# BPLIM: Microdata Research Laboratory of Banco de Portugal

"Measuring the economy in the digital age"

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#### Microdata is the new gold!

**E**conomic agents are heterogeneous.

Increasing availability of large administrative micro data sets.

Ability to combine information from several sources.

**Endless** number of questions to be tackled.

Better grounding to economic policies.



#### But gold-digging is not easy!

Data access must be for the right purpose.

Confidentiality must be safeguarded.

Takes time to develop expertise around a large and complex database.

Preparing data for statistical or econometric analysis is often a daunting task for the researcher.

Exploration of large data requires adequate computational resources and software.

Researchers need to keep abreast of recent developments on techniques to manipulate and analyze data.



#### Sharing the gold

Central Banks are very well positioned to bridge the gap between producers of administrative micro data and the research community in general because they:

- collect and produce micro data sets;
- have privileged access to administrative data sets;
- have a body of in-house researchers that routinely use the data for their research activities.



#### Sharing the gold

#### That is the case for Banco de Portugal:

- Vast amount of knowledge regarding the collection, handling, and production of micro data sets;
- Researchers with a successful research agenda centered on the exploration of Portuguese administrative micro data bases;
- Assumed goal to: "Promote understanding of the Portuguese economy and European integration, and contribute towards a better and more informed society".



#### **BPLIM**

✓ BPLIM is a Microdata Research Laboratory located in the <u>Porto</u> branch of Banco de Portugal.





- ✓ It is a unit of the Economics and Research Department (DEE) but works in close collaboration with the Statistics Department (DDE).
- ✓ A small but highly qualified team that combines data analysts and researchers.



#### **BPLIM Goals**

## Support the production of microdata based research projects about the Portuguese Economy

Make available to researchers ready-to-use or customized data sets.

Supply auxiliary documentation.

Give access to great computational power and software.

Provide technical and scientific support to researchers.

Offer training in microdata techniques.

Contribute to the development of young researchers.



#### **BPLIM Servers and** *software*



#### **Internal Server**

Access ONLY at Banco de Portugal facilities (All data sets )













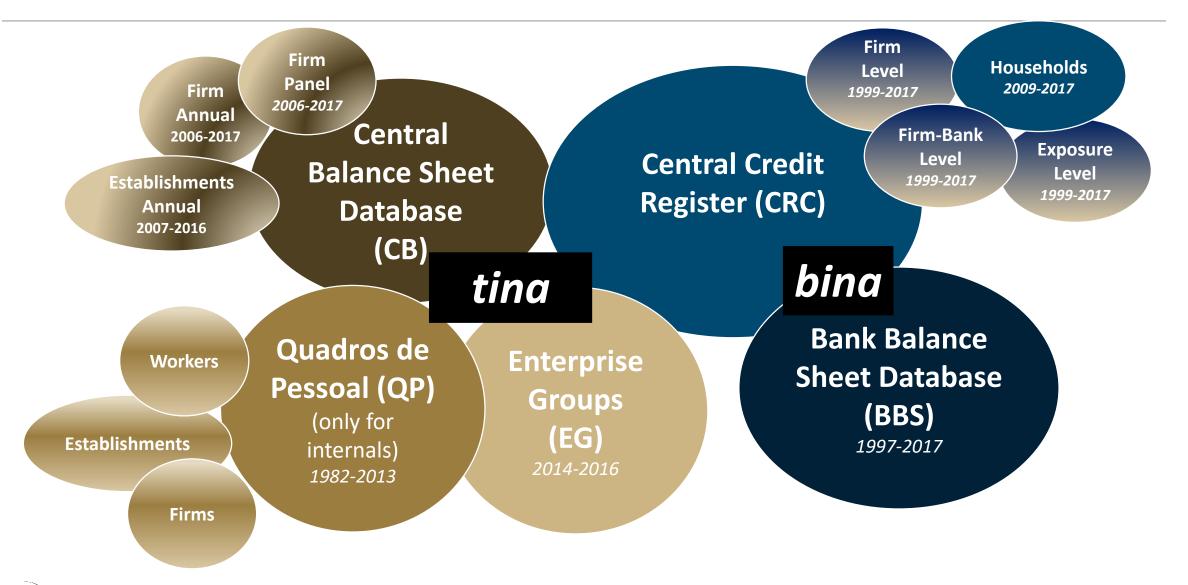
#### **External Server**

Accessed <u>remotely</u>
(national and internationally),
using a safe connection
(restricted to fewer data sets)





#### **Most Relevant Datasets**





#### **BPLIM** Web page

#### BPLIM - Microdata Research Laboratory of Banco de Portugal Search... **About BPLIM** Data Resources **Projects** Events Forum **INEXDA** H **BPLIM News Latest Projects** Forum Stata 15.1 is now available in BPLIM Servers Welcome! Determinants of productivity in the quaternary sector Welcome to the BPLIM website. New CB Extraction Available - Jun2019 General discussion Gazelles: Drivers of exceptional job creation - A dynamic probit approach using Portuguese firm-level data User login The effects of TLTROs on the Portuguese economy Username \*



#### **Lessons learned so far**

Document, document. Be as transparent as possible. Share knowledge. Keep learning. Researchers come in all sizes and shapes.



#### Challenges ahead...

**Increasing demand.** 

Dealing with larger datasets.

Adding and merging data.

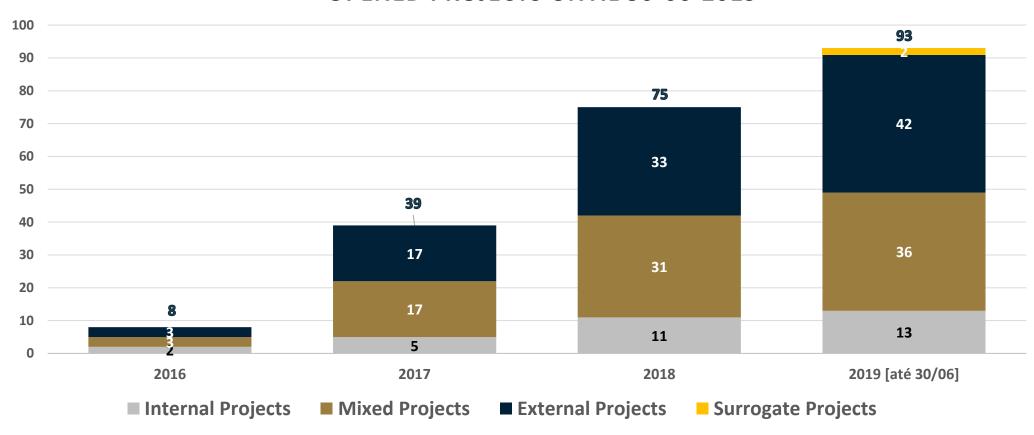
Adding value to the data.

Replicability with confidential data.



#### **Projects and researchers**

#### **OPENED PROJECTS UNTIL 30-06-2019**



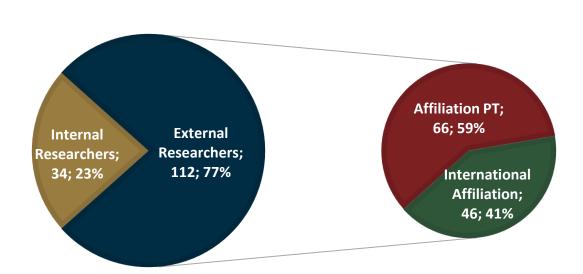
Until June 30, 93 projects were opened (in the Internal and External Servers) and 83 remain active. In 2019, for the first time, 2 projects with Surrogate Access were opened.



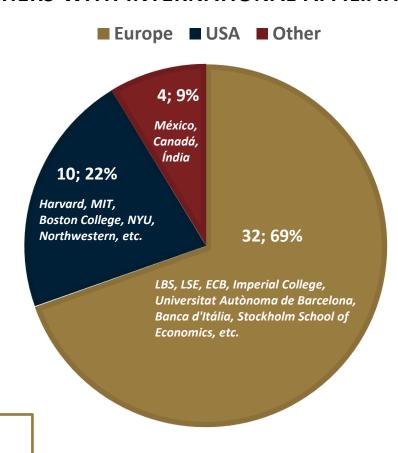
#### **Projects and researchers**

#### **RESEARCHERS BY AFFILIATION**





#### RESEARCHERS WITH INTERNATIONAL AFFILIATION



#### 12 Visiting Researchers at BPLIM:

- 4 Senior Researchers, 4 Master Thesis and 4 PhD Thesis.
- 5 PT affiliation, 4 Europe affiliation and 3 USA affiliation.



Internal

### Thank you for your attention!

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