Microdata Platform for Productivity: Steering Committee Report #1
03 February 2023

This project has received funding from the European Commission; Directorate-general for Structural Reform Support under grant agreement No 101101853.
Roadmap

• Where do we stand (TSI)
• Website
• Data Access
  • Training
  • Visualization
• NPB Projects
• MDI
• Workshop
• Milestones and Conclusion
Where do we stand

PROGRESS SO FAR

The first wave of CompNet based trainings, as well as discussions with NSI to extend the MDI network is already underway.

CompNet and IWH members met individually with the 6 productivity boards to discuss goals, expectations, and next steps.

October 12th 2022 official start date.
Conference on innovation and productivity in the aftermath of the pandemic

Jointly organised by CompNet, ADBI, IMF, CARF & Hitotsubashi University

15 November 2022 at the University of Tokyo.

For the livestream and presentations please click here.
About the program

Project Information: MULTIMSPROD

Grant Agreement number: 101101853

Funded under: TSI-2022-MULTIMSPROD-IFA

EU contribution: €699,969.00

Coordinated by: Halle Institute for Economic Research (IWH)

Project Outline: Enhancing the Micro Foundation of the Research Output of National Productivity Board (NPRBs). Using Compat and expanding its Micro Data Infrastructure (MID).

Motivation: Access to cross-country comparable micro-based data entails many challenges due to confidentiality concerns. MULTIMSPROD aims to provide national authorities of participating productivity boards with the tools to improve their ability to analyze productivity and development and design policy reforms.

Implementation: 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 a network to share best practices and common goals. The project is founded by the European Commission.

It started in October 2022 for a period of 24 months.

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This website reflects only the author's view and that the Commission is not responsible for any use that may be made of the information it contains.
Training

Here you can find the trainings in WH-CompNet are making available to the productivity boards and CompNet members.

Through these trainings, users will gain expertise in the use of the CompNet database as well as the CompNet Reduced Dataset. The WH-CompNet training offering is in two modalities: self-guided, and directed.

The self-guided program is designed to allow users to take the course in their own time and at their desired pace. There are three self-paced courses: Basic, Intermediate, and Advanced. This course is currently based on the 8th vintage of the CompNet database.

They will take the user from a basic introduction to the data, to more advanced exercises. The user will become familiar with the structure of the data, the variables, and how to combine them to create a report – including charts and regression output.

The directed program will provide theme specific training, for example, in the analysis of business dynamism, and market concentration. These courses will be developed as the need arises.

In addition, trainings in the use of the MOL 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.

Training Events at Tinbergen Institute in Amsterdam (Summer School)

The summer school welcomes second year (research) master students, PhD students, post-docs, and professionals from a wide variety of fields (e.g. macro, applied micro, industrial organization, international trade, labor, empirical finance, regional and urban) who are interested in learning state-of-the-art methods for (cross-country) firm-level data analysis.

This course provides a self-contained set of lectures to bring Master's and PhD students as well as practitioners up to speed in the area of empirical research using firm-level data. The course starts with an introduction to models of firm dynamics and innovation. Next, attention is paid to estimation of productivity, including methods to cope with sample selection, endogeneity of inputs, and lack of firm-level quality adjusted prices.

The insights from production function estimation are used to develop a framework to estimate markups using the so-called production approach. This framework is used to discuss the recent debate around rising market power. Finally, the course discusses recent empirical work on structural modeling of productivity, trade, and growth. Besides theory, the course will include a set of lectures on data handling, programming, and algorithms for empirical applications, as well as daily hands-on practical sessions.

The course serves as a training activity of CompNet and is open to its members and participating institutions.
Although the course is meant for autonomous learning, the ComNet team will be available to answer technical questions and to receive feedback or suggestions, in order to help the data users to exploit this learning opportunity at their best.

Contents

The aim of the course is to learn how to use ComNet data to analyze competitiveness, by looking at different economic dynamics including productivity, financial conditions, international trade, labor, institutional factors, market power, and other economic factors. The three modules touch upon the same topics going at a deeper level of analysis, by growing in analytical complexity from Beginners to Advanced.

Before the three modules start, an introductory presentation explains the structure of the ComNet database:

- Data collection process, data release methodology;
- Coverage: countries, years and sectors;
- Variables: all and zero;
- Data files: unconditional statistics, productivity decompositions, joint distributions, transition matrices, production function for innovations, and reduced database;
- Statistics on percentile, moments (mean, variance, skewness, kurtosis), weights.

The Beginners module is intended for ComNet first users with a limited knowledge of stata, micro data analysis and/or economic theory. The goal is to show how to download and open data using Stata, to make the user able to understand the basic structure of the database, to carry out some statistical analysis, as well as aggregating data. The final output includes tables and charts at country, regional, and industry level. Stata do-files are prepared using the simplest commands, therefore a basic knowledge of Stata would be useful. but is easy in this first session.

TO: how to download the data from the website, open and merge data files, and label the sample of interest; aggregation how to: summarize data and represent them in simple tables, and aggregate data, and charts and scatter plots and different levels of aggregation.

Some users are familiar with the basic structure of the ComNet database and the micro-based aggregation. Some, the most common analyses which are typically implemented using ComNet for data analysis, which involves numerical and non-numeric variables coming from different data files. A simple graphical representation of the data is necessary to understand the different trends across the firms' distribution and distributions are: transition matrices. Also, participants will perform some standard regressions and charts for a visual representation. Rigorous definitions of the different variables are included in the growth material, in order to make the users aware of the economic reasoning behind their meaning.

Training

Course Material and Layout

To implement the training course and run the Stata code, ComNet competitiveness data are needed and all researchers can apply to have access to them by submitting the data request form to the ComNet team via the IVN-Research Data Centre.

The user is advised to start the course by consulting the Introduction to ComNet and its database, at the following links:

Introduction to ComNet and its Database

Afterwards, the Beginners module presentation can be found at the following link:

Beginners - Presentation

The user is recommended to follow the modules task by task, and reproduce the output of each task running the respective Stata do-files.
• CompNet
  • Documentation
  • Self-guided learning modules
  • In the next few weeks:
    • Code to elaborate on concrete research applications
    • Data quality reports with specifics about how to work with your country data
  • As we proceed: Advanced research topics and applications (e.g. productivity measurement)

• MDI (country specific)
  • Some trainings in place (documentation)
  • Additional trainings in development
Data Access: Visualizations

3rd Finance and Productivity Conference (FINPRO)
8. - 9. Juni 2023

Call for paper (submission closes 6 February 2023)
Visualization

Below you can see a first application of the data visualization created using the CompiNet Reduced Dataset. On the top of the graphs, there is a filter called 'select a view' in which everyone can choose the preferred visualization between bar chart, map, line chart, and table. The visualization is a living tool and will grow over time.

CompNet Reduced Dataset - Application (1)

Documents

Here you can find the country reports:

Here you can find some more information on the 8th-vintage use:

The 8th-vintage is the latest CompiNet dataset on micro-aggregated firm-level data. The links provided, you can find information on how to generate, interpret and compare results about labor productivity as well as other indicators. The 8th vintage will be available soon.

Training

Here you can find documentation, the definitions of variables, and the reduced dataset used for visualizations. This Reduced Dataset is a carefully cleaned subset of the CompiNet dataset that contains a few critical variables for policy-oriented users.

Here you can find access on the reduced dataset training. The link will provide assistance on how to start analyzing the essential parts of the CompiNet dataset.
## NPB Projects

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### 1. Productivity Benchmarking

### 2. Energy

### 3. Trade

### 4. Intangibles and Spillovers

### 5. Business Dynamism

### 6. Competitiveness

### 7. SMEs
NPB Projects: Next Steps

- Form specific research teams around each theme
- Ensure NPB assigned experts go through trainings
- Brainstorm together on 1st steps
  - Approach
  - Variables
  - Time frame
  - Challenges (e.g. need for other data)
- We will provide code for first set of analysis
- Regular meetings to discuss results/concerns/next steps
MDI Infrastructure

• MDI implementation is undergoing 3 major steps:

Step 1
• **Step 1:**
  • **LV:** currently assessing feasibility of the MDI setup with statistical office
  • **SK:** currently assessing best way of implementing data access

• **Step 2:**
  • **SI:** contract signed
  • **DE, PT:** dataset is being set-up

• **Step 3:**
  • **FR:** MDI is established, currently working on ultimating code infrastructure in cooperation with local NPB

• **Note on non-TSI countries**
  • The MDI is currently established in NL, while AT and FI are expressing interest in participating and integrating their data with our infrastructure independently.
Workshops

• Every 4 Months
• First TSI-NPB Workshop
  • Lisbon
  • February 24, 2023
  • Travel/Accommodation: up to 2 per NPB
  • Requested Slovenia to gracefully host the 2nd Workshop

• Agenda
  • Introduction
  • CompNet Vintage 9: Status and Trends
  • CompNet: Energy Use Variables and Analysis
  • MDI Research: Intangible
  • MDI Progress Report: Status and Current Efforts.
  • NPB Session:
    • Project Presentations and Teams
    • Networking
    • Synergies
Milestones

FORTHCOMING DELIVERABLES

EVENTS
- Workshop Nr 1 Lisbon: 15 Feb. 2023
- Workshop Nr 2 tbd: 15 June 2023
- TSI Compnet Conference EC, Brussels: 15 Oct. 2023
- Workshop Nr 3 tbd: 15 Feb. 2023

DATA INFRASTRUCTURE
- Data Quality Report: 1 Apr. 2023
- Data access toolkit: 1 Apr. 2023
- Replication packages: 1 Apr. 2023
- Extended MDI: 1 Oct. 2023

REPORTS / COMMUNICATION
- Project Website: 15 Dec. 2022
- Progress Report Nr. 1: 15 Feb. 2023
- CompNet Productivity report: 15 July 2023

TRAINING
- General (data handling): 15 January 2023
- Special (policy applications): 1 April 2023
- Training on the extended MDI: 1 Jan. 2024
• Deliverable for this TSI Grant: On Target

• Data accessibility Improvements:
  • Visualizations, Reduced CompNet Data
  • Code forthcoming: GitHub and OneDrive

• Engagement with the NPBs:
  • Slow progress taking up the trainings: We are following up now that we have country assigned CompNet experts.
  • We expect to start working on specific projects immediately now that we have identified interest

• MDI Infrastructure: Some countries lack funding so little progress. Great progress in Slovenia and France....

• Productivity Report: Will be a compendium of the projects with the NPBs. Will be a work in progress. 1st Report expected in July.