

# Building business registers to monitor entrepreneurial dynamics

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## Overall context

The in depth knowledge of the economic agents' characteristics within a certain economy has always been one of the goals of economic and financial statistics. Given the relevance of non-financial corporations (NFC) contribution to Portuguese economy (roughly 56% of Portugal's gross value added, in 2012) it is vital to have comprehensive, reliable and detailed information on this institutional sector.

This paper discusses how the integration of business registers and other administrative sources of information enabled the Statistics Department of the Banco de Portugal to create a single enterprise database with annual information on virtually all non-financial corporations, while providing some examples of the analysis this data, by itself, allows, namely in what regards the monitoring of entrepreneurial dynamics.

## Framework

Banco de Portugal has developed and manages several micro-data databases (e.g. Central Credit Register, Securities Statistics Integrated System, Central Balance-Sheet Database) covering many features of NFC's activity. However integrated information on each firm's individual characteristics was not easily available (e.g., size, NACE, age, legal nature), with most of this information being scattered across numerous data sources and organizations.

Without a single statistical units file joining all the sources deemed relevant, it was possible for different users to consider different classifications with negative consequences on the comparability and reliability of official statistics, namely regarding its harmonization.

In order to overcome these limitations, the Banco de Portugal developed a new business register that combines information from several databases making use of a considerable number of administrative and statistical sources which provided information on firms' individual features.

Identifying the available information in order to determine how to characterise Portugal's NFC was the first challenge. Prior experiences in cooperating with other entities (such as IES – Simplified Corporate Information, a breakthrough which enabled Portuguese enterprises to single-handedly report their annual accounts to

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several institutions; or SICAE, a single channel through which the companies are categorized via NACE codes according to their economic activity) gave way to a better knowledge of the strengths and weaknesses of each kind of report and database.

The following step was to determine which should be the sources deemed more relevant in each case, determining a hierarchy of sources. For instance, IES was considered a priority source in all accounting related characteristics, such as the level of turnover and assets, as well as the number of employees (and, consequently, the enterprise size which is derived from these items). The Ministry of Justice, responsible for SICAE's management and for the legal registries in Portugal, was deemed the source with the highest priority in what relates to the geographic location of the enterprise, its legal nature, and its economic activity. Other data sources, like Statistics Portugal, would then add to this information in cases where it was missing.

The implementation of this hierarchy depended, nevertheless, on the availability of a single key which enabled the correspondence between the several sources of information. Given that in Portugal all firms are identified by a unique fiscal number, the choice of the primary key was simple. The final outcome was the implementation of an integrated database, automatically and constantly updated according to the most relevant and recent information, for a time-frame that spans from 1991 onward (reconstructing more than 20 different yearly populations estimates of NFC operating in Portugal).

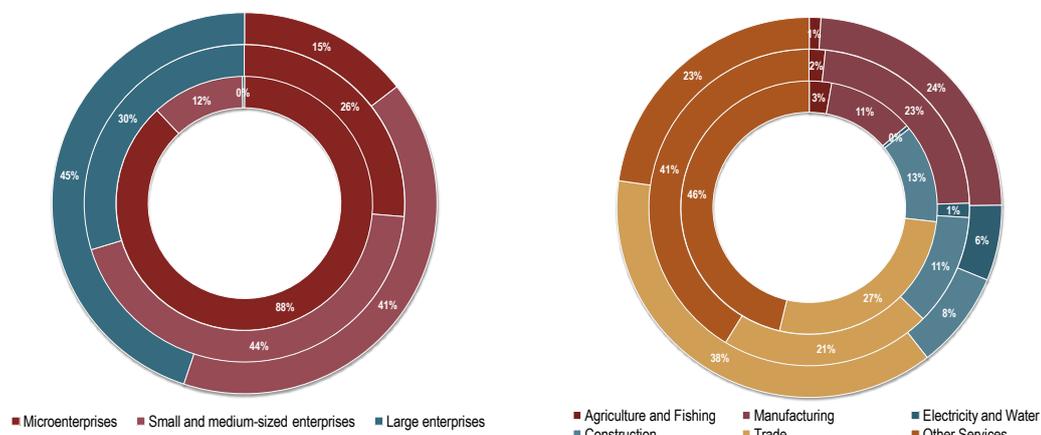
## Some applications on monitoring entrepreneurial dynamics

The integration of the above mentioned data sources and the fact that they are automatically updated enables the users to analyse the structure and track the dynamics of Portugal's NFC sector. Figure 1 shows this sector's structure by size and economic activity in 2011, based on the number of enterprises, number of employees and turnover. It is possible to notice the significant weight of microenterprises in number of firms (88%) and the fact that large companies are the most relevant when turnover is considered (45%, although they only represent 0.3% of the firms). On the other hand, by economic activity, the weight of *Other Services* when considering the number of enterprises (46%) is partially compensated by the greater relevance of *Manufacturing* when considered the turnover of Portugal's NFC (24%).

## Structure of Portugal's non-financial corporations (2011)

By enterprise size (left) and economic activity (right), based on the number of enterprises (inside), number of employees (middle) and turnover (outside)

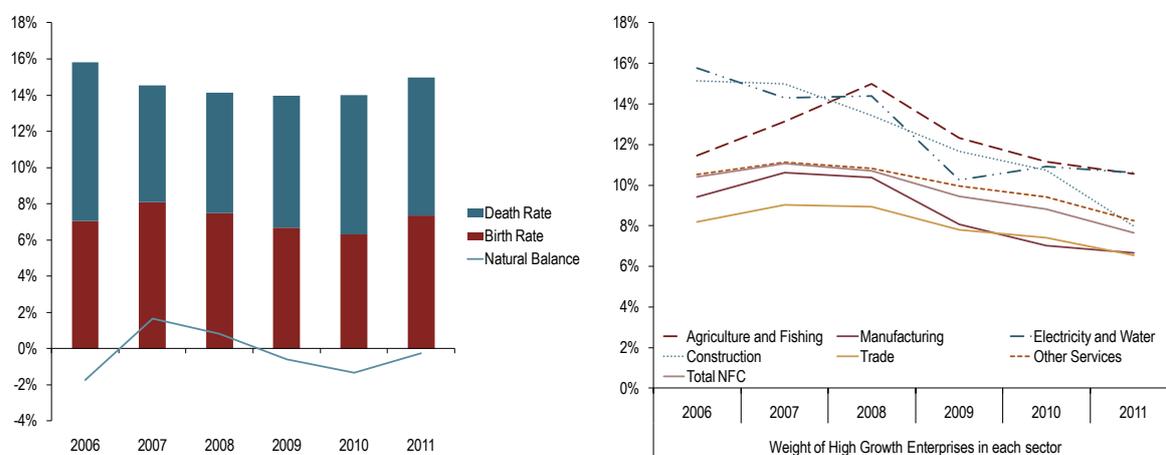
Figure 1



The fact that this information is organized as time-series enables the analysis of the dynamics of Portugal's NFC, namely through the computation of birth and death rates or by using the average variation in turnover to identify High Growth Enterprises (HGE) (Figure 2). The available data reveals negative natural balances in the demographics of Portugal's NFC over the last three years (-0.3% in 2011), as well as a reduction in the weight of HGE (from 11% of the total enterprises in 2008 to 8% in 2011). *Agriculture and Fishing* and *Electricity and Water* gather the largest proportion of HGE in 2011 (11% of its enterprises), while *Construction* has registered the largest decrease in this number over the last five years (from 15% in 2006 to 8% in 2011).

## Portugal's non-financial corporations' dynamics

Figure 2



## Conclusion

This new micro-data database highlights the benefits of inter-institutional cooperation in statistics. Indeed, gathering data from different official sources enabled the collection of a new dataset that not only allows a better use of other micro-data, assuring their harmonization and an easy cross-reference between datasets (single identifier and single attributes per enterprise allow more straightforward comparisons and stable results across several fields of statistical data and outputs), but also, by itself, the monitoring of business and entrepreneurial dynamics.

## References

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