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## MICROPROD

### Raising EU Productivity: Lessons from Improved Micro Data

H2020-SC6-TRANSFORMATIONS-2018

Supply and demand-oriented economic policies to boost robust growth in Europe –  
Addressing the social and economic challenges in Europe

#### D1.7

#### Data dissemination via CompNet I

##### WP 1 – Firm-level Data and Productivity Measurement

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<b>PP</b>	Restricted to other programme participants (including the Commission Services)	
<b>RE</b>	Restricted to a group specified by the consortium (including the Commission Services)	
<b>CO</b>	Confidential, only for members of the consortium (including the Commission Services)	



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## Disclaimer

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The content of this deliverable does not reflect the official opinion of the European Union. Responsibility for the information and views expressed herein lies entirely with the author(s).

## History of the changes

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1.1	17-10-2019	Mirja Hälbig	First draft
1.2	21-10-2019	Filippo di Mauro	Additions and refinements
1.3	25-10-2019	Eric Bartelsman	Additions and review

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## Key word list

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Data, CompNet, Productivity Measurement, Intangible Investment

## Definitions and acronyms

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Acronyms	Definitions
CompNet	Competitiveness Research Network
MMD	Micro Moments Database
NCB	National Central Bank
NSI	National Statistical Institute
R&D	Research and Development

## 1. Introduction

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### 1.1. General context

As outlined in the Grant Agreement and a joint Memorandum of Understanding, insights resulting from the MICROPROD project will be shared and disseminated via the existing CompNet infrastructure in the course of the project to achieve high reach and ensure their availability to research and policy. In particular, the new data and productivity concepts generated by MICROPROD will be progressively implemented in the data collection process for the annual update of CompNet's micro-based dataset.

While the underlying source datasets used in MICROPROD cannot be made available due to data confidentiality, the data will be disseminated via the CompNet Micro Moments Database (MMD), which is an internationally harmonized research database of statistical moments at various levels of aggregation collected from firm-level data in a large selection of EU countries.

The data dissemination is split in three deliverables due in month 10, month 22 and month 34 of the project duration, respectively. This deliverable 1.7 ("Data dissemination via CompNet I") represents the first round of data dissemination.

### 1.2. Deliverable objectives

The collaboration between MICROPROD and CompNet ensures (i) longevity of the results generated within MICROPROD and (ii) external quality control, since the new data and productivity concepts can be utilized and tested by users of the freely available CompNet database.

## 2. Methodological approach

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The CompNet database comprises a broad set of micro-aggregated measures based on firm-level data, nationally available in each of the institutes participating in the network as data provider, i.e. national statistical agencies, national central banks and research institutes.

To address confidentiality the construction of indicators follows the so called "distributed micro-data approach" (Bartelsman et al. 2004). In this approach, a common code is used to extract relevant information from existing firm-level datasets available within each National Central Bank (NCB) or National Statistical Institute (NSI). The protocol computes indicators at the firm-level and then collapses the information to a given level of aggregation.

The data encompass various characteristics of the respective indicator's distribution at different levels of aggregation, namely the sectoral level, macro-sector level, size-class level and at the country level, as well as parameters of joint distributions.

### **3. Summary of activities and research findings**

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One of the central aims of MICROPROD is to account for “intangible capital” in the estimation of productivity. In line with this objective, CompNet gathered information on the book value of a firm’s intangible fixed assets during the data collection procedure for CompNet’s 7<sup>th</sup> data vintage. This indicator together with measures of the joint distribution of intangible fixed assets and the various productivity indicators will be available in the 7<sup>th</sup> data vintage for a selection of about 20 EU countries. Moreover, intangible fixed assets were included as a production factor in the production function estimations. Results from these estimations as well as the resulting productivity measures are included in the published data package. Being a central part of intangible investments, expenditure for Research & Development (R&D) as a share of total costs and associated joint distributions are incorporated as additional indicators in the latest CompNet data vintage. Moreover, the 7<sup>th</sup> vintage will cover information on firm demographics, i.e. firm age, entry and exit.

The pilot NSIs working with MICROPROD WP1 are setting out to identify in their firm-level collections other indicators that can be thought of as proxies for intangible investment or that are in other ways associated with intangible investments, such as use of various information and computing technologies (ICTs), hiring of appropriately skilled workforce, or information on research collaboration and innovation. These data will be linked at the firm level to other data on productivity, inputs and outputs, and be available to MICROPROD researchers.

### **4. Conclusions and future steps**

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This deliverable, a subset of data covering novel information on intangible fixed assets, R&D and firm demographics to be included in the CompNet dataset, is a first concrete example on how the two projects will interact going forward. MICROPROD will provide the technical and conceptual inputs related to new data to be collected in order to achieve a better and more granular understanding of productivity developments and their drivers; this will be tested first among a restricted set of “pilot” NSIs, work of which will be financially supported. CompNet, as a large Network encompassing some 20 country teams in Europe will be able to implement such new tested inputs on a much larger set of countries, thus providing larger impact to the test phase.

Going forward, the CompNet dataset is expected to be enriched from additional information on the interaction of intangible capital and productivity once results from the research projects within MICROPROD become available. Additional indicators explaining productivity dispersion are also expected to be included, such as for example embeddedness in the global economy, labour input and labour market institutions.

## 5. Publications resulting from the work described

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As of end of October 2019, it is expected that 70 percent of the CompNet new dataset - encompassing the MICROPROD innovation previously indicated - will be available to Network researchers. The full report on the entire set of 20 countries will be published - and the dataset officially released - in Spring 2020. This will include an updated User guide (see attached link to the previous version).

## 6. Bibliographical references

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Bartelsman, Eric, John Haltiwanger, and Stefano Scarpetta (2004). Microeconomic evidence of creative destruction in industrial and developing countries. IZA Discussion Paper No. 1374; Tinbergen Institute Discussion Papers No. TI 2004-114/3; World Bank Policy Research Paper No. 3464.

CompNet's 6<sup>th</sup> vintage of data: Novelties and main stylised facts. URL:

[https://www.comp-net.org/fileadmin/compnet/user\\_upload/Documents/Cross-country\\_report\\_updated\\_28.02.2018.pdf](https://www.comp-net.org/fileadmin/compnet/user_upload/Documents/Cross-country_report_updated_28.02.2018.pdf)