

BUSINESS DEMOGRAPHY METHODOLOGY

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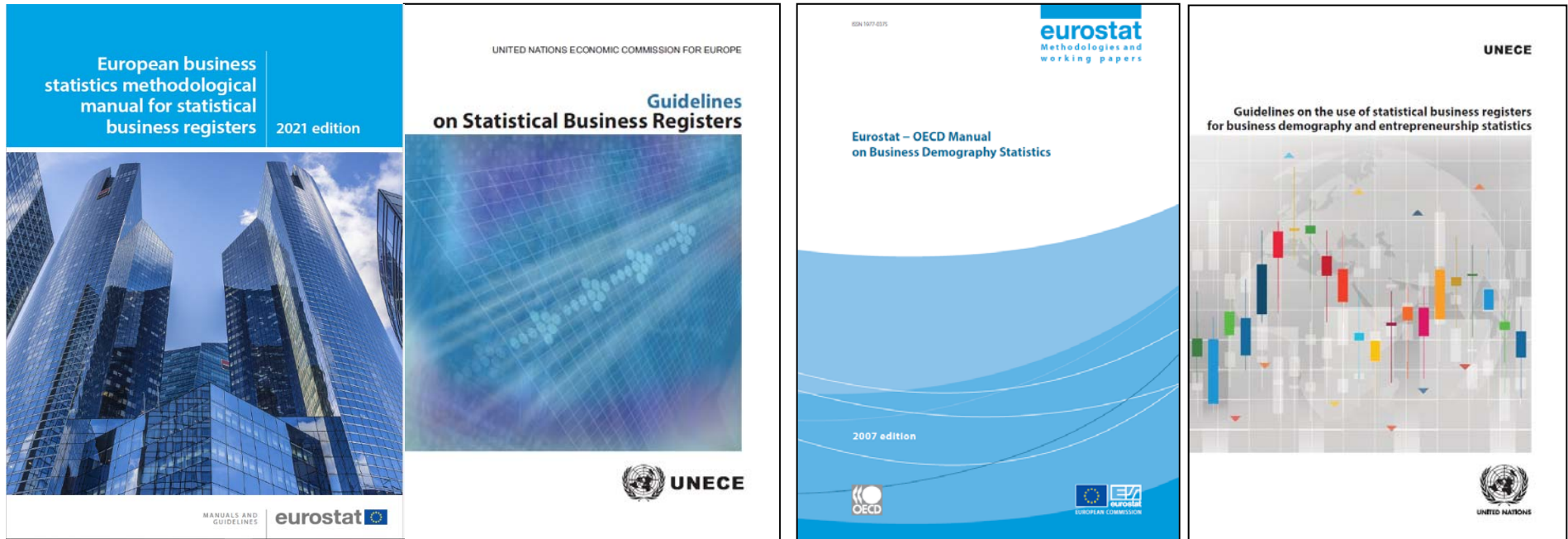
Content

- Methodological Sources
- Methodology
 - Definition, Aim, Data Source, Statistical Unit
 - Demographic Events
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Methodological Sources

- Regulation (EU) 2019/2152 European Business Statistics and Commission Implementing Regulation (EU) 2020/1197, besides Regulation (EEC) 696/93 of the Council
- European Business Statistics ethodological Manual for SBR (2021) by Eurostat
- Guidelines on Statistical Business Registers (2015) by UNECE
- Business Demography Statistics Manual (2007) by OECD - Eurostat
- Guidelines on the use of statistical business registers for business demography and entrepreneurship statistics (2018) by UNECE
- A new and updated source upcoming: EBS Manual on Business Demography Statistics (2025)

Methodological Sources



Methodological Sources

- A new and updated source upcoming: EBS Manual on Business Demography (BD) Statistics.
 - ❖ *provide a methodological document on concepts, definitions, data requirements and compilation methods,*
 - ❖ *explain the new legal basis (EBS Regulation, implementing regulation),*
 - ❖ *explain the new challenges in the compilation of BD statistics,*
 - ❖ *present information on selected national practices that could serve as good practices,*
 - ❖ *explain validation and quality rules, and metadata reporting tools according to the EBS requirements,*
 - ❖ *explain the concepts, methods and rules of the data transmission to Eurostat.*

What is Business Demography?

It covers events,

- like **births** and other creations of units, **deaths** and other cessations of units
 - *Birth rate: newly born businesses in t as percentage of all active businesses in t*
 - *Death rate: businesses closed in t as percentage of all active businesses in t .*
- follow-up of units in time dimension, thus gaining information on their **survival** or discontinuity
 - *Survival rates: percentages of businesses born in t that are still active in $t+1$, $t+2$, $t+3$, etc.*
- development in time dimension according to certain characteristics like size, thus gaining information on the **growth** of units

Aim

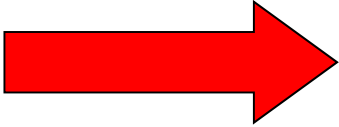
- Coherent and comparable data across the members of EU
- Promoting entrepreneurship
 - ❖ *Improving competitiveness*
 - ❖ *Generating economic growth and job opportunities*
 - ❖ *Dynamic knowledge based economy*
 - ❖ *Sustainable growth, more and better jobs economic growth and productivity*
- Observation of enterprise births, deaths, survivals over time
 - ❖ Impact of these “demographic events” on employment

Aim

BD Data answering questions like:

- How many enterprises are born every year compared with the total population of active enterprises?
- How many of these enterprises survive for 1...5 years?
- How many people are employed in these newly born enterprises?
- How many enterprises showed a significant growth in time?
- Etc.

Data Source

- Births & Deaths
 - Survival
 - High Growth&Gazelles
 - Entry & Exit
 - Etc.
- 
- Analyzed under Business Demography
 - Data source is Business Registers frames (annual business populations)

Statistical Unit

- International data collections by Eurostat use enterprise

Being Active

- Producing employment or turnover in a reference period.
- The same definition with Structural Business Statistics (SBS) but not with Statistical Business Registers

Business Population

- The same population with Structural Business Statistics but sector A and K also included here.
- Population is coming from SBR frames with all necessary variables (legal form, location, size class, date of birth etc.)

Demographic events

- Birth
- Death
- Survival
- Reactivation
- Change of Ownership
- Merge
- Takeover
- Breakup
- Splitup

Demographic events are events with an impact on the existence of statistical units and/or the links between them. The mere growth or decline of a statistical unit is not a demographic event.

Demographic events

Criteria for identification of demographic events

- Continuity of production factors
 - *A production factor is any good or service used to produce output. Production factors are normally grouped into categories such as employment, machines and equipment, land, buildings, management, and intangible assets. The continuity of a statistical unit is determined by the continuity of its production factors.*
 - *In practice: controlling legal unit, economic activity, location (2/3 rule)*

Table 2.2 Continuity rules for an enterprise

Change of controlling legal unit	No	Yes	No	No	Yes	No	Yes	Yes
Change of principal activity	No	No	No	Yes	No	Yes	Yes	Yes
Change of main location	No	No	Yes	No	Yes	Yes	No	Yes
Continuity of enterprise?	Yes	Yes	Yes	Yes	No	No	No	No

Source: Eurostat & OECD (2007)

Enterprise birth

- Independent event affecting only one enterprise and involving the creation of a new combination of factors of production.
- Births do not include entries into the population due to: mergers, break-ups, split-off or restructuring of a set of enterprises.
- It does not include entries into a sub-population resulting only from a change of activity

Enterprise birth

- Creation of new combination of production factors
- Unit must be active (employment or turnover)
- Change in BR: creation of ID number
- Exclusions:
 - ❖ *Mergers, break-ups, split-offs, restructuring of enterprise group*
 - ❖ *Change of activity or legal form*
 - ❖ *Reactivation of dormant units within 2 years*

Practical calculation: Referring to an enterprise active in year t , while it is not active during the year $t-1$ and $t-2$.

Enterprise death

- Deaths do not include exits from the population due to mergers, take-overs, breakups and restructuring of a set of enterprises.
- It does not include exits from a sub-population resulting only from a change of activity.

Enterprise death

- Dissolution of production factors, enterprise really closes down.
- No more activity (employment and turnover) for two years. A reactivation within 2 years is not a death and birth.
- Change in BR: “deletion” of ID number
- Exclusions
 - ❖ *mergers, break-ups, take-overs, restructuring of enterprise group*
 - ❖ *change of activity, change of legal form*

Practical calculation: Referring to an enterprise active in year t , while it is not active during the year $t+1$ and $t+2$.

Enterprise survival

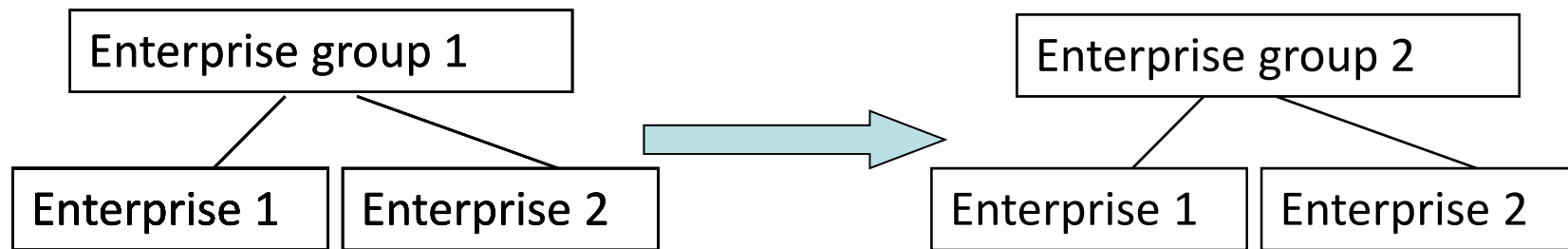
- An enterprise born in year t and if it is still active in terms of turnover and/or employment in any part of year $t+1$, it is considered to have survived to $t+1$
- An enterprise is also considered to have survived if the linked legal unit(s) have ceased to be active, but their activity has been taken over by a new legal unit set up specifically to take over the factors of production of that enterprise (survival by take-over).

Practical calculation: Referring to the enterprises born in year t and having survived to $t+n$.

Enterprise events without birth/death

- Change of ownership – One to one takeover
- Use of matching steps can be useful

Enterprise events without birth/death



- Restructuring within an enterprise
 - ❖ *creation or deletion of a legal unit*
 - ❖ *change of enterprise group*

Enterprise events without birth/death

- Merger - New enterprise is not a birth
 - ❖ *Cessation of units but no dissolution of production factors*
 - ❖ *Two or more enterprises integrate, all of them lose their initial identity*
 - ❖ *No death, production factors continue, more than one enterprise involved in event*
 - ❖ *One new ID number, two or more “deleted”*

Enterprise events without birth/death

- Takeover - Cessation of units, but no dissolution of production factors
 - ❖ *No death*
 - ❖ *One of the enterprises keeps its identity (and ID number) and integrates the other(s), whose ID number is “deleted”.*

Enterprise events without birth/death

- Break-up - creation of units, but not of production factors
 - ❖ *Break-up (counterpart to merger)*
 - ❖ *One enterprise disappears (ID number “deleted”)*
 - ❖ *Two or more enterprises emerge from it (new ID numbers)*
 - ❖ *No births, no death*

Enterprise events without birth/death

- Split-off (counterpart to take-over)
 - ❖ *creation of units, but not of production factors*
 - ❖ *Split-off (counterpart to take-over)*
 - ❖ *One enterprise continues to exist (keeps ID number)*
 - ❖ *One or more enterprises emerge from it (new ID numbers)*
 - ❖ *No birth*

Enterprise – more complex events

- Joint venture: Two or more enterprises commit resources to a new one on a temporary basis. (new ID number)
- Restructuring within an enterprise group: Creation / cessation of enterprises within a group
- Complex restructuring: Enterprises or parts of them move between enterprise groups

Enterprise Reactivation

Special case in terms of continuity

If reactivated within 24 months: enterprise continues

If reactivated after 24 months: death followed by a birth

SUMMARY

<i>Event</i>	Real, observable world		Business register	
	<i>Number of enterprises before the event</i>	<i>Number of enterprises after the event</i>	<i>Number of creations</i>	<i>Number of deletions</i>
Birth	-	1	1	-
Death	1	-	-	1
Change of ownership	1	1	-	-
Merger	n	1	1	n
Take-over	n	1	-	n-1
Break-up	1	n	n	1
Split-off	1	n	n-1	-
Creation of a joint venture	n	n+1	1	-
Cessation of a joint venture	n	n-1	-	1
Restructuring within an enterprise	1	1	-	-
Restructuring within an eg	n	n	0 or more	0 or more
Change of group	1	1	-	-
Complex restructuring	n	n	0 or more	0 or more

High Growth Enterprises

Enterprises with average annualised growth greater than 10% per annum, over a three year period should be considered as high-growth enterprises.

Growth can be measured by the number of employees or by turnover. An employment threshold of 10 is applied.

Gazelles

Gazelles are a subset of high-growth enterprises, namely those that are up to five years old.

Thank you for your attention!

LOCAL UNIT

Definition of local unit:

- The local unit is an enterprise or part thereof
 - ❖ A factory, office, mine or depot
- Situated in a geographically identified place.
- Economic activity is carried out for one and the same enterprise

*Council Regulation on Statistical Units 696/93

LOCAL UNIT BIRTH&DEATH

Birth

Creation of a combination of production factors a certain geographical location.

Death

Dissolution of the combination of production factors at a location.

LOCAL UNIT-CONTINUITY RULES

Change of enterprise link	No	Yes	No	No	Yes	No	Yes	Yes
Change of principal activity	No	No	No	Yes	No	Yes	Yes	Yes
Change of employment > 50%	No	No	Yes	No	Yes	Yes	No	Yes
Continuity of local unit?	Yes	Yes	Yes	Yes	No	No	No	No

=> Local unit continues if no or 1 factor changes;
it dies if 2 or 3 factors change.

Continuity of local unit that moves

Move over a short distance

If one or more of the three factors change as well, the unit loses its identity

Move over a long distance

The local unit loses its identity

What is a short distance?

Within a region

National conditions

LOCAL UNIT REACTIVATION

Special case in terms of continuity

If reactivated within 24 months: local unit continues

If reactivated after 24 months: death followed by a birth

=> Same rule as for enterprise reactivation

SERIES

SERIES (Annex IX):

9A: data collection broken down

by NACE activity and *legal form*

9B: data collection broken down

by NACE activity and *employee size class*

9C: estimated death data broken down

by NACE activity and *legal form*

9D: estimated death data broken down

by NACE activity and *employee size class*

Coverage of small and micro enterprises

- Main data source for BD studies is Statistical Business Registers (SBR) annual data frames.
- The scope of SBR data covers the whole economic units small and micro enterprises regardless of their size in terms of employment or turnover.
- Turkstat does not need a survey or additional data source for SMEs.

Separating genuine business demography events from administrative changes

- It is possible to monitor the demographic events (openings and closures) of firms daily in Turkish SBR.
- Main Approach: Reactivations , entries and exits are not real demographic events
 - If reactivated within 24 months: enterprise continues
 - If reactivated after 24 months: death followed by a birth
- Matching a frame of a reference year t with the frames of previous/following years' in order to get the genuine births/deaths.
- 2/3 rule is not applied.

BD Studies & Indicators

- Business Demography and Entrepreneurship Bulletin
 - Births
 - Deaths
 - Survivals (up to 5 years)
 - High Growths and Gazelles
 - Employment creations by births
 - Employment destructions by deaths
 - With some economic indicators

BD Studies & Indicators

- Harmonized Data Collection by Eurostat
 - Births
 - Deaths
 - Survivals (up to 5 years)
 - High Growths and Gazelles
 - Employment creations by births
 - Employment destructions by deaths