MULTIMSPROD Interim Report: Part A

A. Project summary:

1. Context and overall objectives

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 harmonized data (micro-aggregated and cross-country comparable) to conduct policy analysis and produce policy recommendations, the necessary training to ensure that the beneficiaries can fully exploit the potential of the micro-based data infrastructure, and finally 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 7th member of the program.

Marking the end of the first year of the MULTIMSPROD project, this interim report serves the purpose of documenting the current project status, highlighting the achievements and results obtained thus far. The report is structured as follows: Section 2 documents the project progress and describes the main achievements and submitted deliverables. Section 3 describes the results and impact of the work undertaken so far.

2. Work performed and main achievements

2.1 In the first quarter of the MULTIMSPROD project (October-December 2022), we organized a number of kick-off meetings to meet individually with the participating national productivity boards (NPBs) and statistical offices (NSOs). These meetings served several purposes:

- Introducing our data products, i.e., the micro-aggregated CompNet dataset, and the micro data infrastructure (MDI)
- Obtaining a first impression of training and data needs
- Describing the deliverables and responsibilities
- Initiating contacts between each country's productivity board and statistical office regarding the provision of administrative microdata

We met with all requesting countries in Wiesbaden (Germany), Paris (France), Lisbon (Portugal), Ljubljana (Slovenia), Bratislava (Slovakia), and Riga (Latvia). The meetings included representation of the EC DG-Reform as the funders of the Technical Support Instrument. Representatives provided the introductory remarks and set a collaborative tone for all the meetings. Meeting summaries were provided to DG-Reform.

Following the kick-off meetings, we provided the NPBs with documentation of the CompNet data and self-guided learning modules, as well as documentation of the data required to build the MDI in the respective statistical office. One-on-one conversations with statistical offices were initiated to assess: 1) the types of research projects they would like to undertake with the readily available CompNet data, and 2) the feasibility of setting up access to confidential microdata through each of the requesting countries NSOs.

During this time we initiated the creation of the project website including detailed information about the project and its participants. The website is accessible to all participants and is updated regularly with additional content. The site is first made available in March of 2023 (**Deliverable D.1.1**).

2.2 In the second quarter (January-March 2023), we continued with multiple one-on-one meetings to engage both the NPBs and the NSOs. The goal of these meetings was multifold:

- To assess progress and concerns with the training modules
- To obtain a list of economists from each of the requesting countries that would become CompNet data experts
- To obtain a list of initiatives the NPBs might be interested in. To this end we provided a list of possible topics. This was not meant to be exclusive or exhaustive
- To initiate the process to gain access to confidential microdata

In February 2023, we organized the 1st workshop in Lisbon at the premises of the Portuguese statistical office (**Deliverable D.2.5**). The workshop included presentations of outlines of research projects to be carried out using the CompNet data. We explored potentials for collaboration between productivity boards, and productivity boards and the CompNet staff. Following the discussion at the workshop in Lisbon and subsequently incorporating the participants' feedback, the following research topics were shortlisted:

1. Productivity trends 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 small and medium enterprises (SMEs)
6. Firm concentration and market power

These research topics were then pursued in the form of collaborative projects among various NPBs and the CompNet staff. In order to facilitate access to the data and the collaboration with the productivity boards we developed a series of online trainings that were accessible through the TSI website (**Deliverable D.3.1**). We made available 3 specialization levels (Beginners, Intermediate, and Advanced) aimed at mastering the use of the CompNet Dataset. In addition and again to facilitate working with the data we provided a detailed CompNet data Quality Report for each country in the TSI (**Deliverable D.2.1**).

Contruction of the website and data access tools continues during this time. One relevant aspect of the development is a new visualization tool that allows CompNet users to access the CompNet data in graphical form and download it to their computers on demand. The new tool is made available through the website in March of 2023 (**Deliverable D.2.2**).

On the MDI side, we made significant progress in terms of setting up the infrastructure in various countries. Data access contracts were signed with the Slovenian NSO (SURS) and the preparation of harmonized datasets was kicked off by the Portuguese NSO, to be followed by the German NSO (Destatis). We initiated the process of data access in cooperation with STAT AT and the Austrian-Micro-Data Center (AMDC). We also continued with general efforts to span the network beyond the participating countries. While these are not strictly TSI funded activities, they do benefit the TSI network. We started the process of setting up MDI data in Finland, led by the Finnish NSO in cooperation with ETLA. We also made efforts to start a collaboration with the UK productivity institute for accessing the UK firm level from the ONS.

The first progress report is uploaded to the EC Project management website (**Delivery D1.2**).

2.3 In the third quarter (April-June 2023), we continued with the research collaborations with NPBs on the 6 topics shortlisted in the previous workshop. Results from the research were published in the form of an Annual Productivity Report (**Deliverable D.3.3**) and the code made available through a GitHub repository accessible through the TSI Website (**Deliverable D.2.4**). All output including tables, and charts is replicable. The code is provided for training and replication purposes.

In June, we organized the 2nd workshop in Halle where we presented the findings of the ongoing research projects and gathered feedback from the participating NPBs (**Deliverable D.2.6**). As we made progress with the setting up of the MDI data across countries, we turned our focus towards research applications of the MDI. To this end, we started engaging the productivity boards to expand the research projects described in the Productivity Report using micro-level MDI data.

We made significant progress in the development of the necessary harmonized datasets in Slovenia, Portugal, Germany, and Austria. We also continued to explore options with the Slovakian and Latvian productivity boards and their respective statistical offices to initiate the setting up of MDI data.

The progress of the MDI infrastructure generated strong 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. In this regard, we started preparing a special MDI training course to help facilitate NPBs to use the MDI data and tools for policy-relevant research applications.

The second progress report is uploaded to the EC Project management website (**Delivery D1.3**).

2.4 In the fourth quarter (July-September 2023), we pushed our efforts to consolidate the MDI data in various countries. Having completed and delivered the output associated with the CompNet data, access, training, and tools, we turn our attention to hiring and training the necessary staff to deliver the MDI phase of the project. With the new staff in place we embark on their training and engagement with the statistical offices, as well as with the National Productivity Boards.

In the case of Austria, we duly completed the accreditation of various academic institutions to which our staff are affiliated. In August, we drafted a detailed research proposal and submitted an application to Statistics Austria to request data access. In Portugal and Finland, we liaised with the respective NSOs to harmonize the firm-level datasets for the MDI and install the code infrastructure so that codes shipped by the MDI team run smoothly in the Portuguese and Finnish environments respectively. In Slovenia, we continued to proceed sequentially and add data source by data source, with the aim of harmonizing the MDI database by the end of November.

We continued our negotiations with counterparts in Slovakia and Latvia to gain access to data from their respective NSOs. In the meantime, the Slovakian NPB has been working with the CompNet-MDI team to identify alternative viable resources for meaningful research. In this regard, the NPB has identified rich data we can access. These data are in the process of being set up to mimic the MDI. It will include data access tools and coding routines typically available to the MDI. In this sense, the data can be used to develop code that can be executed also in MDI member countries – and viceversa. We will, however, keep engaging in this fashion with the Slovakian NPB until progress can be made regarding access to the NSO data. In the case of Latvia, we have identified similar scope of joint research outside the MDI infrastructure. We are working with a new counterpart to jointly prepare a policy brief as a snapshot of the Latvian economy using key indicators of productivity and competitiveness based on micro-aggregated CompNet data.

This time is also a period of conversation and introspection. We have continued to listen to our partner NBP and NSO and have conceptualized the best way to deliver the confidential Micro Data Infrastructure (MDI). An element that is the object of repeated conversations is the need of a data networking tool that members can use to share information and seek guidance. The results of these conversations and our plants to deliver the MDI tool are summarized in an Extended MDI report (**Delivery D2.3**).

The third progress report is uploaded to the EC Project management website (**Delivery D1.3**).

2.5   In the fifth quarter (October-December 2023), we continue the development of the staff, the Micro Data Infrastructure, as well as the research of with the productivity boards around specific research topics. The following 5 topics are identified:

- Trade and competitiveness: Member NPBs include SI, PT, AT, LV, SK*
- Energy: Member NPBs include DE, FR, SI, AT
- Phillips curve and monetary policy: Member NPB include FR and possible PT
- Firm responsiveness and Productivity: Member NPBs include SI, AT
- Small Business Finance: Member NPB include SK* with other potential additions

Training, data infrastructure, and research will be delivered by 11 teams, 6 related to the data infrastructure development, and 5 research and training groups. These groups are composed of members of the TSI staff, as well as members of the NPBs, and the relevant NSO. The TSI staff are tasked with the following:

1. Interacting with the National Statistical Offices and the National Productivity Boards in the continued development of the MDI data infrastructure.
2. Assessing the training needs of the NPBs, and interact the with NPBs to provide training, and assist in the development of the research projects deemed of interest by the NPBs.

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Training modules for the MDI are being completed following the assessment from the research teams. It is planned to be delivered in the middle of December 2023. (**Continuing Training Delivery D.3.2**).

3. Results and impacts

3.1   We have created a **project website** which can be accessed via the CompNet website and includes an overview of the project content, information on the project team, data products and training. The news section provides updates on recent developments. The website can be found here: CompNet (comp-net.org).

3.2   We prepared and submitted a **Data Quality Report** which provides a first comparison of CompNet aggregates for the TSI participating countries against "official" statistics of the Structural Business Statistics published by Eurostat (as well as the OECD). The aim of this report is to make transparent the reasons for differences between the CompNet aggregates and official statistics and highlight features of the CompNet data users should be aware of.

3.3   The **1st TSI workshop** in Lisbon on 24 February 2023 saw the participation of a total of 42 representatives from across EU institutions and DGs, NPBs, NSOs and various central banks. The discussions which took place at the 1st workshop shaped the research agenda for the rest of the year, resulting in several research collaborations among different NPBs as well as between NPBs and the CompNet staff.

3.4   The **2nd TSI workshop** in Halle on 23 June 2023 had a total of 45 participants. This workshop offered us a platform to share the findings of ongoing research collaborations as well as present the results of the 2023 Productivity Report. It also gave us the opportunity to explore potential longer-term collaborations using MDI data to replicate the findings of the Productivity Report.

3.5   **Replication files** for the analyses presented at the 1st and 2nd workshops are accessible to all CompNet users including the productivity boards through our replication package site: Secretariat-CompNet/Replication-Packages (github.com). This site is also directly accessible via a link through our website: Trainings (comp-net.org)

3.6   We offered various training programs in the use of the CompNet database for interested productivity boards and CompNet staff members. The training modules include self-guided courses for beginners, intermediate, and advanced users to gain expertise in data analysis, and directed program for theme-specific training, and MDI infrastructure training.

3.7   In addition, **trainings in the use of the MDI infrastructure** are offered in the form of documentation, reports and guided learning. These will be made available as needed and as National Productivity Boards get access to the confidential microdata in collaboration with their National Statistical Offices.

3.8   We prepared and submitted a **Data Access Toolkit** which includes data visualizations in the form of a point-and-click tool featuring seven core variables of the CompNet dataset and is available on the CompNet website. Expansion of the visualizations are planned in accordance with user needs. In addition, an easy-to-use dataset is now available called the CompNet reduced dataset. This dataset provides quick access to key CompNet variables (including productivity and employment) in an easy-to-use manner. It is meant as an easy introduction to the more complex CompNet data.

3.9   We finalized and delivered the **CompNet Productivity Report** in July 2023, summarizing the findings from joint research projects with various NPBs. The research undertaken for this Report serves

as the basis for continuing longer-term collaborations with NPBs, to potentially replicate the findings using cross-country MDI data, once it is readily available.

3.10 An extended MDI conceptualization report was made available in November of 2023. This will form the bases of the final MDI, including access tools and protocols, that will allow the NPBs to access the MDI and interact with each other in a collaborative fashion together with the National Statistical Offices, and the MDI Team.

Dissemination of the project is in the form of:

1. The main website: comp-net.org
2. Annual Productivity Report
3. Workshops: 2 workshops have been delivered.
4. Conferences and Forums: We have discussed the results and goals of the project in multiple conferences and research venues including:
   a. CompNet Annual Conference
   b. CEPR Data Access Workshop and white paper
   c. EU National Productivity Forum.
5. Presentations to National Productivity Boards including:
   a. Austria, Finland, Malta, and Italy.
6. Linked in page
7. A VOXEU piece
8. A VOXTALK Podcast.