



CompNet The Competitiveness Research Network

# MULTIMSPROD – TSI 2022

## 3rd Progress Report

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Deliverable D1.4

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### 1.1.2. Introduction

*Content: Brief introduction of TSI project, context and goal of progress report, structure of the report.*

Access to cross-country comparable micro-based data entails many challenges due to confidentiality concerns, different requirements for data access and lastly heterogeneity in data structure.

MULTIMSPROD aims to provide national authorities of participating productivity boards with the tools to improve their ability to analyze productivity and economic development and design policy reforms.

This ambitious objective is achieved by providing the beneficiaries with

1. harmonized data (micro-aggregated and cross-country comparable) to conduct policy analysis and produce policy recommendations,
2. the necessary training to ensure that the beneficiaries can fully exploit the potential of the micro-based data infrastructure, and
3. finally with a network to share best practices and common goals.

MULTIMSPROD started in October 2022 for a period of 24 months. Initial participating countries include Germany, France, Slovenia, Slovakia, Portugal and Latvia. After approval of the European Commission, Austria became the 7<sup>th</sup> member of the program.

This report is the third of in total eight quarterly progress reports which have the goal of documenting the current project status, highlighting achievements, and pointing out risks and problems.

The report is structured as follows: Section 2 documents the project progress and describes submitted deliverables, section 3 describes the country specific progress in constructing the MDI and section 4 describes recent activities in research projects in collaboration with NPBs. Section 5 provides an outlook and the next milestones and planned steps.

### 1.1.3. General Progress Report

*Content: Description of recent activities (i.e., research projects using CompNet and MDI, expansion of MDI infrastructure) and their current status. This report builds on the previous progress report dated June 11, 2023. In the last few weeks we have focused on retooling for the next phase of the TSI deliverable which centers primarily on continued development, training, and research with the Micro Data Infrastructure (MDI). Our plan for the year is detailed in D2.3 Extended MDI. We have also finalized and delivered the CompNet Productivity Report (D3.3 on 03 July, 2023), we are working to deliver an MDI specific Special Training (delivery D3.2). Finally, we have updated the data accessible through the visualization tools (D2.2.)*

#### Deliverables

*Content: listing and description of the submitted deliverables and those in progress*

- D2.2 Data Access Toolkit
- D3.3 CompNet Productivity Report (9<sup>th</sup> Vintage)
- D3.2 Special Training
- D2.3 Extended MDI

Research projects using the most recent (9th) CompNet data vintage were conducted cooperatively with the productivity boards, or by CompNet staff, and submitted as **D3.3 CompNet Productivity Report**. The projects cover the following topics:

1. Productivity development and dispersion
2. Firm competitiveness
3. Reallocation and business dynamism in times of crises
4. Energy price shocks, energy usage and firm performance
5. Liquidity constraints and SMEs
6. Firm concentration and market power

Replication files for the analyses presented at the 2nd workshop are accessible to all CompNet users including the productivity boards through our replication package site: [Secretariat-CompNet/Replication-Packages](https://github.com/Secretariat-CompNet/Replication-Packages) (github.com). This site is also directly accessible via a link through our website: [Trainings \(comp-net.org\)](https://trainings.comp-net.org)

### Planning for the Extended MDI Research Output

As we look towards the next phase of the Technical Support Instrument our focus turns to MDI research applications. To this end we are already engaging the productivity boards to expand the research projects described in the Productivity Report this time using the MDI data. Our goal is to first, replicate the analysis that was conducted with the CompNet data with the confidential MDI for the participating countries, and second, to expand the analysis making use of firm-level information.

### Expansion of the MDI Infrastructure

Our ultimate goal is to expand the use of microdata by the Productivity Boards. To this end we continue to make significant progress towards the development of the microdata infrastructure (MDI). The development of the necessary harmonized datasets is progressing in Slovenia, Portugal, Germany, and Austria. Our TSI-MDI team in cooperation with the Slovenian Productivity Board and Slovenian Statistical Office, the Portuguese Statistical office, and the German Statistical Office (Destatis) continue to work towards finalizing and preparing the research files. The process of data access in cooperation with STAT AT and the Austrian-Micro-Data Center (AMDC) is well underway.

The Slovakian and Latvian productivity boards are exploring options with their respective statistical offices. In addition, there have been efforts to expand the MDI network. The MDI progress, documentation and training modules will be covered in depth in **D2.3 Extended MDI**.

### MDI Special Training

The progress of the MDI infrastructure has generated large interest of the participating productivity boards in using the data, but also the need for training on the usage of the MDI and its tools. A special MDI training course is in preparation and will be submitted as **D3.2 Special Training on Policy Applications**.

## 1.1.4. Country specific MDI progress

*Content: Status of the current MDI set-up/data access; Description of efforts to access the data (accreditation, signing of contract) and data preparation (choosing datasets, data harmonization).*

### France

In France, we inserted in the CASD environment three additional data sources: EACEI (survey on energy data at the plant level), EAP (Prodcom data) and DADS (employer-employee data, needed to connect EACEI data to the rest of our sources). We worked with the French Productivity Board (France Strategie and one new Junior Consultant).

## Germany

The German statistical office has appointed two staff members that are now fully dedicated to the collection and preparation of the MDI and CompNet dataset. The two staff members started in June and are undergoing training by us. Since then, the MDI setup has progressed significantly. We have bi-weekly meetings with the statistical office to discuss questions arising in the data preparation process. Moreover, we meet regularly jointly with the statistical office and productivity board to make sure the selection of datasets matches the research interests and needs of the German productivity board. Current activities include the selection and assembling of datasets, contract specification and negotiation, and estimating a timeline for the completion of the MDI dataset.

## Latvia

Unfortunately, Latvia does not appear to have made progress with regards to access to the Statistical Office data. More precisely, the Statistical Office has come up with an estimation of costs to produce the needed data to participate in the MDI, but there is no indication of whether some Latvian Institution will take up the cost. Overall, the Latvia'n delegation is for the most part unresponsive. Latvia's NPB has not expressed interest in participating in the ongoing research projects using CompNet, and they did not participate in the last Steering Committee meeting, nor in the 2<sup>nd</sup> TSI Workshop in Halle.

## Portugal

In Portugal the Statistical Office completed the first set of sources as agreed (business registry, structural business statistics, and part of ICT survey and balance sheet data). We are slowly installing the set of codes that make up the MDI code infrastructure, making sure the codes shipped by the MDI team run smoothly in the Portuguese environment. INE has also conducted some quality checks on the data and we initiated after their input the setup of a network of statisticians to help in the data construction process. By end of October, we expect to receive the rest of the BS and ICT data, as well as Prodcom and the energy data.

## Slovakia

The Slovakian productivity board continues its negotiations with the Slovakian statistical office for: 1. getting access to, and 2. setting up the MDI database. The CompNet team has provided the list of MDI datasets, variables and relevant metadata. The NPB's assessment is that the statistical office cannot provide access or data at this time. The estimation is that this will not happen for at least three months. In the meantime, the NPB is working with the TSI team to identify alternative viable resources for meaningful research. In this regard the NPB has identified rich data we can access outside of the MDI infrastructure, which are however only related to Slovakia and of limited scope for international comparisons. We will however keep engaging in this fashion with the Slovakian NPB until progress can be made with the MDI.

## Slovenia

We are in the process of harmonizing the main firm-level datasets for the MDI (i.e. business register, structural business statistics, firm balance sheet data) in collaboration with the Slovenian statistical office and productivity board. We continue to proceed sequentially and add data source by data source. We plan to harmonize the MDI database by the end of November.

## Austria

We have duly completed the accreditation of academic institutions to which our staff is affiliated. A detailed research proposal was drafted and an application to request data access was submitted to Statistics Austria in August. We have received the first round of feedback from Statistics Austria and

submitted a first answer. The Productivity board (at the National Central Bank) is currently negotiating the data access costs with Statistics Austria.

### 1.1.5. Project Status

*Content: Description of recent activities in research projects using CompNet and MDI and their current status: Description of communication/collaboration with NPB, datasets used (CompNet, and potential extensions using the MDI), and intended usage of research output (e.g. for country's productivity report, policy note, full paper).*

#### NPB France and NPB Germany: Energy Usage

Both the French and German NPBs are actively involved in a research initiative that centers on enhancing firms' energy efficiency. This undertaking started with an exhaustive examination utilizing CompNet and external datasets that encompassed the relation between firms' energy consumption and energy pricing. These findings are comprehensively presented in the D3.3 Productivity Report. The project will progress by analyzing microdata. It is important to note that the CompNet team does not yet have direct access to all the microdata sources within these countries. Consequently, the analysis will be carried out by the NPBs under the vigilant oversight and guidance of the CompNet team. At present, one of our counterparts has provided us with a set of summary statistics pertaining to firms' energy consumption, composition, and overall efficiency. The CompNet team is actively formulating additional research inquiries and analyses based on these initial descriptive statistics.

#### NPB Slovakia: Young and constrained small firms

The Slovakian Productivity Board is actively engaged in collaborative research focusing on the credit constraints faced by SMEs. This comprehensive project commenced with an in-depth analysis utilizing CompNet data across a wide number of countries, as detailed in the D3.3 Productivity Report. Subsequently, a microdata sample related to Slovakian firms was provided by the NPB and examined by the dedicated CompNet team. To advance further, we require additional data pertaining to external financing of firms, encompassing both public and private sources. Direct access to the highly confidential data is not available to the CompNet team. Consequently, the project will progress with the NPB team spearheading the analysis under the guidance of the CompNet team. Presently, the NPB team is in the process of providing CompNet with comprehensive codebooks for all data sources to facilitate the formulation of next steps.

#### NPB Portugal: Competitiveness Indicator

The Enterprise Competitiveness Indicator (ECI) was built using CompNet data in the context of a joint research project with the Portuguese NPB. The indicator is a composite index encompassing several dimensions of firm performance and has already been computed in the past by the Portuguese team on different datasets. The goal is to rank European countries in terms of their firms' competitiveness across various dimensions. Also, the indicator allows us to track how competitiveness develops in Europe over time. Last, the project aims to assess the explanatory power of the indicator vis-à-vis conventional measures of external performance, e.g., export market shares. The project is being carried out under supervision of senior staff at the Bank of Portugal and results have already been presented in the 2023 CompNet Productivity Report. There have been preliminary talks with PT colleagues about continuing, refining and extending the project (e.g., comparing urban vs rural regions and gauging the relevance of different ECI dimensions to alternative external performance metrics of different regions and macro-sectors). The idea is also that of computing the ECI on the MDI once access to Portugal data becomes available.

### NPB Portugal: Toolkit to compare frontier and laggard firms

We are working with the Portuguese NPB to produce a toolkit of indicators that allow sector-specific comparisons of frontier firms with laggard firms, over time. Using micro-aggregated CompNet data, we are also interested in measuring productivity catch-up between firms, by sector and by region. The expected output from this collaboration is a reproducible toolkit of indicators which may be easily replicable to other countries with CompNet data. We also plan to assist the Portuguese NPB in preparing a policy brief summarizing the findings specifically for the Portuguese economy.

### NPB Slovenia: Productivity convergence

We collaborated with the Slovenian NPB in a joint research project on “The Productivity Gap between Frontier & Laggard Firms”. Preliminary analysis was done using micro-aggregated CompNet data. The results were presented in Chapter-1 of CompNet’s 2023 flagship Productivity Report. Following the release of the report, we consulted with our counterparts at the Slovenian NPB to assist them in an internal project of benchmarking Slovenian frontier and laggard firms against those in the EU and explaining the forces behind productivity convergence in Slovenia. The longer-term goal is to use the MDI data to replicate the analysis at the firm-level and to compare the findings with other EU countries for which MDI is available. This longer-term project will be pursued once the raw data for Slovenia has been harmonized into the MDI format.

### NPB Slovenia: Reallocation and business dynamism

The Slovenian NPB expressed interest in understanding business dynamism as it relates to productivity and growth. Chapter 3 of CompNet’s 2023 flagship report reports the results of CompNet based analysis in this regard, including challenges to reallocation and growth. We will approach the Slovenian colleagues and explore their interest to extend this line of work further using the MDI infrastructure.

## 1.1.6. Outlook

*Content: Outlook on the next milestones and steps ahead (particular on the horizon until the next progress report)*

Our focus over the next few months will be to develop training modules for the MDI and the capacities of the NPBs in the use of the MDI. In addition, we will delineate further the research projects using the MDI infrastructure and will re-organize the research teams accordingly, including engaging further with the NPBs. Progress along these elements will be presented at the next Workshop scheduled to be held in Vienna, February 22/23 of 2024. The email announcement and invitation to keep the date have already been sent out to all TSI NPBs and additional supportive institutions.