

# ENTREPRENEURSHIP STATISTICS

## Measuring Determinants and Performance

*Workshop on “Business Demography and Entrepreneurship Statistics” by SESRIC*

*July 16 - 17, 2024*

*Online*

*Can DOĞAN – Head of Business Registers Group*

*candogan@tuik.gov.tr*

# Content

- General information about
  - ❖ *Entrepreneurs*
  - ❖ *Entrepreneurial activity*
  - ❖ *Entrepreneurship*
- Entrepreneurship Indicators Programme
- Indicators

# Entrepreneurship

- Indicating the phenomena associated with entrepreneurial activity
- Popular subject after 2008 economic crisis and very broad phenomenon
- Understanding the economic dynamism and looking for the ways out of crisis
  - ❖ *economic growth*
  - ❖ *productivity*
  - ❖ *innovation*
  - ❖ *employment*

# Entrepreneurship

- Understanding the determinants and measuring the entrepreneurship
- Measuring can be by many aspects
  - ❖ *Regional development; the creation of new firms is supported for employment&economic value for troubled regions*
  - ❖ *The participation of certain target groups (women or minorities in the economy)*
  - ❖ *Firm creations&closures*
  - ❖ *Supporting high growth firms*

# Entrepreneurship

- The impact of entrepreneurship has also been associated with poverty reduction and social inclusion.
  - *Stimulating entrepreneurial activities among individuals who belong to disadvantaged or marginalised groups (because of their age, gender, ethnic characteristics, lack of education and skills, or the geographical area where they live) can be an important vehicle for social inclusion, and it can contribute to poverty reduction by bringing into a country's active labour force segments of the population previously excluded.*

# Entrepreneur

- All persons who own and control an enterprise with the intention of generating income from it are considered entrepreneurs
  - ❖ Innovative entrepreneurs
  - ❖ Survival entrepreneurs
- Innovator
  - ❖ *the introduction of a new good or quality*
  - ❖ *the introduction of a new method of production*
  - ❖ *the opening of a new market*
  - ❖ *the conquest of a new source of supply of new materials*
  - ❖ *the carrying out of the new organization of any industry*
- Risk taker (uncertainty of market dynamics)

# Entrepreneurial activity

- Entrepreneurial activity is enterprising human action in pursuit of the generation of value through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets,
- Involves identifying opportunities within the economic system,
- Recognising and acting upon profit opportunities,
- Act of innovation,
- Act of making a new entry

# Entrepreneurial activity

- Business creation but how?
  - ❖ *Self-employment or employer enterprises*
  - ❖ *High-growth companies*
  - ❖ *Creating a competitive business environment*



# Entrepreneurship Statistics

- To understand the role of entrepreneurship, determinants and impacts of entrepreneurial phenomenon should be analyzed. However, empirical research on entrepreneurship continues to rely to a large extent on private data sources and much less on official statistics by NSOs.
  - ❖ *entrepreneurship data span a multitude of domains*
  - ❖ *cross the traditional boundary between economic and social statistics by encompassing topics such as the demography and performance of businesses, the profiles of individuals who create enterprises, the attitudes toward entrepreneurship, and the regulatory environment for setting up new businesses*

Global Entrepreneurship Monitor:

<https://www.gemconsortium.org/>

World Bank's Entrepreneurship Databases:

<https://www.worldbank.org/en/programs/entrepreneurship/methodology>

Eurobarometer on Entrepreneurship of the European Commission:

<https://europa.eu/eurobarometer/surveys/browse/all/series/17836>

## Entrepreneurship Indicators Programme

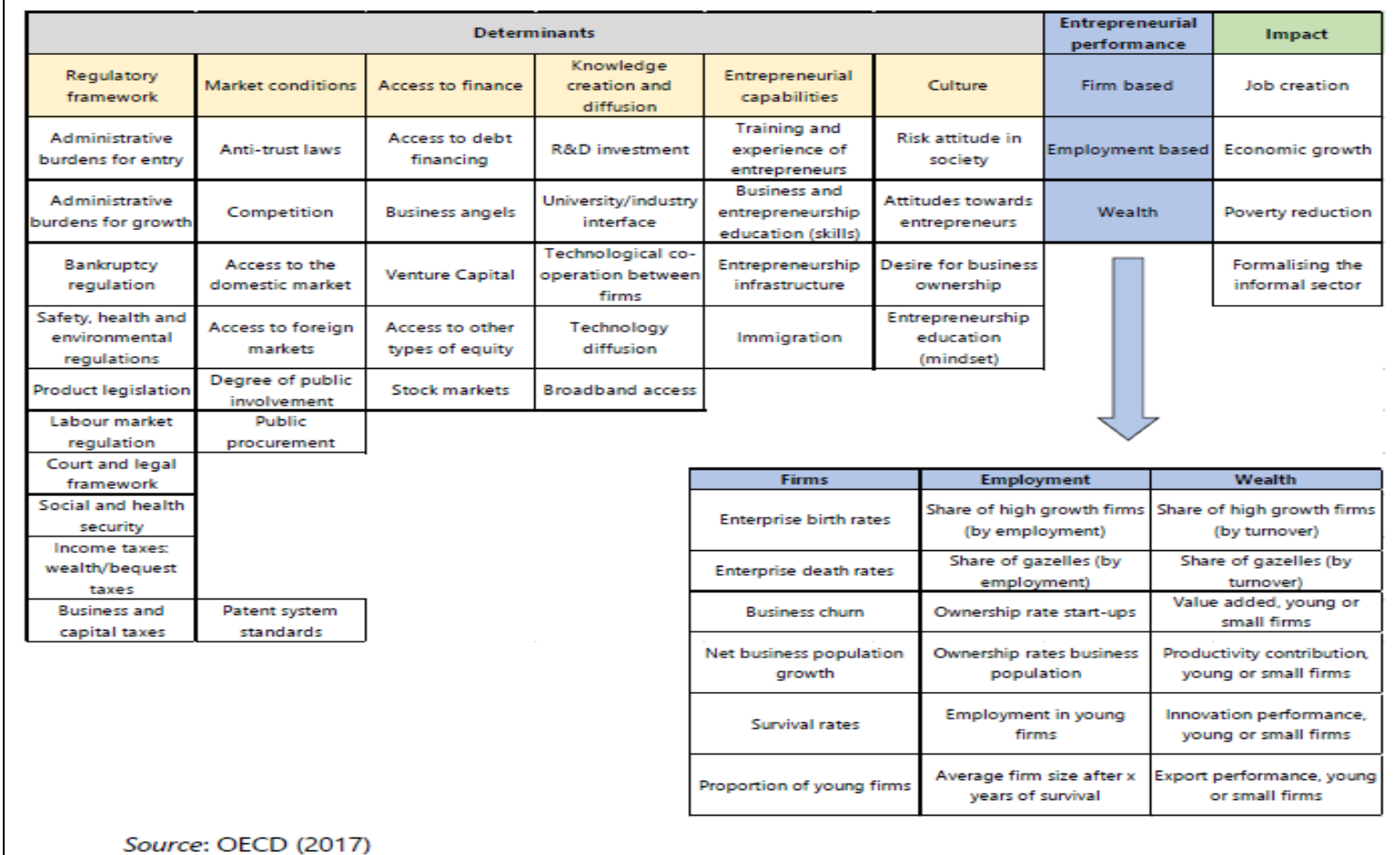
- Launched by OECD in 2006, joint programme with Eurostat after 2007
- To build internationally comparable statistics on entrepreneurship and its determinants
- The goal is to establish a framework of relevant indicators for the study of entrepreneurship and to encourage countries to use the definitions, methodologies and classifications of the framework as much as possible when producing the data

## Entrepreneurship Indicators Programme

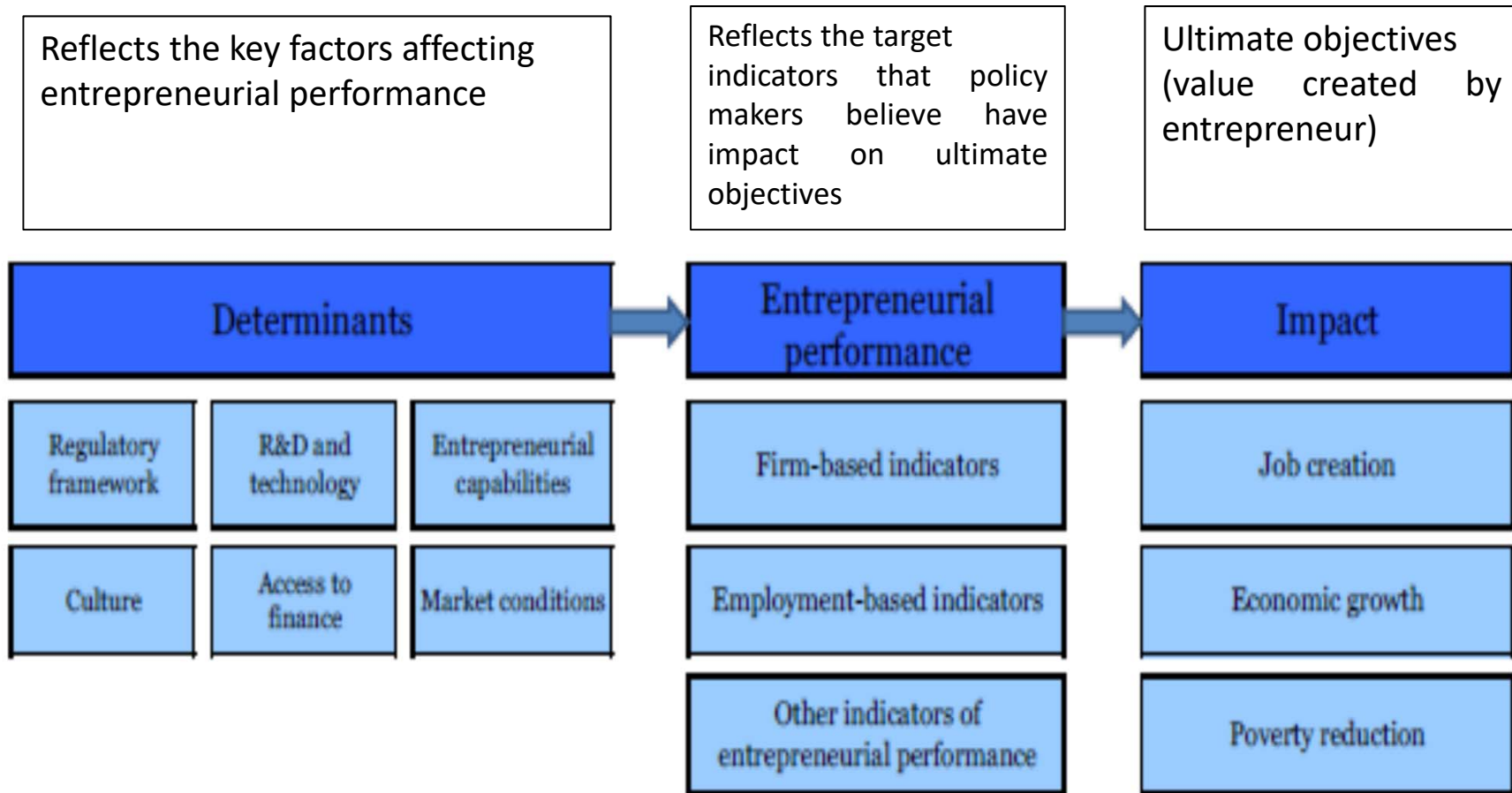
- Result of a strong collaborative effort by Eurostat and the OECD and a willing commitment by many National Statistics Offices to harmonise methods and produce results
- Publication by industry and by size class
- Also publication by entrepreneurial determinants
- As a result, Eurostat and the OECD have created databases of internationally comparable business demography statistics that were previously missing from official statistics.

# Entrepreneurship Indicators Programme

Figure 1.1 Conceptual framework of the OECD-Eurostat Entrepreneurship Indicators Programme



# Entrepreneurship Model

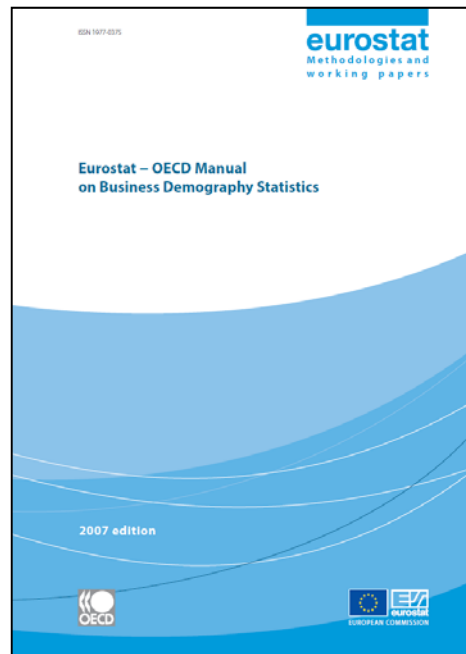


# Summary

- *Entrepreneurs* are those persons (business owners) who seek to generate value, through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets.
- *Entrepreneurial activity* is the enterprising human action in pursuit of the generation of value, through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets.
- *Entrepreneurship* is the phenomenon associated with entrepreneurial activity.

*\*Formal definitions by OECD and Eurostat*

# Methodological Sources



# Indicators of Entrepreneurial Performance

- Business data
  - ❖ Statistics that focus on businesses (bd indicators, also, by linking business demography data with other business statistics, examples of linked business data are statistics on exports and innovation activities of young businesses)
  - ❖ Statistics profiling businesses jointly with the business owners (These measures of entrepreneurship rely on statistics linking data on the individuals who are business owners with data on the businesses they own. Such statistics provide the profile of an entrepreneur together with the performance of his/her business. Progress in this area has been slower reflecting the greater compilation challenges involved. Examples for these are statistics on business births and deaths by gender of the business owner, and innovation activity of young firms by educational attainment and employment history of the business owner)



# Indicators of Entrepreneurial Performance

- The individual (actual or potential entrepreneur) and not the enterprise, as the statistical unit. Entrepreneurship indicators on individuals include statistics on self-employment from labour force surveys and population censuses, and statistics from ad-hoc surveys of individuals on attitudes toward entrepreneurship and involvement in entrepreneurial activities. Examples:
  - ❖ *Statistics on self-employed by the gender and age*
  - ❖ *individuals' preference for self-employment over wage employment*
  - ❖ *attitudes toward the risk of business failure;*
  - ❖ *perceptions on the social and economic role of entrepreneurs.*

# Indicators of Entrepreneurial Performance

- At past, self-employment was the indicator most frequently used as a proxy for entrepreneurship collected on a regular basis by labour force surveys and population censuses.
- However, this approach was excluding owners of incorporated enterprises, and unincorporated quasi-corporations.
- Also, not all the self-employed are in fact entrepreneurs; this is for instance the case of unpaid contributing family workers.
- So, independent workers definition has arised (ICSE-18): who are those persons who own and control an economic unit for which they work, whether it is incorporated or not. The category of independent workers in the classification of status in employment would provide the best starting point for the identification and compilation of statistics on entrepreneurs.

# Indicators of Entrepreneurial Performance

Table 4.1 Characteristics available on entrepreneurs by linking administrative sources and surveys

Subject/Population	Source	Characteristic
<b>Inhabitant</b>	Civil Register	Address, age, sex, marital status, parents, children, nationality, place of birth
<b>Tax-payer</b>	Income Tax Register	Amount of income, source of income (employment, entrepreneurship, capital)
<b>Labour force population</b>	Labour force survey	Educational level, hours worked (as entrepreneur)
<b>Employee</b>	Social security administration	Employee status, employment before, during or after entrepreneurship, Characteristics of: <ul style="list-style-type: none"> <li>• The employment contract, e.g. permanent, temporarily, working hours, salary</li> <li>• The enterprise of the employer, e.g. size, NACE-code.</li> </ul>

# Indicators of Entrepreneurial Performance

- Self-employment data (or data on independent workers) can provide information on the population of entrepreneurs, for example, their number, their characteristics in terms of gender, age, education or work experience. They cannot, however, offer any insight into the performance of the businesses being created, for example, their survival or growth.
- Considering these limitations, over the past decade the international statistical community has made considerable efforts to conceptualise and develop additional indicators for measuring entrepreneurial activity, in particular indicators that concentrate on businesses as the observation unit rather than individuals. So, business demography or business dynamics indicators are produced (births, deaths, survivals and growth).

# Indicators of Entrepreneurial Performance

- Business demography statistics can be compiled from a range of data sources, in particular SBRs, business censuses and business surveys.
- Research conducted in the mid-2000s on how to improve cross-country comparability of data on the creation of new businesses identified the following advantages and challenges associated with these different sources of data on business demography:
- SBRs usually provide comprehensive coverage of the population of interest and are a reliable source. In fact, data from a comprehensive, frequently updated SBR are likely to be more reliable than those from small scale surveys or studies on enterprise creation. However, the scope of the SBR, and of specific threshold restrictions, may involve exclusions from the population coverage that are different from those desirable from a business demography perspective.
- Census data can be as good as SBR data, and sometimes better if they have less scope restrictions. However, the cost of running a census of businesses every year makes this approach unrealistic in any country. Data from less frequent censuses can be used, but the statistics become out of date, and the comparability of statistics across countries is difficult when their periodicities differ.

# Indicators of Entrepreneurial Performance

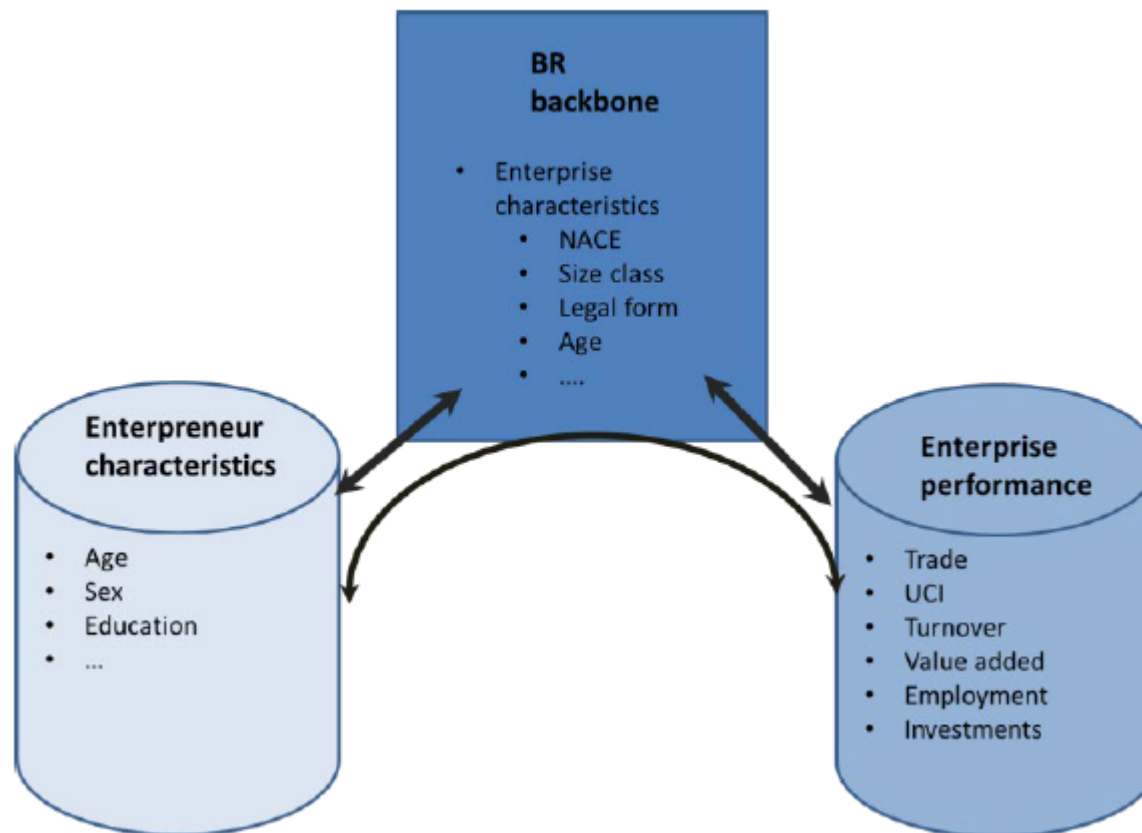
- Survey data can also be used when SBR is not sufficiently developed. It allows collection of more information on the profiles of entrepreneurs than is available from other sources. It allows collection of information on the informal economy. However, it suffers from the usual constraints set by sample size when detailed data breakdowns are required. Also, it is not possible to identify business deaths through surveys.

# Indicators of Entrepreneurial Performance

- The SBR plays a central role in linking data from surveys and administrative data
- The SBR also holds information about demographic events such as mergers, acquisitions, split-offs, changes of ownership, leading to births, deaths and survivals of the longitudinal units that are the basis for business demography statistics
- Linking SBR data to administrative data and other data sets at the micro level can provide additional insights into the relationship between business characteristics and business performance.
- The statistical units in the SBR are typically based on (sets of) legal units, which are covered in one of more administrative sources. The SBR provides the links between administrative and statistical information about businesses.

# Indicators of Entrepreneurial Performance

Figure 4.2 The SBR as the core in linking additional micro-data sets





# Indicators

- Indicators vary because different policy needs and diverse perspectives on what is meant by entrepreneurship
- As firms enter and exit the market, theory suggests that the new arrivals will be more efficient than those they displace. Existing firms are forced to innovate and become more productive in order to compete. Many studies have given empirical support to this process of “creative destruction” first described by Joseph Schumpeter.

# Indicators

Core indicators of entrepreneurial performance

Entrepreneurial performance		
Firm-based	Employment-based	Other
Employer firm birth rate	High-growth firm rate by employment	High-growth firm rate by turnover
Employer firm death rate	Gazelle rate by employment	Gazelle rate by turnover
Business churn	Ownership rate start-ups	Value added by young firms
Net business population growth	Ownership rate business population	Productivity contribution, young firms
Survival rate at 3 and 5 years	Employment in 3 and 5 year old firms	Innovation performance, young or small firms
Proportion 3 and 5 year survival	Average firm size after 3 and 5 years	Export performance, small firms

# Indicators

- Entrepreneurial performance
  - ❖ *Employer enterprise birth rates*
  - ❖ *Employer enterprise death rates*
  - ❖ *One- and two-year survival rates*
  - ❖ *Share of one- and two-year-old employer enterprises in the population*
  - ❖ *Share of high-growth firms (employment or turnover)*
  - ❖ *Share of gazelles (employment or turnover)*
  - ❖ *Employment creation by enterprise births*
  - ❖ *Employment destruction by enterprise deaths*

# Indicators

- Structural indicators on enterprise population
  - ❖ Number of *enterprises by size class*
  - ❖ *Employment by size class*
  - ❖ *Value added by size class*
  - ❖ *Exports by size class*

# Indicators

- Timely indicators of entrepreneurship
  - ❖ *Enterprise entries*
  - ❖ *Enterprise exits*
- Entrepreneurial determinants
  - ❖ *Knowledge creation and diffusion*
  - ❖ *Access to finance*
  - ❖ *Entrepreneurial capabilities*
  - ❖ *Regulatory framework*
  - ❖ *Market conditions*
  - ❖ *Entrepreneurial culture*

# Indicators

## Indicators from “Entrepreneurship at a Glance, 2016” by OECD

- New enterprise creations
- Enterprise exits
- Bankruptcies
- Self-employment
- Outlook and prospects of job creation
- Enterprises by size
- Employment by enterprise size
- Value added by enterprise size
- Turnover by enterprise size
- Compensation of employees by enterprise size

# Indicators

## Indicators from “Entrepreneurship at a Glance, 2016” by OECD

- Labour productivity by enterprise size
- Birth rate of enterprises
- Death rate of enterprises
- Survival of enterprises
- Employment creation and destruction by enterprise births and deaths
- High-growth enterprises rate
- Incidence of traders
- Trade concentration
- Exports and imports by enterprise size
- Market proximity

# Indicators

## Indicators from “Entrepreneurship at a Glance, 2016” by OECD

- Exports and imports by enterprise ownership
- Self-employment by gender
- Self-employment among the youth
- Earnings from self-employment
- Inventors by gender
- Perception of entrepreneurial risk
- Venture capital investments



**Thank you for your attention**