Operation and development of New Statistics in the LM&SP DWH” (PONS). This project is co-financed by the Federal Public Service Social Security (FPS SS) and the CBSS. The PONS project aims at the further development, enlargement and deepening of the LM&SP DWH. This project is executed by a team of researchers, which is a network of three partners, namely the Centre for Sociological Research (CeSO, KU Leuven), Centre METICES (ULB) and the Centre of Expertise for Labour market Monitoring (CELM, KU Leuven). The division of the different tasks is based on the expertise of the three partners. The research team closely cooperates with the CBSS and the FPS SS. Technical support is provided by Smals; the ICT organisation for federal government organisations working in social security. In order to reach the different objectives, the network, namely the research team, the FPS SS and the BCSS, consults a group of experts consisting of the partaking public institutions, also known as the user network, the technical documents of the public institutions and the expertise of the research partners.

The PONS project was designed to safeguard the ongoing and initiated projects of the LM&SP DWH in the short term, awaiting a more structural budgetary solution in the longer run. The work volume of this project was especially concentrated in the first period of the project (01/12/2013 – 28/02/2015), gradually reduced in the second period (01/03/2015 – 28/02/2016) and fell back to a minimum level in the third period (01/03/2016 – 28/02/2017). The budget of the project was twofold: (1) a basis allocation of EUR 250.000 made available by Belspo and (2) a supplementary allocation of EUR 100.000 made available by the FPS SS. The CBSS and Smals also assisted the project by providing technical and financial support – a yearly budget is allocated – to develop new applications.

To overcome the limited resources during the third period, an annex to the original PONS contract was designed. The annex increased the original budget made available by Belspo by EUR 120.000. The supplementary allocation of the FPS SS was increased by EUR 50.000. An extra amount of EUR 10.000 was made available by the CBSS. The annex did not change the objectives of the original PONS contract, namely the further development, enlargement and deepening of the LM&SP DWH. The annex did, however, stipulate a number of extra tasks. These will be discussed in part 4 (‘scientific results and recommendations’).

Relevance of the LM&SP DWH

The greatest added value of the LM&SP DWH is its ability to provide combined and longitudinal (anonymised) data on individuals. The rich nature of the LM&SP DWH makes it an extremely useful source for research purposes and policy assessment. First of all, and in contrast to survey data, the administrative character of the data guarantees longitudinal data that covers entire research populations accessible at modest cost in time and money. In addition, the variety of sources in the LM&SP DWH offers very complex information that can be used for different research themes, including the labour market, (un)employment, pensions, careers, occupational diseases and poverty. Moreover, these themes and data can be linked with data sources (even surveys, like for instance 'Census 2011') outside the LM&SP DWH. The richness of the LM&SP DWH therefore enables a wide range of research questions, from the most basic applications, such as population descriptions, to more advanced problems, such as longitudinal or survival analysis, measuring the effects of policies on populations or dynamic descriptions and analysis of trajectories.

The users of the LM&SP DWH are therefore many and include academic researchers as well as administrations and policy makers. Examples include the Flemish government, for instance to assess active labour market policies, or the FPS SS, which has implemented and used the Microsimulation Model for the Belgian Social Insurance Systems (MIMOSIS) to assess the impact of new legislations with respect to budgetary impacts and redistributive effects on targeted groups. Other users of the LM&SP DWH, in its aggregated form, are journalists and students.

2. STATE OF THE ART AND OBJECTIVES

The PONS project aims at the further development, enlargement and deepening of the LM&SP DWH. The activities stipulated in the original contract and the annex will improve the quality, accessibility and strategic position of the LM&SP DWH for research purposes and policy assessment. This will be done by sustaining and expanding the LM&SP DWH, as well by developing new variables. These objectives were realised by utilising three work packages with the following associated tasks:

- WP 1. General support. The existing material – work processes, metadata, indicators, classifications, web tools and the Content Management System (CMS) - will be improved and updated as new sources and methods are integrated. Moreover, the network of data suppliers and users of the LM&SP DWH will be maintained and strengthened.
- WP 2. Support enlargement. The scope of the LM&SP DWH will be extended by integrating new datasets in the LM&SP DWH, aiming at a more comprehensive view on the socio-economic characteristics of the population. The project will examine how new information on the individual level can be linked to the LM&SP DWH in a harmonised and structured way, and this in alignment with international standards.
- WP 3. Deepening. The data of the LM&SP DWH will be further explored, validated and valorised. To this end, new derived variables, international indicators and tools for analysis will be developed. These new instruments will improve the utility and relevance of the LM&SP DWH for research purposes, monitoring and policy assessment.

The further enlargement and deepening of the LM&SP DWH only stresses the importance of the LM&SP DWH as a primary source of data. The PONS project tries to meet the needs of the scientific community as well as the authorities. By linking the LM&SP DWH to new sources, new lines of research are explored. But the project will not only help the scientific community. By making the aggregated data accessible online, individual citizens are able to consult the LM&SP DWH and, if desired, give their remarks.

3. METHODOLOGY

The various tasks of the project were carried out thanks to the following actions:

1. the consultation of a network of experts from the participating public institutions (i.e. the data suppliers),
2. the consultation of a network of users of the LM&SP DWH (i.e. the user network, a group consisting of academic and institutional researchers),
3. the consultation of technical documents from the participating public institutions,
4. the knowledge and expertise of the research partners in the field of labour market and social protection,
5. regular meetings with the network (i.e. the research team, the CBSS and the FPS SS), and,
6. technical support provided by Smals in order to develop new applications.

Meetings with the data suppliers (1) during the course of project took place on 16/12/2014, 17/09/2015 and 18/10/2016. Representatives of all data suppliers were invited. The user network (2) was consulted on 07/05/2014, 18/12/2014, 25/09/2015 and 27/10/2016. Every person who works with LM&SP DWH data, and who was interested in attending, was welcome. To guarantee the integration of the contributions of the scientific partners, meetings including the supervising presence of the CBSS and the advisory role of the FPS SS were organised (5). During these meetings, the expertise of the scientific partners with respect to social security and labour market studies in Belgium and abroad was called upon. This was done in order to validate and control each other's work, as well as to assess the relevance of the developments and opportunities arising from collaborations with the network of data suppliers and users. The meetings were also used to inform all partners concerning the latest developments of the LM&SP DWH.

These aforementioned resources were used to update metadata and indicators, to validate new indicators, to validate new means and procedures of data availability and to explore the possibilities of new couplings and participating institutions.

4. SCIENTIFIC RESULTS AND RECOMMENDATIONS

Due to the nature of the project (i.e. the management of a data collection), the research results will be described by mentioning the output of the different work packages. The project generates a large amount of information, which is integrated in the Content Management System (CMS) of the LM&SP DWH and which is made available via the website of the CBSS.

Work package 1: General support

The first work package focuses on the update and maintenance of the LM&SP DWH. The LM&SP DWH consists out of metadata, indicators, derived variables and online consultation tools. Due to the dynamic nature of the data base, these aspects have to be maintained and updated on a permanent base. Changes to the primary sources, legislation and registration procedures all influence the LM&SP DWH. The documentation on the LM&SP DWH is integrated in a content management system (CMS). The content of the CMS is updated by the research team, while technical support is provided by Smals.

T1.1: metadata

The metadata of the LM&SP DWH are threefold, namely (1) the documentation of the data (i.e. data sets, variables and codes), (2) the general description of the LM&SP DWH and (3) the description of the primary data collections.

The documentation of the existing data sets, variables and codes (1) within the LM&SP DWH is a continuous task. All data sets have been kept up-to-date during the course of the project by the research team. Moreover, a number of new sources have been documented and have been made available online for consultation:

- The LED data base, a data base with qualifications issued by institutions in Flanders, of the Flemish Ministry of Education and Training
- The SATURN data base of the Wallonia-Brussels Federation, which contains information on higher education in the federation
- Employment at European and international institutions known in the National Register
- Legal cohabitation known in the National Register
- Information on permanent incapacity for work in case of an occupational accident, from the Fund for Occupational Accidents
- Outgoing border work, known to the National Institute for Health and Disability Insurance
- Information on holidays and its associated allowances for blue-collar workers, from the National Holiday Allowance Office

The general description of the LM&SP DWH (2), including the accompanying texts on the web tools, have been updated online multiple times. They can be found online:

https://www.bcass.fgov.be/nl/dwh/dwh_page/content/websites/datawarehouse/data/online-statistieken.html.

The description of the primary data collections, which for instance provides information on the ways of registration and possible quality controls of the data, has been completed. The descriptions can be consulted online: https://www.bcass.fgov.be/nl/dwh/dwh_page/content/websites/datawarehouse/others/beschrijving-primaire-databanken.html.

T1.2: nomenclature of the socio-economic position

The nomenclature of the socio-economic position is one of the key components of the LM&SP DWH and is based on twelve different data sources. Changes in these sources trigger changes in the construction of the nomenclature, keeping it up-to-date on a permanent base.

There were no substantial changes made to the nomenclature of the socio-economic position. A number of missing derived variables have been added to the nomenclature, for example the positions 'known to the health insurance funds and pensioner out of work' and 'known to the health insurance funds and child eligible for children benefits'. The documentation, including a paper explaining the construction of the nomenclature, has been kept up-to-date and is available online. The paper can be found here: https://www.bcass.fgov.be/nl/dwh/dwh_page/content/websites/datawarehouse/others/structuur-nomenclatuur.html.

However, there will be a substantial change to the nomenclature in the near future. This is linked to the inclusion of three new data sources in the LM&SP DWH, namely the following earlier mentioned data sources:

- Outgoing border work, known to the National Institute for Health and Disability Insurance
- Employment at European and international institutions known in the National Register
- Information on permanent incapacity for work in case of an occupational accident, from the Fund for Occupational Accidents

A preliminary working paper documenting the integration of these data sources in the nomenclature was completed by the research team during the course of the project. This paper is available on demand.

T1.3: indicators

During the previous projects, three sets of indicators were constructed based on the LM&SP DWH, namely the income concept (T1.3a), the (low) work intensity indicator (T1.3b) and the life cycle variables (T1.3c).

The income concept (T1.3a) was updated and improved, but no substantial changes were made. The concept was adapted to changes in the data and the simulation of children benefits was improved. Its construction is documented online, and can be found here: https://www.bcass.fgov.be/nl/dwh/dwh_page/content/websites/datawarehouse/others/inkomensnotie.html.

The (low) work intensity indicator (T1.3b) has not been revised during the course of the project. An analysis of the differences between the LWI indicator present in the LM&SP DWH and the LWI in EU-SILC has been made. Possible future adjustments to the LWI indicator in the LM&SP DWH are described in T3.1.

The life cycle variables (T1.3c) are no longer part of the LM&SP DWH due to quality concerns. The results of the simulation of the life cycle variables turned out to be inconsistent: the results based on the LIPRO typology did not coincide with the results based on the data on civil status.

T1.4: web tools

The most direct way to use the LM&SP DWH, is by generating aggregated statistics using the online tools. Three online tools were available at the start of the project: a tool displaying local statistics, one on global statistics and one on socio-economic mobility. These web tools were updated and improved according to new requirements, by for instance adding new variables on income, origin, place of employment and work intensity. The aforementioned changes to the nomenclature (T1.2) were also implemented in the web tools.

Moreover, a new web tool was constructed. A tool on family composition can now be found online. A new web tool on short term socio-economic mobility is also in the pipeline, but cannot be found online just yet. It will be developed by Smals in the near future.

The web tools can be consulted online by anyone interested in using them: https://www.bcass.fgov.be/nl/dwh/dwh_page/content/websites/datawarehouse/data/online-statistieken.html.

T1.5: Content Management System (CMS)

The information and documentation about the LM&SP DWH is integrated in a Content Management System (CMS). This enables users of the LM&SP DWH to consult the documentation in a user-friendly way. The research team maintained the CMS by integrating

documentation on new data, indicators and variables in the CMS. The research team supported the CBSS and Smals with improvements to the accessibility and functionality of the CMS. More specifically, Smals designed a new CMS and website for the LM&SP DWH. The research team assisted the CBSS and Smals in this process by attending numerous meetings. The new system will improve data management for the researchers and will be less prone to faults. The new website can be found online: <https://www.bcsc.fgov.be/nl/dwh/homepage/index.html>.

T1.6: network

The network of data suppliers and users of the LM&SP DWH was maintained and strengthened through several actions. First of all, the network organised meetings with the users of the LM&SP DWH, during which the users could give feedback on the LM&SP DWH and the progress of the project. New issues and concerns about the LM&SP DWH were presented in these meetings. As mentioned before, these meetings took place on 16/12/2014, 17/09/2015 and 18/10/2016 (3. Methodology).

Secondly, to enable new sources and research opportunities for the LM&SP DWH, the CBSS set up a network among institutions and departments outside the field of the labour market and social security. Several meetings with the following institutions took place:

- Statistics Belgium, and more specifically on the household composition (LIPRO), the inclusion of fiscal data in the LM&SP DWH and the update of the work intensity indicator. These meetings were linked to the objectives described in 'T3.1: international indicators' and 'T.0.1: Lipro and origin'.
- The Flemish Ministry of Education and Training, and the Wallonia-Brussels Federation, on the integration of diploma data in the LM&SP DWH.
- The European Commission, on the integration and quality of the data on employment at European institutions in the LM&SP DWH.

Thirdly, the network organised, in close cooperation with the CBSS, meetings with the data suppliers in order to gain information on the quality, content and structure of the primary data sources and variables. Two different types of meetings were being held: meetings with all the data suppliers (see '3. Methodology' for the dates) and meetings with specific institutions in order to clarify certain developments or problems present in the data. The latter was for instance the case for the Fund of Occupational Accidents and the Pensions Service for the Government Sector.

Work package 2: Support enlargement

Several data sets in the field of social security and the labour market are not yet available in the LM&SP DWH. The PONS project supports the integration of new data sets in the LM&SP DWH, aiming at a more comprehensive view on the socio-economic characteristics of the population.

T2.1: educational level

At the start of the PONS project, information on the obtained educational level is still lacking for a large part of the population, which is a major shortcoming for the socio-economic research based on the LM&SP DWH. Before the start of PONS, the entities responsible for data on education agreed to collaborate and to strengthen their relationship with the LM&SP DWH.

Data on qualifications issued by the Flemish educational institutions were integrated in the LM&SP DWH. The certificates cover secondary education (since 2002), higher education (since 2000), adult education (since 2013) and professional education (since 1994). Individuals who obtained their certificate before the aforementioned periods are not available in the data. The content of the data can also be found online: https://www.bcass.fgov.be/nl/dwh/variables_table/variables_description.html?filter=sources&sources=DWH_AHOVOKS_LED.

The Wallonia-Brussels Federation has created an institution responsible for research and education. The different higher education institutions in the Wallonia-Brussels Federation are responsible for submitting data to this institution on a regular base. A myriad of data is collected, e.g. information on the highest diploma of a student or the names of the courses that were followed. More information on the content of the data can be found online: https://www.bcass.fgov.be/nl/dwh/variables_table/variables_description.html?filter=sources&sources=DWH_FWB_Saturn. Data on degrees obtained at universities in the Wallonia-Brussels Federation is not yet available in the LM&SP DWH. An agreement should be made in the near future. Once the data on university degrees are also integrated, a harmony of classifications should be investigated.

T2.2: classification of occupations

Information on the occupational aspirations of jobseekers is registered by the regional public employment services. Due to the federal structure of Belgium, these regional services (VDAB-FOREM-ACTIRIS-ADG) use different classifications of occupations. With this task, the network aims at an integration of these data in the LM&SP DWH and at a harmonisation of the occupational classifications for statistical and research purposes, with respect to international classifications and standards (e.g. ISCO – International Standard Classification of Occupations and ESCO – European classification linking skills, competences, qualifications and occupations).

A reunion with the employment services took place on 07/12/2016. The different regional employment services agreed to integrate their data on the aspirations of jobseekers in the LM&SP DWH. These data are grouped by the ISCO classification. The Flemish public employment service (VDAB) also added the 'Competent' classification to their data. In the near future, all services will shift to the 'Competent' classification. The integration of the data in the LM&SP DWH is still being prepared together with the different regional public employment services.

T2.3: employment measures

In Belgium, a wide range of employment measures are applicable. This is due to the fact that these employment measures are a regional competence. This task aimed to produce an inventory of the regional employment measures, analyse the relevance for the LM&SP DWH and to study the feasibility of a harmonisation and integration.

A reunion with the public employment services and the Flemish department Work and Social Economy (WSE) took place on 07/12/2016. To prepare the integration of the data on regional employment measures, an inventory of the federal and regional employment measures who were in operation before the sixth state reform was made. The information on the regional employment measures were collected at the different regional institutions.

T2.4: career data

Currently, the LM&SP DWH only contains career data on employees. The career data of the self-employed and civil servants are lacking. The career data of civil servants are gathered by Sigedis (in the 'CAPELO' data base). During the project, the feasibility of integrating CAPELO was assessed. It was, however, too early to integrate the career data of civil servants in the LM&SP DWH. Secondly, the National Institute for the Social Security of the Self-employed was charged to gather data on the careers of the self-employed (in the 'eClipz' data base). An exploratory meeting with the National Institute for the Social Security of the Self-employed was held on 13/10/2016. During this meeting, they agreed on the integration of the eClipz data base in the LM&SP DWH. Although the integration will not be finished by the end of the project, it should be finished soon.

T2.5: periods of holiday

Data on periods of holiday for blue-collar workers used to be lacking in the LM&SP DWH. Both the periods of holiday and the holiday allowances are essential for the construction of the income concept and for a correct definition of the labour volume. The National Holiday Allowance Office is responsible for the payment of the holiday allowances for blue-collar

workers. During the project, the feasibility of integrating their data in the LM&SP DWH, and more specifically in the income concept, were studied. In the end, the data were integrated in the LM&SP DWH. They are documented online: https://www.bcass.fgov.be/nl/dwh/variables_table/variables_description.html?filter=institution&institution=Rijksdienst%20voor%20Jaarlijkse%20Vakantie. The integration of the data in the income concept, however, proved to be too difficult.

T2.6: cross-border labour

People living in Belgium and working abroad cannot be identified in the LM&SP DWH because no information on cross-border labour is available in the current data base. This kind of information is especially important for labour market research in cross-border regions. The lack of cross-border labour data results in an underreporting of the individual work intensity and in an underestimation of the global employment level. The National Institute for Health and Disability Insurance gathers information on cross-border labour. During the project, we studied the feasibility of integrating their data in the LM&SP DWH.

The data were integrated in the LM&SP DWH but not yet in the nomenclature of the socio-economic position (see T1.2), because the validity of the data is questionable. This remark has been submitted to the National Institute for Health and Disability Insurance.

Work package 3: Deepening

The focus of the third work package is the deepening of the LM&SP DWH. The data present in the LM&SP will be further explored, validated and valorised. To this end, international indicators and tools for analysis were developed during the course of the project.

T3.1: international indicators

Due to the wide coverage and the administrative character of the LM&SP DWH, the LM&SP DWH can be used for monitoring at a very detailed level of analysis. This provides opportunities for quantitative policy assessment related to the European monitoring frameworks and complementary to the existing European surveys. Most indicators of the European monitoring frameworks are based on survey data (e.g. the European Labour Force Survey – EU LFS and EU-SILC). Due to the European coordination and harmonisation of the data collections, these surveys are of major importance for the development of European comparative analyses. However, the level of analysis is limited because of the sample character and the survey size. With the administrative data present in the LM&SP DWH, the monitoring can be refined to lower regional levels (e.g. municipalities or districts) or very specific target populations (e.g. single-parent families, specific nationalities). During this project the network tried to ‘duplicate’ some of these indicators as closely as possible to the European definitions, based on data present in the LM&SP DWH, and tried to explain the differences between the original indicators and the indicators based on the LM&SP DWH.

This task aims at the development and / or comparison of two important indicators, namely a disposable income on the household level (based on the variable ‘HY020’ in EU-SILC) and the low work intensity indicator. A first analysis of the construction of a disposable income on the household level by using administrative data was conducted during the course of the project. A working group was established, including the research team, the BCSS, the SPF SS and representatives from Statistics Belgium. During the analysis, the research team closely cooperated with Statistics Belgium. Data from IPCAL (a data base containing fiscal data) and the LM&SP DWH were used for the construction of a disposable household income. Data from EU-SILC were used for comparison. The analysis states which income components of HY020 can be constructed by using IPCAL and the LM&SP DWH data, and which data are still lacking in able to construct a disposable income on the household level. The resulting preliminary working paper is available on demand.

Concerning the low work intensity indicator (LWI indicator), an analysis mapping the differences between the indicator in EU-SILC and the indicator in the LM&SP DWH has been made. In this analysis, some suggestions were made to adjust the LWI indicator in the LM&SP DWH to European definitions. The indicator was also recalculated for a different age group and household work intensity. The results of this analysis have been presented in the working group. The resulting paper is available on demand.

T3.2: MIMOSIS

The development of MIMOSIS, the Microsimulation Model for Belgian Social Insurance Systems, and a tool for social policy research, was supported during the project. MIMOSIS is a microsimulation model managed by the FPS SS. This model runs on a data set which is an extract of the LM&SP DWH. The model is accessible for research in Belgium. The research team developed a new, up-to-date, data set in order to update the model. This was realized in close cooperation with the FPS SS.

T3.3: DynaM

The DynaM project, which consists out of the National Social Security Office and the HIVA research institute of KU Leuven, creates dynamic statistics on job creation and job destruction at the enterprise level, and this based on internationally recognized definitions and scientific research. During the project, the research team supported the integration of DynaM concepts in the LM&SP DWH. The integration of these concepts in the LM&SP DWH offers the opportunity to supplement the current DynaM statistics with characteristics of individual employees (e.g. age, gender, household characteristics, migrant background, employment support or allowances) and the in- and outflow channels of employment (inflow from or outflow to unemployment, retirement, self-employment...). Furthermore, the integration of indicators on the demographic behaviour of enterprises (starting, closing, expanding and merging enterprises) developed in the DynaM project, could offer new insights on job mobility and socio-economic mobility in the LM&SP DWH. Meetings were held with the National Social Security Office and the HIVA research institute on 17/06/2015 and 15/12/2016 to discuss the integration of a concept of job mobility in the LM&SP DWH. Although no concept has been integrated yet, a preparatory note has been written during the course of the project. This preparatory note is available on demand.

T3.4: web tool on household level

The network completed a new tool, initiated during the previous Belspo project, to generate aggregated statistics on the household level. Information on the composition of the household, personal characteristics of the reference person and his or her partner and socio-economic status were integrated in this online tool. Smals was responsible for the technical development of this tool. The tool can be found online: <https://www.bcass.fgov.be/app030/samigs/?language=nl>.

T3.5: disabled persons

This task aimed to identify disabled persons on the labour market, and this by combining different sources of data present in the LM&SP DWH. Since several data sets contain information on the incapacity for work, it would be interesting to define one variable which is a synthesis of all these data sets. The network decided however, and this in close cooperation with the BCSS and the FPS SS, to not complete this task. Due to the workload, priority was given to other tasks, like for instance T3.1.

Work packages specified in the annex

The annex wants to further develop, enlarge and deepen the content of the LM&SP DWH. Eight different tasks were mentioned in the annex; some being quite similar to the earlier mentioned tasks.

T4.1: manual for ad hoc data requests

A document on the LM&SP DWH website describes the procedure for obtaining data for research purposes (for more information, visit https://www.bcass.fgov.be/nl/dwh/dwh_page/content/websites/datawarehouse/data/gegevensaanvraag-op-maat.html). This document, however, is quite complicated and could be rewritten and expanded with information on the use of administrative data in other countries. The research team decided, together with the BCSS and the FPS SS, to not take up this task. Priority was given to other tasks due to time constraints.

T4.2: description of the LM&SP DWH

The general description of the LM&SP DWH on the website is very technical. Updating and simplifying this description would improve the accessibility of the website, and the LM&SP DWH in general, for a layman. On top of that, a translation of this description would be advisable according to Belspo.

The general description of the LM&SP DWH was updated numerous times by the BCSS and the research team during the course of the project. They decided however, not to translate this general description into English. The reasons are similar to the previous task.

T4.3: list of other relevant data sources

Belspo indicates that relevant Belgian data sources, who are not yet integrated in the LM&SP DWH, should be identified. A distinction between sources that should be linked on a permanent base, and sources that could be linked ad hoc, should be made.

This was an ongoing exercise by the research team during the project. When a particular source appeared to be missing, the research team assessed whether this source should be integrated in the LM&SP DWH or not. Specifically, this task was also performed while developing a disposable income concept (see also T3.1 and T4.4). A list of relevant, and missing, income components was delivered by the end of the project.

T4.4: international classifications

Certain data that are already integrated in the LM&SP DWH, or data that could be integrated, could be categorized based on international classifications. The LED data base, a data base with

qualifications issued by institutions in Flanders (see also T2.1), makes use of the ISCED classification (International Standard Classification of Education) of Eurostat. The data on the occupational aspirations of jobseekers, which makes use of the ISCO classification (International Standard Classification of Occupations) of the International Labour Organization (ILO) of the UN, will be integrated in the LM&SP DWH in the near future (see also T2.2).

T4.5 derived variables

One of the strengths of the LM&SP DWH, is its ability to construct derived variables. The annex stipulates four different concepts that should be developed. All of these tasks were assigned to Centre METICES during a meeting on 29/09/2016 with the network, excluding the final task. This task was assigned to CeSO.

- The development of a new set of variables that does not only calculate volumes at the end of a quarter, but also within a quarter. This task was not carried out during the project due to the workload and time constraints.
- The development of variables that indicate the duration of a certain position in the nomenclature of the socio-economic position. At the moment, the nomenclature only indicates the position on the last day of the quarter. Again, this task was not carried out during the project due to the workload and time constraints.
- The development of new variables that indicate labour market activity at the company level. These variables are developed following the methodology formulated during the DynaM project. This task was already discussed in T3.3.
- The construction of a definition of employment disability, so a derived variable based on this research can be created. The outcome of this task was already discussed in T3.5.

T4.6: international indicators

The following indicators / tasks were mentioned in the annex:

- The construction of a disposable income on the household level, based on 'HY020' in EU SILC. A first analysis was conducted by the CeSO and was delivered by the end of the contract. This task was already discussed in T3.1.
- Highlighting the differences between the (low) work intensity indicator in EU-SILC and the LM&SP DWH. If possible, the low work intensity indicator in the LM&SP will be recalculated using the earlier mentioned differences and insights. During the course of the project, the differences were analysed by writing a paper and presenting this paper in the working group (see also T3.1).
- The construction of a number of indicators that map the challenges on the labour market. This task is linked to the Employment Performance Monitor of the Joint Assessment Framework. This task originates from the SPF SS. A first comparison

between the employment rate calculated in the EU-LFS (European Union Labour Force Survey) and the possibilities of the LM&SP DWH has been made during the course of the project. This preparatory note is available on demand.

- The development of a number of indicators concerning origin in relation to the labour market. The indicator 'employment gap of immigrants' was studied during the course of the project. The integration of this indicator in the LM&SP DWH was investigated.

T4.7: tools for analysis

This task is twofold. First of all, the current web tools were adapted to changes in the data and were kept up-to-date (T1.4). New web tools were developed: a web tool on the household level was published online (T3.4) and a web tool illustrating socio-economic mobility in the short term (T1.4) was designed. The latter will be developed by Smals in the near future.

Secondly, a number of tools were developed based on the LM&SP DWH in the past. Because they rely on data and data requests from the LM&SP DWH, they need to be updated on a regular base. Reference can be made to the microsimulation model MIMOSIS from the SPF SS. This task has already been discussed in T3.2.

T4.8: expansion of the LM&SP DWH

Under the influence of the 6th state reform, and, directly linked to this, the merging of different government institutions, the LM&SP DWH is undergoing important changes. The research team monitored these changes and tried to adapt the LM&SP DWH to these changes. This was for instance the case for the Federal Agency for Children Benefits, the Federal Pensions Service and the Pensions Service for the Government Sector (now part of the Federal Pensions Service). A meeting between the research team and the Pensions Service for the Government Sector was held on 03/02/2017 to discuss possible important changes in their data.

Furthermore, the LM&SP DWH is constantly expanded with new, relevant data sources. At present, talks are being held with the National Institute for the Social Security of the Self-employed to integrate their eClipz data base, which holds information on career data for the self-employed, in the LM&SP DWH (see also T2.4). This integration was not finished before the end of the project, but will be finished in the near future. The same applies for the integration of data on employment in international institutions. During the course of the project, contacts were established with the European Union in order to eradicate the gaps linked to employment at international institutions in the LM&SP DWH. The same is true for the integration of data on universities in the Wallonia-Brussels Federation (T2.1). Lastly, the integration of the Crossroad Bank for Enterprises as a source was investigated.

Work packages not specified in the contract, nor in the annex

A number of tasks that were not specified in the contract, nor in the annex, were completed during the course of the project. This was the case for three different tasks.

T0.1: Lipro and origin

Statistics Belgium formed a working group on the reform and harmonisation of the lipro typology; a typology of households (e.g. single households, people living in a communal household...). The lipro typology is currently integrated in the LM&SP DWH. During the course of the PONS project, the network monitored these changes in order to assess and document these changes for the LM&SP DWH. The working group of Statistics Belgium decided to change the lipro typology, although the proposed changes are minor. The network decided to integrate the new typology in the LM&SP DWH. The old typology will however continue to exist in the LM&SP DWH for comparative reasons.

T0.2: Renewal and expansion of the National Register data

A data request that renews and expands the data of the National Register in the LM&SP DWH was submitted and approved. This data request does not only demand the already existing variables from the National Register in the LM&SP DWH, but also contains a number of new variables. Information on legal cohabitation, employment at European and international institutions (see also T1.1 and T4.8) and people on the waiting list of Belgian municipalities were added to the LM&SP DWH.

T0.3: Integration of permanently disabled known to the Fund for Occupational Accidents

The Fund for Occupational Accidents has delivered data on permanent disability due to an occupational accident to the LM&SP DWH. Because of the administrative nature of the data, there are some difficulties concerning the integration of the data in the LM&SP DWH. Permanently disabled persons are only present in the data during the first year of the permanent disability, meaning they are lacking for the following years. The data of the Fund for Occupational Accidents need to be reformed. The research team is currently discussing this reform with representatives of the Fund. This means that this task won't be finished before the end of the project, but it will be in the near future.

Recommendations

The rich nature of the LM&SP DWH makes it an extremely useful source for research purposes and policy assessment. The users of the LM&SP DWH are many and include academic researchers as well as administrations and policy makers. The aforementioned work packages improved the quality, accessibility and strategic position of the LM&SP DWH for research purposes and policy assessment.

Work package 1 focused on the general support of the LM&SP DWH. Due to the dynamic nature of the LM&SP DWH, new data sources are constantly being added and the existing data sources are subject to change. This means that the metadata, indicators, derived variables and online consultation tools of the LM&SP DWH need to be kept up-to-date continuously, and this not only during the course of the project, but also afterwards. If not, the quality of the data and the documentation of the LM&SP DWH is at risk. This has serious consequences for research based on the LM&SP DWH data.

Work package 2 aimed at extending the scope of the LM&SP DWH. The integration of new data sets in the LM&SP DWH needs to be supported in the (near) future, in order to maintain the relevance of the LM&SP DWH for scientific and policy preparatory research. This means that the tasks mentioned in work package 2 need to be monitored after the end of the contract. First of all, the integration of educational data is not yet finished (T2.1), since the incorporation of university degrees for the Wallonia-Brussels Federation still needs to be investigated. After the integration of the university degrees, these data need to be coordinated with the existing data of the Wallonia-Brussels Federation. Secondly, the shift to the 'Competent' classification (T2.2) needs to be followed up. The same is true for the actual integration of the data of the different regional employment services. Moreover, eClipz still needs to be integrated and the incorporation of career data on civil servants (T2.4) needs to be monitored in the future. Lastly, the integration of cross-border labour, especially in the nomenclature of the socio-economic position, needs to be supervised (T2.6).

A number of international indicators and tools were developed in work package 3. The nature of these exercises was primarily theoretical, which means that the tasks specified in work package 3 need to be resumed in the future. This is especially true for the construction of a disposable household income (T3.1). Furthermore, the identification of disabled persons on the Belgian labour market (T3.5) was not set in motion due to the workload and time constraints. This task should be taken up in the near future.

5. DISSEMINATION AND VALORISATION

The results were presented to a broad range of stakeholders by means of a multiple valorisation strategy. First of all, the results were presented to the management group / data suppliers of the LM&SP DWH. This group consists out of all the public institutions delivering data to the LM&SP DWH. As illustrated in '3. Methodology', this group met a number of times during the course of the project. Secondly, the project's results were presented once or twice a year during the user network of the LM&SP DWH, which was organised by the research teams. The user network consists out of researchers, policy makers, representatives of various institutions and other interested parties. Again, this was already illustrated in '3. Methodology'. Thirdly, the updates and innovations were communicated and published on the website of the CBSS, which can be accessed by the general public (for more information, visit: <https://www.bcass.fgov.be/nl/dwh/homepage/index.html>). Lastly, the dissemination and valorisation of the results is clearly illustrated by the number of ad hoc data requests issued by (scientific) institutions, a number which has been on the rise during the last few years. This is illustrated by TABLE I.

TABLE I: Number of ad hoc data requests during the course of the project (2013 – 2017)

Year	Number of ad hoc data requests
2013	35
2014	43
2015	52
2016	59
First trimester of 2017	19

The nature of these different data requests was very diverse. The data requests came from federal or regional government institutions, for instance the SPF SS concerning the number of medical examinations, universities or colleges, for instance KU Leuven on the reform of widow's benefits, or cities, like the city of Antwerp. But also social service departments of towns, like for instance the social service department of Halle, requesting information on couples with low pensions, and embassies, applied for data.

6. PUBLICATIONS

As mentioned in '5. Dissemination and valorisation', all updates and innovations were published on the website of the CBSS (<https://www.bcss.fgov.be/nl/dwh/homepage/index.html>).

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Donvil Nina	KU Leuven
Ermans Thomas	ULB
Hausmann Thomas	ULB
Herremans Wim	KU Leuven
Knapen Hans	KU Leuven
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Parton Martine	KU Leuven
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Rober Ariane	KU Leuven
Van Camp Guy	Federal Planning Bureau
Van Mechelen Natascha	SPF SS
Vleminckx Koen	SPF SS

Moreover, the network would also like to thank the members of the user network for their input:

TABLE III: Members of the user network (situation on 20/04/2017)

Name	Institution
Albareello Elsa	Unia
Aubert Angeline	Université de Mons
Baisier Leen	SERV
Bauwens Els	Stad Gent
Bay Christelle	ONEM
Bellens Willy	FOD WASO
Berghman Jost†	KU Leuven
Bertrand Amandine	Actiris
Bevers Tom	FOD WASO
Boey Raf	KU Leuven
Bollen An	Cevora
Bollens Joost	VDAB

Boon Françoise	Strateg
Boudry Bernadette	Nationale Bank
Boudida Abdeltif	PDOS
Bouvy Anne-Françoise	One
Bussi Margherita	ETUI
Buysschaert Philippe	Vlaamse Overheid
Callier Louise	ULB
Carpentier Sarah	UCL
Carpino S.	Brussels Hoofdstedelijk Gewest
Carrette Valérie	KU Leuven
Castaigne Marie	Statistics Belgium
Ceniccola Pasquale	ULB
Chalon Jean-Claude	FOREM
Chantry Christophe	PDOS
Co Lien	Statistics Belgium
Cocquit Freddy	RSZ
Colard Alain	ULB
Corluy Vincent	UA
Costes Daphne	Vlaamse Overheid
Cuyvers Dries	Brussels Instituut voor Statistiek en Analyse
De Keyser Tomas	Nationale Bank
De Lathouwer Lieve	KU Leuven
De Maeseneer Jan	UGent
De Paepe Edwin	PDOS
De Rick Katleen	KU Leuven
De Spiegelaere Myriam	ULB
De Spiegeleire Marilyne	FOD WASO
De Tavernier Wouter	KU Leuven
De Villers Mourad	Actiris
Debast Amandine	CFWB
Deboosere Patrick	VUB
Debosscher Kobe	Vlaamse Overheid
Debuck Dominique	Socialistische mutualiteit
Debusschere Marc	Statistics Belgium
Decoster André	CES – KU Leuven
Decuyper Johan	Nationale Bank
Defever Philippe	FOD Financiën
Dekkers Gijs	Federaal Planbureau
De Laet S.	
Delvaux Anne	FOD Volksgezondheid
Demaesschalck Filip	KU Leuven

Denorre Marleen	RSZPPO
Derks Anton	Vlaamse Overheid
Deschamps Luc	Vlaamse Overheid
Deschrijver Annelies	Statistics Belgium
Desmarez Pierre	METICES - ULB
Devlaminck Julie	RSVZ
Dewitte Pieter	Statistics Belgium
Dimokritos Kavadias	UA
Dirikx Eric	Stad Gent
Djait Faiza	KU Leuven
Dmitrevsky Pierre	RSZ
Dominioni Léopoldina Caccia	Bruxelles Formation
Dossche Dorien	Stad Aalst
Doyen Gerlinde	Vlaamse Overheid
Dujardin Claire	IWEPS
Dupont Alain	POD MI
Dussart Adeline	FOREM
Eggermont Rita	Kind en Gezin
Englert Marion	Brussels Hoofdstedelijk Gewest
Fehmieva Essin	FOD Economie
Feyaerts Gille	Brussels Hoofdstedelijk Gewest
Fonder Muriel	IWEPS
Fontaine Pierre	ULB
François Jérôme	Actiris
Gadeyne Sylvie	VUB
Gayda Sylvie	Stratec
Geenens Geneviève	Statistics Belgium
Geurts Karen	HIVA - KU Leuven
Ghaye Beatrice	CFWB
Gilbert Valérie	FOD WASO
Greten Verena	Duitstalige Gemeenschap
Haemels Joost	UA
Haex Kristof	FBZ
Halin Anne-Marie	RIZIV
Henau Anne	Brussels Hoofdstedelijk Gewest
Hendrickx Koen	Federaal Planbureau
Herman Barbara	ULB
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Heylen Vicky	Provincie Vlaams-Brabant
Hofman Hilde	RVP

Hoppenbrouwers Karel	KU Leuven
Janssen Steven	Sigedis
Janssens Christophe	FOD Financiën
Jauniaux Nathalie	CFWB
Johanns Bernd	ADG
Joyeux Christophe	Federaal Planbureau
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Laenen Silke	CeSO - KU Leuven
Lamberts Miet	HIVA - KU Leuven
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Lebrun Michaël	METICES - ULB
Ledegen Hans	Vlaams Centrum Schuldenlast
Lefevere Eva	UA
Lejour Christian	AVCB
Leroux Ingrid	FBZ
Lievens Luc	RSVZ
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Lusine Patrick	FOD Economie
Luyten Sarah	Brussels Hoofdstedelijk Gewest
Maes Marjan	HUB
Maes Peter	KSZ
Maesele Monica	Nationale Bank
Marinkovic Patrik	Cevora
Maron Leila	ULB
Martens Albert	CeSO - KU Leuven
Martin Esteban	ULB
Marynissen Rudy	Provincie Antwerpen
Masure Luc	Federaal Planbureau
Masuy Amandine	IWEPS
Mathy Anne-Laure	ULB
May Xavier	ULB
Meessen Florence	Centrale Raad voor het Bedrijfsleven
Meeus Joke	KU Leuven
Merckx Lydia	FOD Economie
Miermans Pieter-Jan	FOD Volksgezondheid
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Misplon Ronny	VDAB
Mortelmans Dimitri	CELLO - UA

Moureaux Jean	RVP
Navarre Olivier	FOREM
Ndamé Samuel	One
Nevejan Hendrik	Centrale Raad voor het Bedrijfsleven
Noirhomme Marie-Laure	FOD WASO
Noppe Jo	Vlaamse Overheid
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Perelman Sergio	ULG
Perrin Nicolas	FOD Binnenlandse Zaken
Pham Kimlien	Nationale Bank
Plasman Olivier	CFWB
Plasman Robert	ULB
Poupinel De Valence Frederic	FOD WASO
Rayp Glenn	Ugent
Renneson Bernard	FAO
Reulens Lysbeth	Kruispunt MI
Roelants Mathieu	KU Leuven
Romain Astrid	Brussels Hoofdstedelijk Gewest
Ruyssen Ilse	UGent
Ryssaert Lynn	Ugent
Scandella Fabienne	ULB
Schelstraete Inge	Stad Gent
Scholiers Bart	CELM - KU Leuven
Schouppe Joost	Stad Antwerpen
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Smith Catherine	Bruxelles Formation
Stellian Virginie	RVP
Stoop Reinhard	Stad Antwerpen
Stroobant Godelieve	UCL
Surkyn Johan	VUB
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Vanthillo Ties	UA
Vantieghem Bart	Sigedis
Vanweddigen Myriam	Vlaamse Overheid
Veinstein Matthieu	ULB
Verbeke Véronique	Brussels Hoofdstedelijk Gewest
Verhaverbeke Wouter	
Verhetsel Ann	UA
Verlinden Roel	VVSG
Vermadere Caroline	HIVA - KU Leuven
Vermeir M.	VDAB
Vertommen Sara	Stad Antwerpen
Vets Peter	RSZ

Vinck Julie	UA
Vivet Veerle	FOD Volksgezondheid
Vroman Patricia	CELM - KU Leuven
Wayens Benjamin	ULB
Wertz Isaline	ULB
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