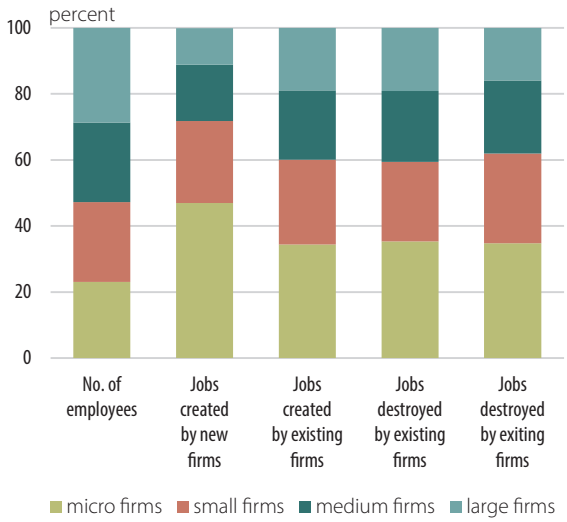
Evidence on job creation and destruction in Romania

Literature provides conclusive empirical evidence on the importance of young and small businesses, especially start-ups, in the job-creation process[1]. The replacement of mature companies by newly-established ones, which are more productive and have a higher technological content ("creative destruction"), is the engine of economic advance and employment growth[2]. Thus, assessing the importance of two company-specific features, i.e. size (measured by the number of employees) and age – is pivotal, also from the perspective of adopting possible public policies that target this segment.

This Box aims at measuring and decomposing the flow of jobs created and destroyed by Romania-based companies by firm size and age. The database used includes annual balance sheet information on firms with majority private capital in the economy during 2000-2016[3]. By definition, in the establishment year, firms participate in job creation only. Similarly, firms exiting the market contribute to job destruction alone (in the year following the last year for which balance sheet information is available). For each existing company, the number of jobs created/destroyed during a certain year is defined as equal to the positive/negative change in the number of employees in the respective year versus the year before.

Chart A. The distributions of the number and dynamics of jobs by firm size



Source: MPF, NBR calculations

Firms are grouped by size according to the EC recommendations[4]: (i) micro-enterprises (under 10 employees), (ii) small enterprises (between 10 and 49 employees), (iii) medium-sized enterprises (between 50 and 249 employees), and (iv) large enterprises (250 employees and more). The categorisation of companies depends on the average of the number of employees in the current year and that in the previous year (the reference year)[5].

Chart A shows the distributions of five indicators on the number and dynamics of jobs by firm size: the total number of employees; the total number of jobs created by newly-established firms (that start to submit fiscal statements in the respective year); the total number of jobs created by continuing firms (by raising

1 See Haltiwanger *et al.* (2013) and Fort *et al.* (2013) for the US economy.

2 See Gourio *et al.* (2014).

3 Source: Ministry of Public Finance. Data do not cover the financial sector (Section K of the NACE Nomenclature). In the case of firms that have missing or erroneous data for certain years, the average number of employees was interpolated based on the adjacent observations.

4 See *User Guide to the SME Definition* available at http://ec.europa.eu/regional_policy/sources/conferences/state-aid/sme/smedefinitionguide_en.pdf

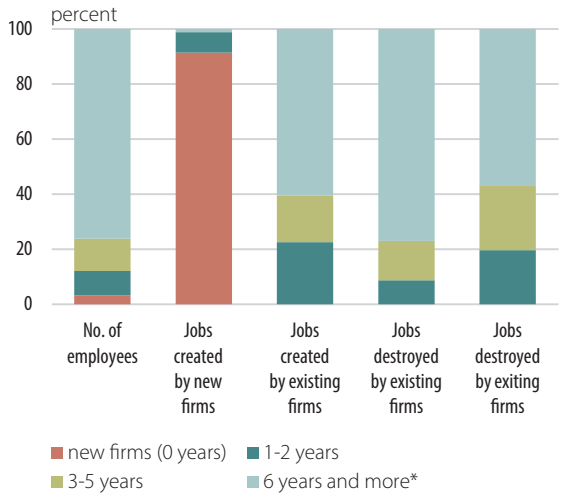
5 The use of a conventional method, namely the categorisation based on the number of employees in the previous year (the reference year), would have generated effects likely leading to an overestimation of both the role of small firms in the job creation process and that of large firms in the job destruction process. For further details, see Davidsson *et al.* (1998).

the number of employees versus the previous year); the total number of jobs destroyed by existing firms (by reducing the number of employees versus the previous year); jobs destroyed by firms exiting the market (that cease to submit fiscal statements in the respective year). The available data indicate an approximately uniform distribution of the total number of employees by employer size. However, micro firms (under 10 employees) make a disproportionately larger contribution to job creation by both the entry into the market of new firms (about 47 percent of total), and the expansion of existing firms (34 percent of total). At the same time, micro-enterprises also account for a larger share of jobs destroyed (as compared to their share in the total number of employees in the economy), with continuing firms and firms exiting the market holding 35 percent each. Unlike micro firms, large companies (with at least 250 employees) are more stable in terms of job flows, taking lower shares of both job creation and job destruction compared to their share in the number of employees in the economy.

Chart B shows similar distributions by firm age. The distribution of the total number of employees in the economy reveals the elevated share of long-established firms, aged at least 6 years old[6]. However, such enterprises make a disproportionately lower contribution to job creation, as well as to job destruction by firms exiting the market. Newly-established firms and young businesses (aged at most two years old) account for only 12 percent of the total number of employees, but create almost all new jobs by their entry into the market[7], as well as about 23 percent of the jobs created by the expansion of continuing firms.

Table A depicts the intersection of information in the two charts, showing the average annual net flow of jobs (i.e. jobs created minus jobs destroyed) broken down by categories of firms based on size (on columns), and age (on rows).

Chart B. The distributions of the number and dynamics of jobs by firm age



*) including firms established before 2001

Source: MPF, NBR calculations

Table A. The average annual net number of jobs created (2001-2016)

thousands

	Micro firms	Small firms	Medium firms	Large firms	Total
New firms (0 years)	58.2	24.3	17.3	12.7	112.5
1 year	20.5	12.2	7.5	1.9	42.1
2 years	0.8	4.4	3.8	3.0	12.0
3 years	-3.0	1.0	0.8	2.0	0.9
4 years	-4.0	-0.4	-0.1	1.3	-3.2
5 years	-4.1	-0.9	-0.5	1.1	-4.4
6 years	-3.9	-1.2	-0.6	0.0	-5.7
7 years and more*	-36.7	-22.1	-25.6	-20.7	-105.0
Total	**28.0**	**17.3**	**2.6**	**1.3**	**49.1**

*) including firms established before 2001

Note: Figures may not add up because of rounding.

Source: MPF, NBR calculations

6 The share of such companies is overestimated as firms established before 2001 have been included into this age group, owing to the lack of information on the establishment year for the firms existing in the first year of the sample (2000). The qualitative results are however similar when analysing only the enterprises established over the period corresponding to the available sample (i.e. excluding companies existing in 2000).

7 By construction, jobs created by the entry of new businesses into the market should be entirely attributed to firms aged 0 years old. Not-null shares taken by firms of different ages in Chart B (the second column) occur in the case when a company is created with zero employees, but hires personnel in the years following its establishment.

During 2001-2016, the private sector created, on average, a net number of 49.1 thousand jobs on an annual basis. In this respect, young and small businesses made a decisive contribution, especially newly-established micro firms (which created annually more than 58 thousand new jobs). The average net flow of jobs becomes negative starting with the fourth year since the establishment, but there is heterogeneity depending on the size. Thus, micro firms show a more pronounced dynamism and a negative net flow of personnel (they create, on average, less jobs than they destroy) from the age of three years, while large firms raise their number of employees over a period of up to six years, on average, since establishment.

The results summarised in this box certify a high degree of heterogeneity as concerns the dynamics of jobs across the companies categorised into groups by size and age. In particular, the analysis underlines the importance of young and small businesses that contribute to a disproportionately higher extent to both job creation and job destruction (as compared to their share of employees in the economy). Other features with a potential impact on the performance of the business sector, subject to additional research, refer to firms' business sector and access to financing via bank loans.

References

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