

Business Dynamics, Business Demography, and Entrepreneurship

12 June 2019



El futuro
es de todos

Gobierno
de Colombia



Outline

- 1. What's the purpose for building and maintaining data on businesses and entrepreneurship?**
- 2. Data Sources for Business Dynamics, Business Demography and Entrepreneurship**
- 3. Core indicators**
- 4. Challenges and roadmap for the future: enhancing productivity**

1. What's the purpose of building and maintaining data on businesses and entrepreneurship?



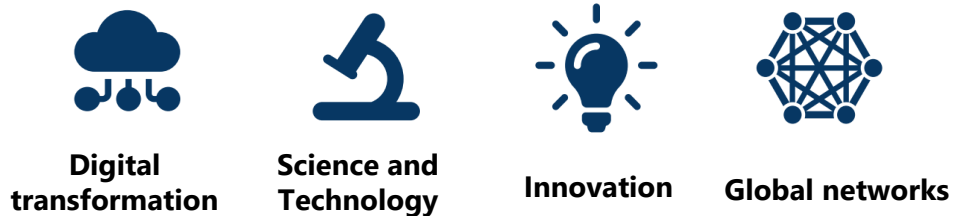
Data on businesses and entrepreneurship: the framework and scope

Recently, the National Congress approved the Government's policy roadmap for the next four years: the National Development Plan: *Colombia's COMPACT: a compact in a search for equity*.



The document has a strong emphasis on policies promoting entrepreneurship and dynamism in the business environment, and programs designed for **productivity enhancement** at the firm level

The goal is to improve the access of entrepreneurs and firms to:



Data on businesses and entrepreneurship: the framework and scope

In order to achieve our *medium term development plan* goals, detailed data on business dynamics (entry and exit of firms), productivity (optimal allocation of resources) and entrepreneurship will be produced by the Colombian NSO-DANE.

- The Colombian National Statistics Department (DANE) has a long history of collecting data on businesses. As such, most of the data that will be used for evaluating the success of policies and programs will be produced by DANE.
- The purpose of building and maintaining data on businesses and entrepreneurship is to perform objective measurements allowing impact evaluation and to provide effective feedback on its effectiveness.



2. Data Sources for Business Dynamics, Business Demography and Entrepreneurship



What are the sources of data?

DANE produces information associated with structural/continuous surveys on:

Manufacturing



Annual and monthly, with territorial disaggregation

Wholesale/retail



Annual and monthly, with international commerce emphasis

Services



Annual and monthly, with disaggregation for each of the subsectors

Innovation and technology



Annual survey, with emphasis on manufacturing and services every two years

Entrepreneurship / household enterprises



Monthly, as a module attached to the households monthly survey

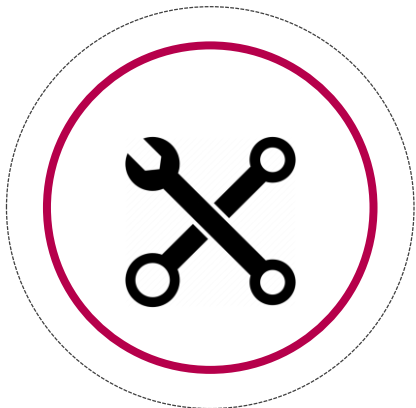
- **The business (partial) registry for each survey is maintained according to information about size (gross output and employment) of the firms. In the case of the services survey, the threshold is defined for each subsector.**
- **For the innovation survey, the business (partial) registry is a subsample of the manufacturing and services surveys.**

More in-depth: the regional analyses and survey redesigns



Subnational scope:

- The monthly manufacturing survey was recently redesigned so as to produce sub-nationally disaggregated indicators of gross output, value added and employment. This has been a good instrument for tracking economic performance at the subnational/metropolitan level



Redesign of surveys:

- The monthly services and wholesale/retail surveys will also endure this redesign in order to improve subnational productivity pictures.
- 2020: DANE will produce a Foreign Direct Investment survey according to the 4th OECD Benchmark Definition of Foreign Direct Investment – BMD4 (**FDI relationships, origin of the FDI flows and subnational distribution of investments**)

What kind of data is produced?

Sectoral economic surveys

(manufacturing, wholesale/retail and services)

Firm size: small, medium and large firms

- Total revenue disaggregated by product
- Gross output value disaggregated by product
- Intermediate consumption
- Value added
- Total employment disaggregated by occupational position
- Total wages disaggregated by occupational position
- Assets valuation

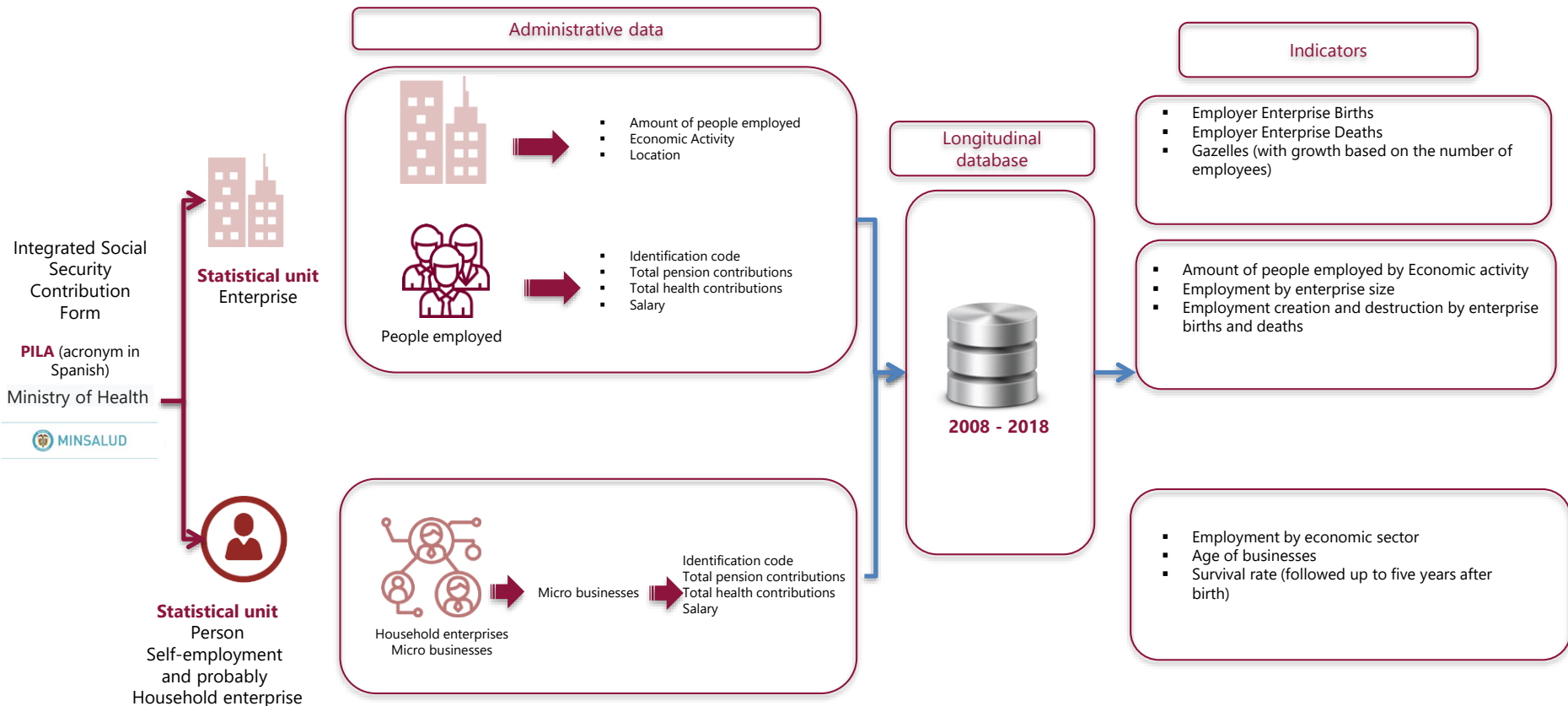
Household surveys

Firm size: micro (household enterprise)

- Revenues and incomes
- Intermediate consumption
- Total employment disaggregated by occupational position
- Total wages disaggregated by occupational position
- Entrepreneurial skills

* This information set will be the source of calculation for business demography, business dynamics and digitalization and globalization of domestic sources

Business Demography: indicators and Administrative Data use



Business Demography: indicators and Administrative Data use

Construction
Longitudinal Data Base

Construction
Query - Reports

Exploitation and Analysis

Construction
of indicators

Business Register
Integrated Social
Security
Contribution Form
(PILA – for its
acronym in Spanish)



Available information
2008 a 2018



Stability of
dependent
contributors



Stability of
independent
contributors



- Employment indicators and number of enterprises
- Expansion - Contraction
- Birth and deaths- Gazelles Enterprises

DANE Development

3. Core indicators

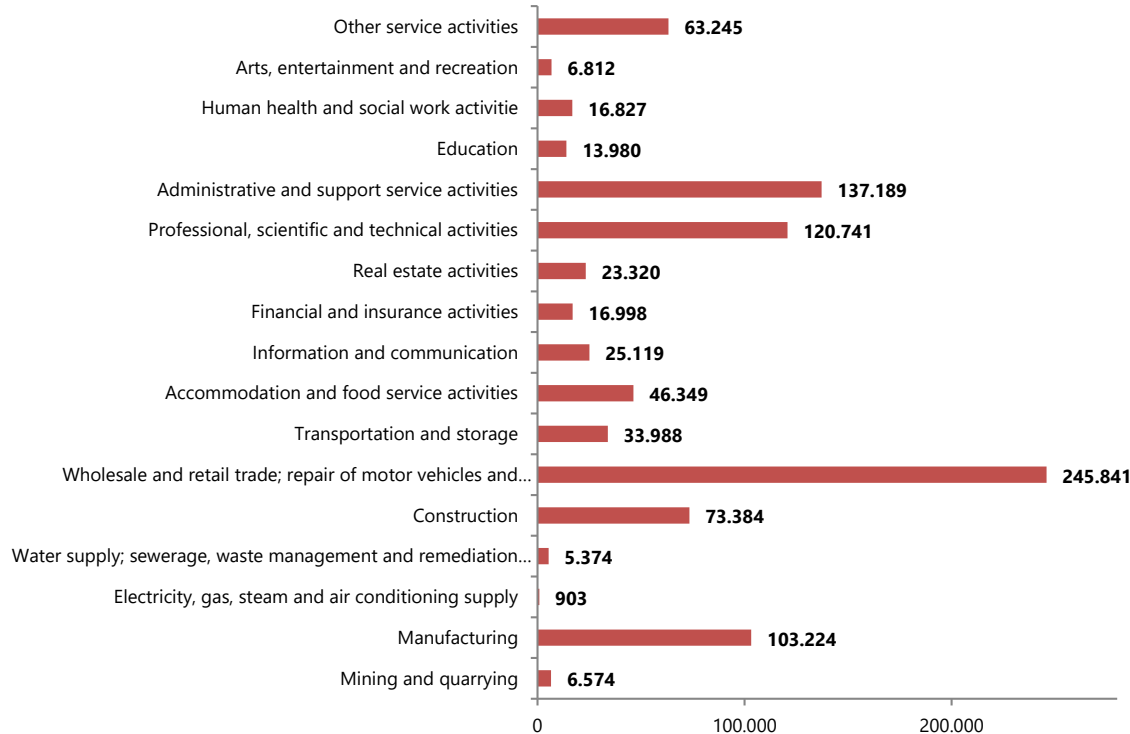


El futuro
es de todos

Gobierno
de Colombia

Business Dynamics: amount of firms by economic sector

Active enterprises with one or more employees - 2016



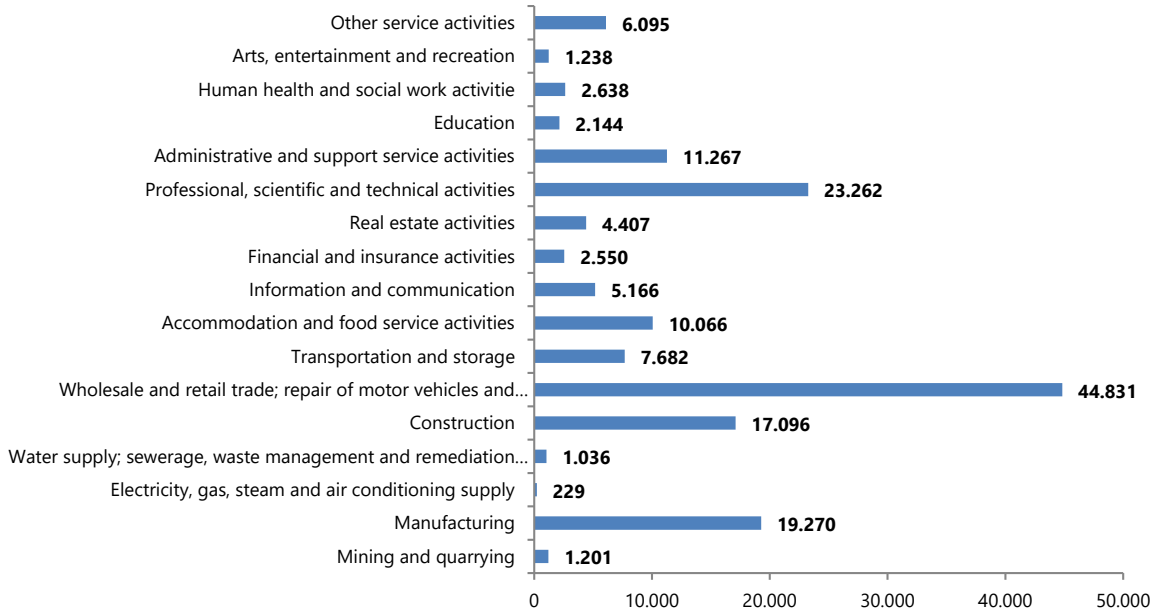
This indicators are produced according to OECD standards for reporting business demography and dynamics.

This is a good picture of resources allocation across sectors that gives an idea about the economic sectors that attracts more activity.

By 2016, most of businesses and enterprises were on the wholesale/retail sector, followed by administrative services.

Business Demography: entry of new firms by sector of economic activity

For each year, it is possible to know the number of new businesses



Now, how dynamic are these sectors?

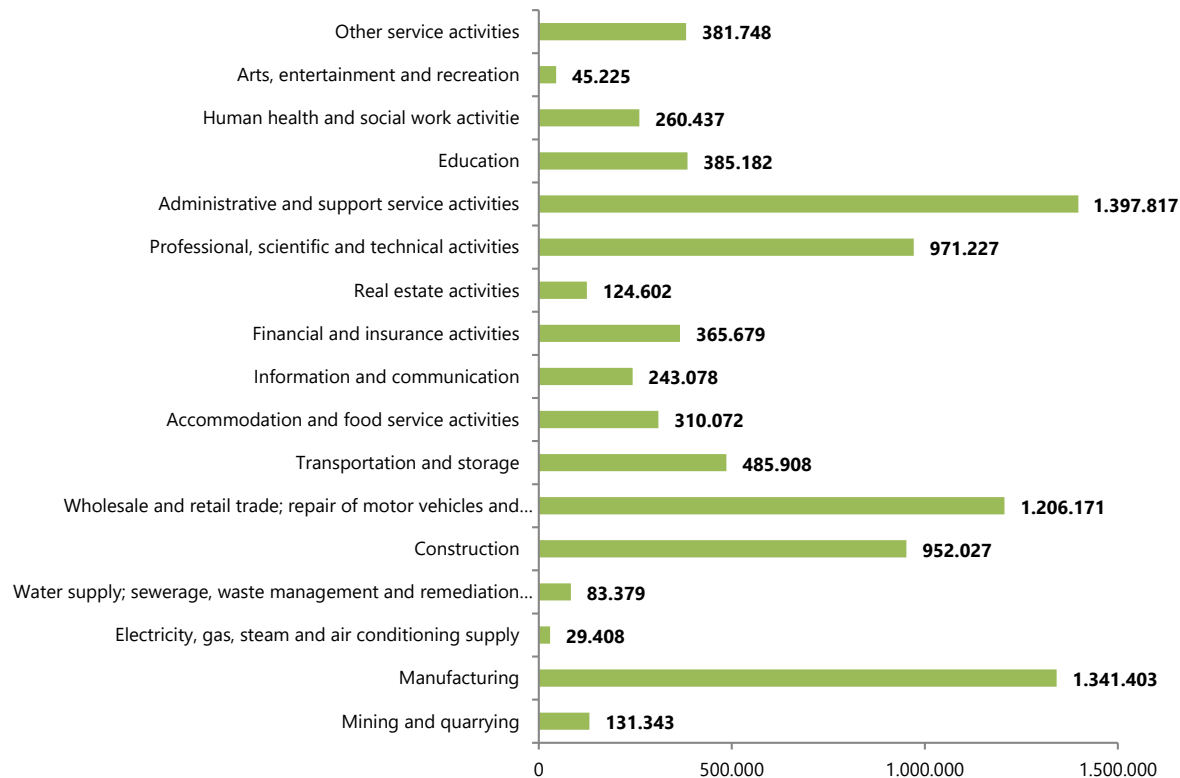
This is a good measure of effective allocation of factors at the sector level. The literature* argues that factor reallocation from less productive to more productive firms is an important signal of productivity enhancement.

It is expected that sectors that have less barriers for entry and exit, are also sectors in which productivity is higher, since there is more competition and more incentives for reallocation of factors from less productive to more productive sectors.

* Bartelsman and Doms, 2000, *Understanding productivity: Lessons from longitudinal microdata*. Journal of Economic Literature.
 Foster, Haltiwanger and Krizan, 2006, *Market selection, reallocation, and restructuring in the US Retail Trade Sector in the 1990s*. Review of Economics and Statistics.

Business Demography: employment in firms by sector of economic activity

Total number of employees

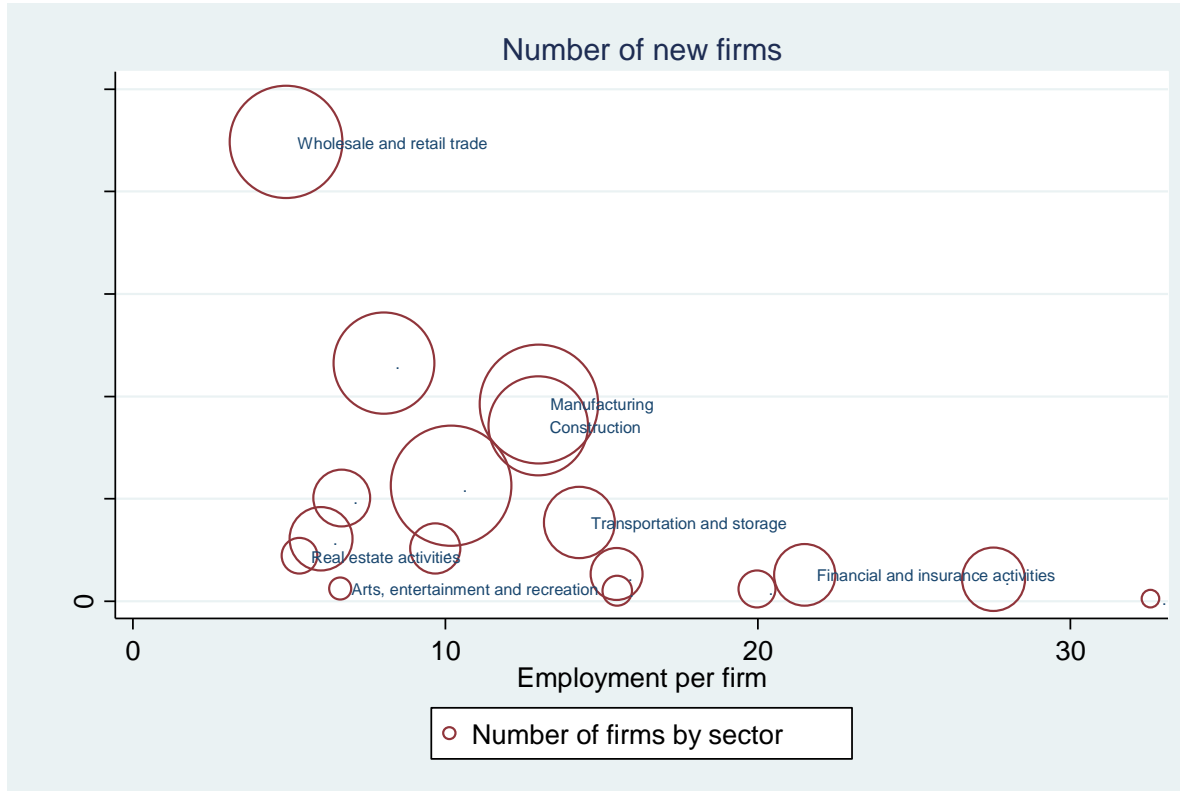


Accordingly, the allocation of factor within sectors is a good measure of productivity.

It is expected that sectors in which there is more entry and exit of firms, there is also a reallocation of productive factors, such as labor, from less productive firms, to more productive ones.

The total employment by sector can be contrasted with the number of large, medium and small firms.

Business Demography: new firms by sector and employment per firm



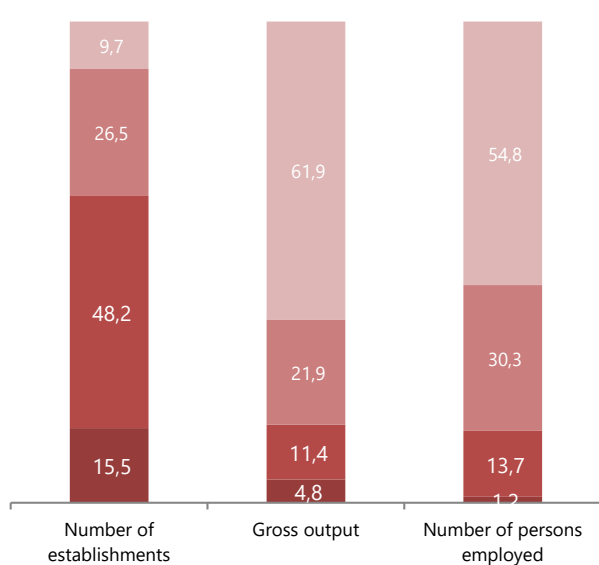
A good way to prove what was said about factor reallocation and productivity is shown here: the entry of new firms is concentrated in sectors that have a low relation of employment/number of existing firms, which are sectors with low productivity.

There are also sectors with a relatively low relation of employment/number of existing firms as the manufacturing and construction sector, but with fewer new firms. In these sectors reallocation is, apparently, not taking place.

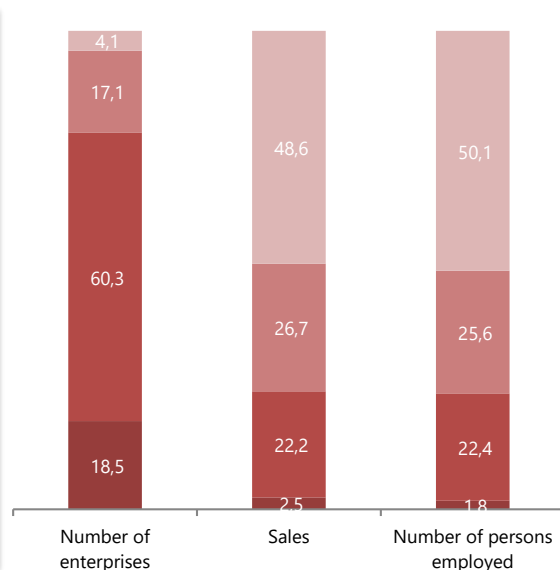
Business Demography: size, output and employment

Annual surveys indicators

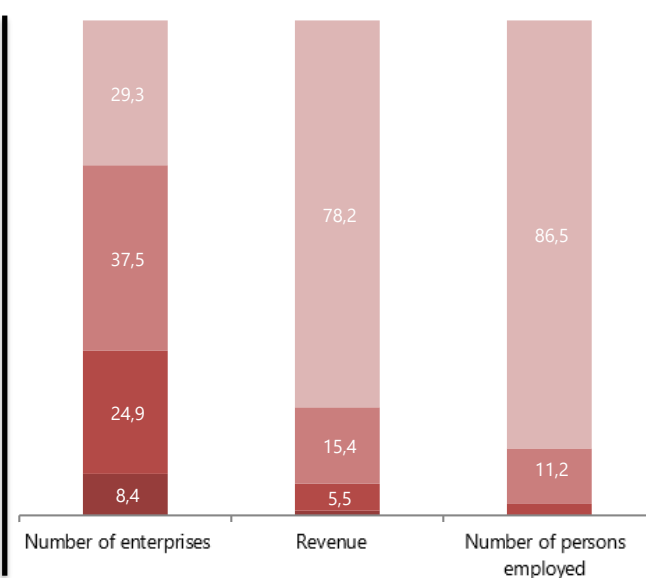
Manufacturing



Commerce



Services

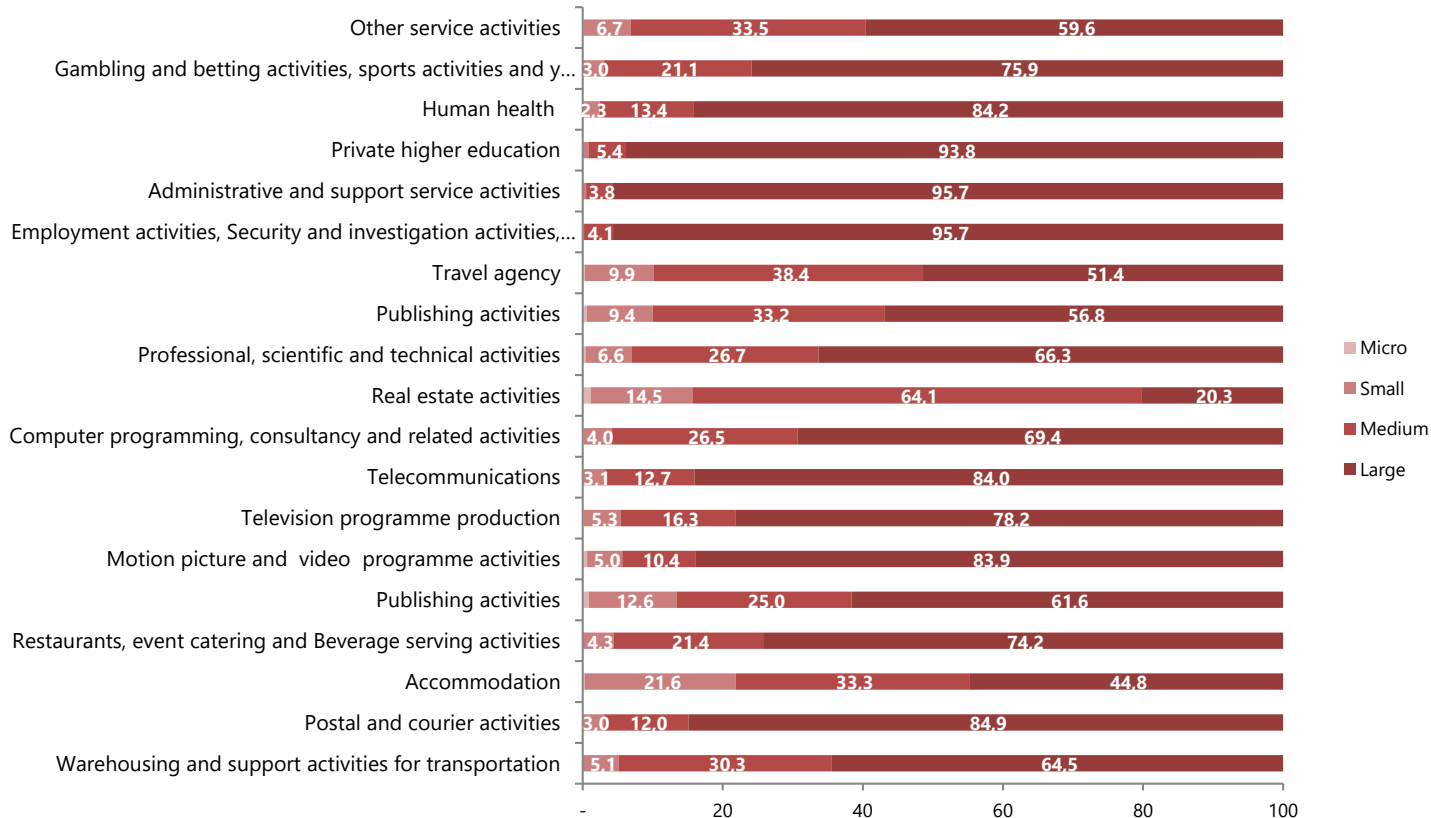


■ Micro ■ Small ■ Medium ■ Big

- **Across all sectors, the proportion of large firms ranges from 4.1 to 29.3 percent of the sample**
- **However, they are responsible for the bigger share of output and employment**



Business Dynamics: the services sector (employment)

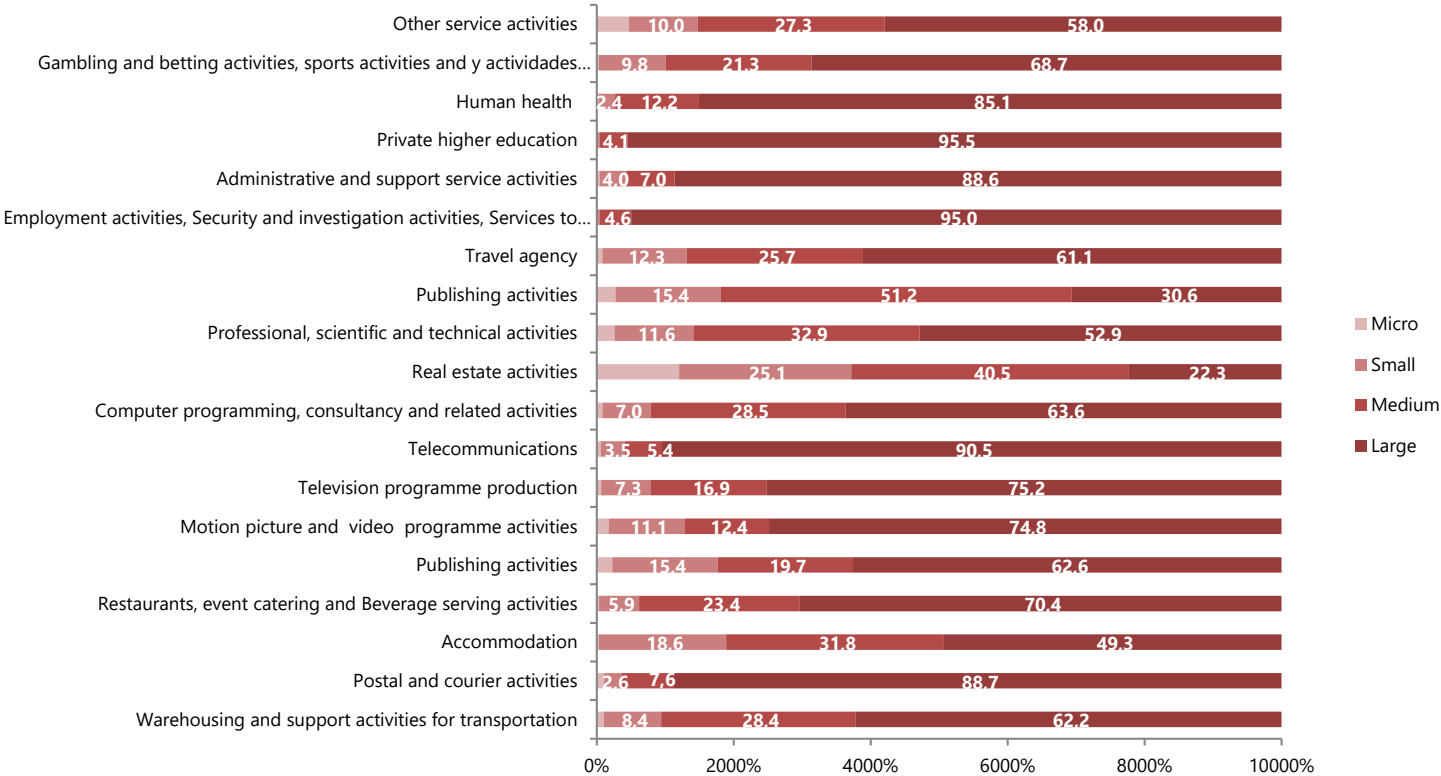


With the DANE information, it is possible to identify, in each sector, the share of revenues (or sales or production) and employment generated by large, medium, small and micro firms.

Specifically, as an example, in the services sector most of employment is concentrated in large firms.

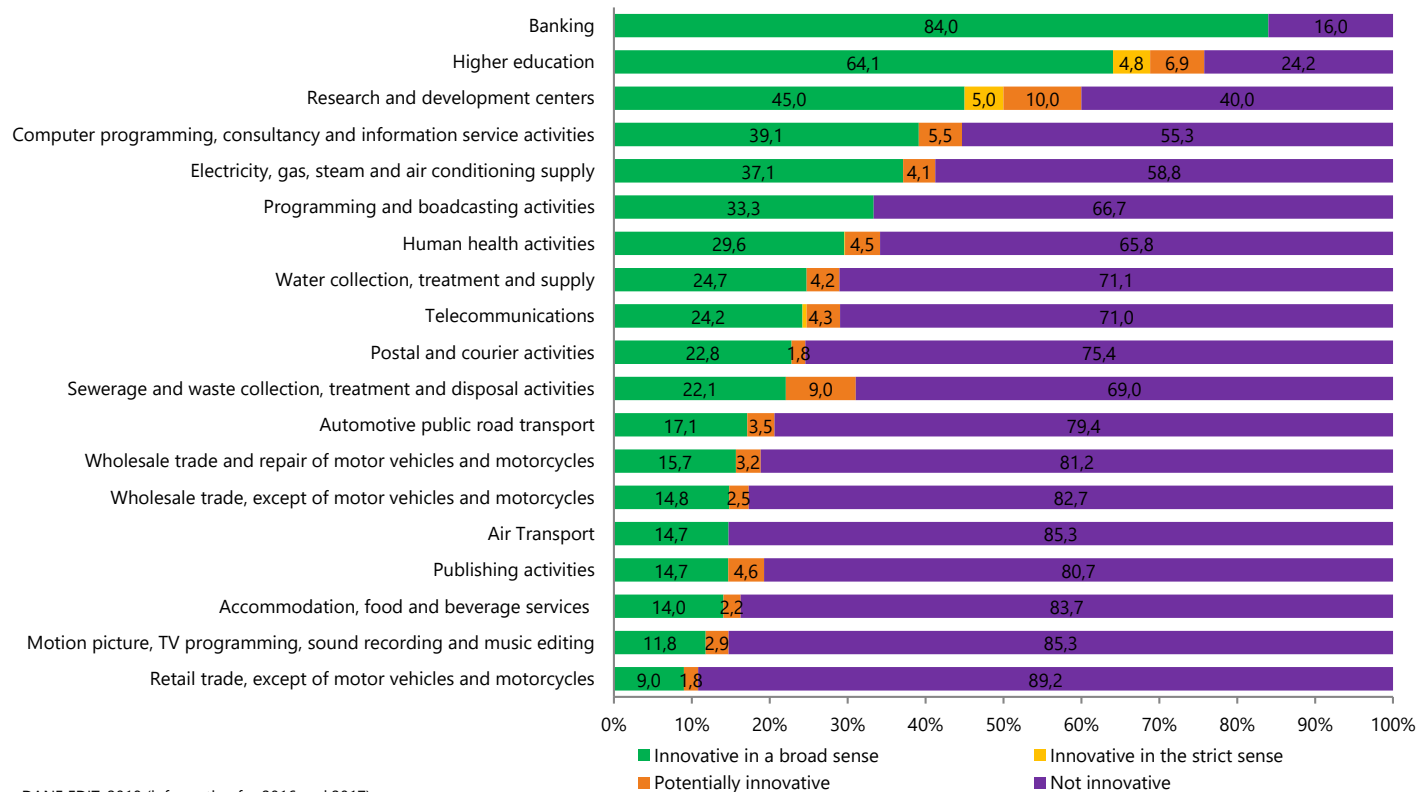


Business Dynamics: the services sector (revenues)



Also, in the services sector, revenues are concentrated in large firms.

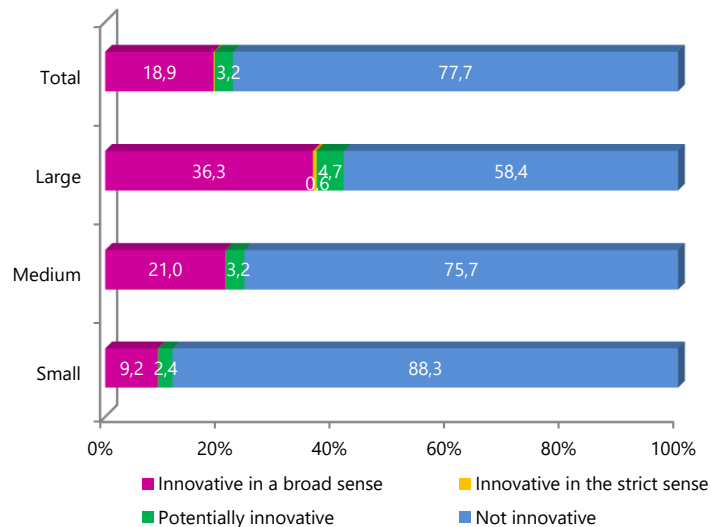
Business Dynamics: innovation in the services sector



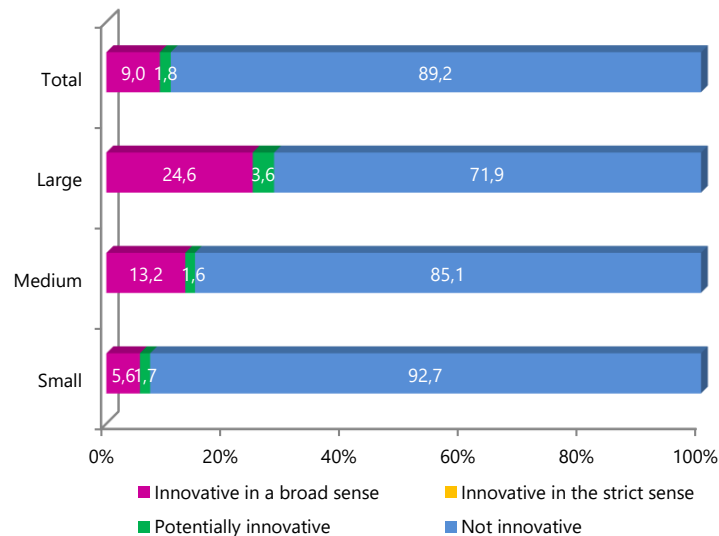
However, only a few services subsectors have innovative firms, which implies that only a few large firms are being innovative, a problem of productivity and business dynamism.

Business Dynamics: innovation in the services sector by firm size

Total distribution in services sector



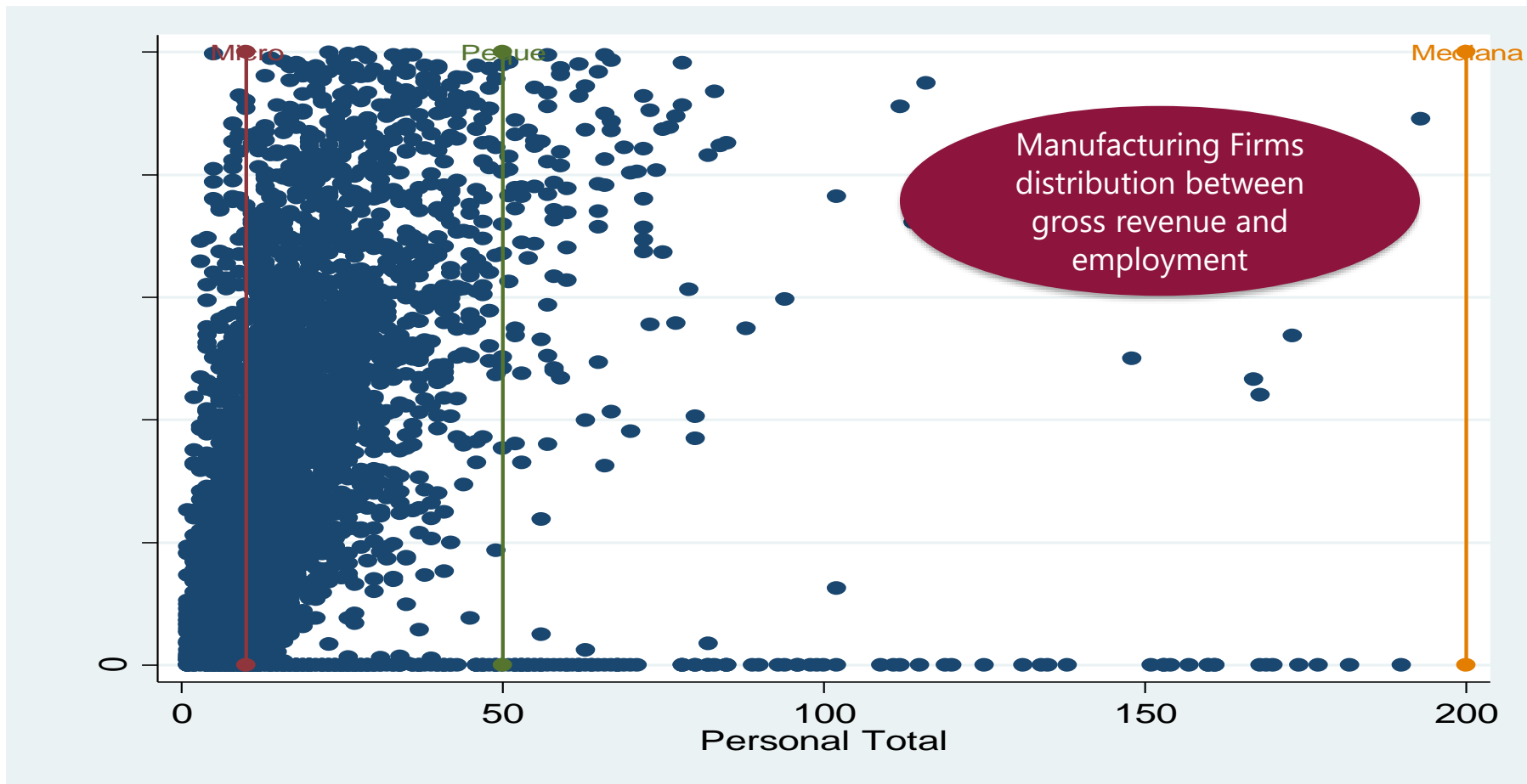
Distribution in wholesale and retail trade

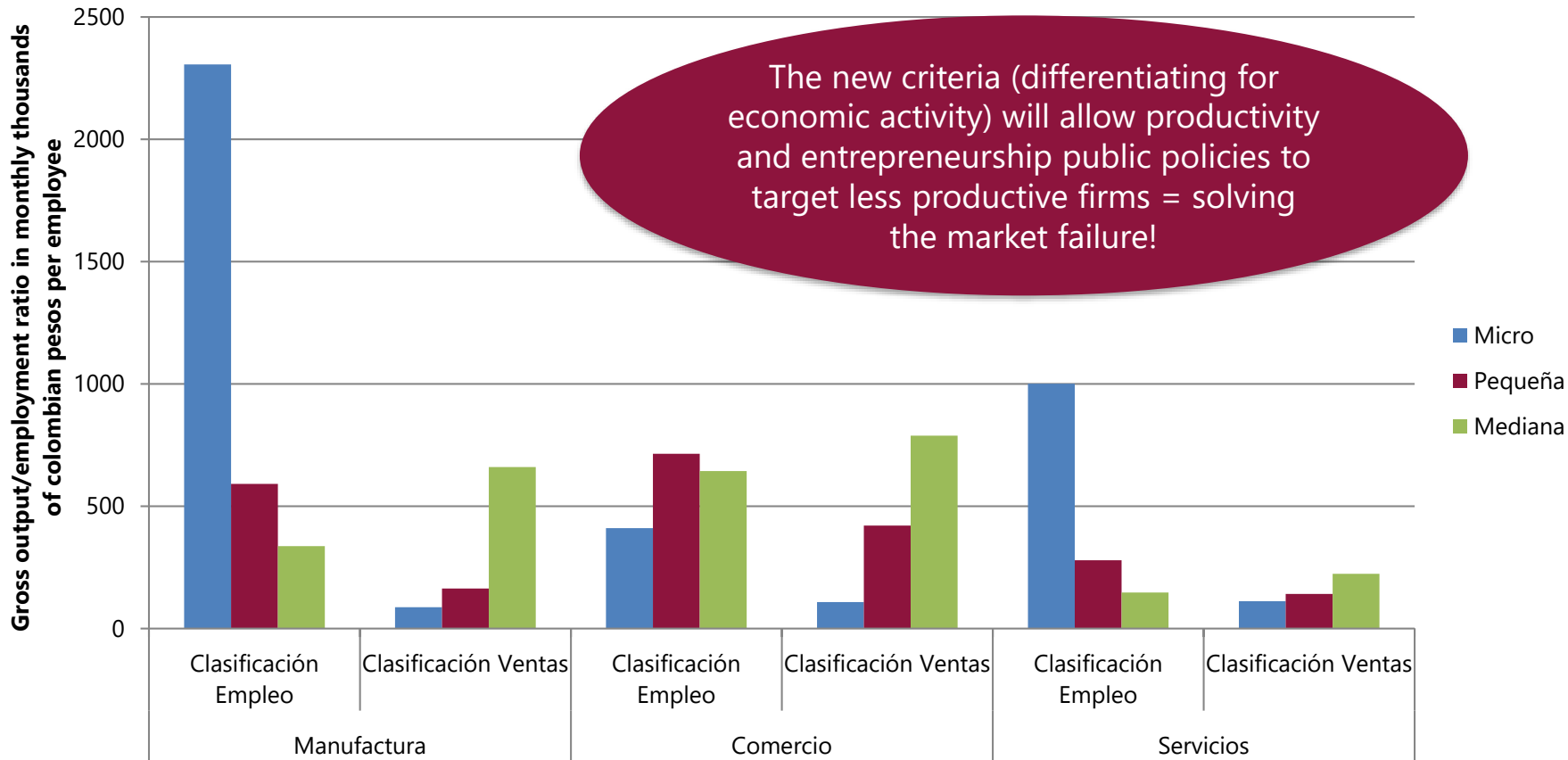


When the innovation data is disaggregated by firm size, then it is clear that large firms are the ones that are making innovation efforts. And the data for the Wholesale and retail trade subsector shows that the analysis made before about entry of new firms and employment/number of existing firms was correct: this is a subsector that is less innovative and, arguably, less productive than the whole sector and other economic sectors. Here, large firms are less innovative than the average.



4. CASE: from MSMEs classification by employment to a gross-revenue-based criteria





4. Challenges and roadmap for the future: enhancing productivity





Challenges: availability of information

The information produced has the higher standards of quality. However, the challenge is being able to:

- Include a higher number of firms in the monthly and annual surveys. Currently the partial business registry is updated with administrative data and information from other public institutions.
- Broaden the scope of economic activities that are surveyed structurally. For example: construction and infrastructure activities.
- Produce regularly official productivity, business dynamics, and business demography indicators.
- Set a standard of measurement for entrepreneurship

The roadmap: coordination and availability of information

Currently, there are some strategies designed to improve data collection and coordination:

- DANE will conduct a Economic Census that will collect exhaustive information about:
 - The number of businesses and entrepreneurs for each sector of economic activity
 - The quality of the business processes within each firm
 - Indicators about resources allocation, use of digital tools, innovation and productivity

These data and indicators will improve the quality of the monthly and annual surveys that collect information about businesses demography and dynamics. However, it will be necessary to:

- For the next wave of innovation surveys, DANE will include new questions about **managerial skills, which, according to recent literature*, are important determinants of productivity performance.**
- Coordinate the production of information from the early stages, in order to make it functional for **productivity tracking**. Organizational changes are being made so the DANE structure is able to produce coordinated data and make it available for policy-makers and researchers.