Em Análise

Employer Enterprise Creation in Portugal[1]

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This study provides a description of enterprise birth dynamics in Portugal, using an entrepreneurship dataset conceived from *Quadros de Pessoal* based on the Eurostat/OECD methodology "Manual on Business Demography Statistics", for the period 1987 to 2007. The main contribution of this analysis is to provide detailed empirical evidence of the performance of enterprise births by firm dimension, region and main economic sectors. Using this unique matched employer-employee micro dataset, we discuss the prevalence of some of the main stylized facts on firm creation. When relevant, we resort to international data for comparison.

1. Introduction

In 2007, a joint OECD-Eurostat partnership took place, and new standard definitions and concepts were adopted as a basis for the collection of empirical data on entrepreneurship, culminating in the publication of a "Manual on Business Demography Statistics" (OECD/Eurostat, 2008).

Our work follows this methodology and focuses on the analysis of entrepreneurial performance indicators of enterprise creation, applied to the *Quadros de Pessoal* dataset (Employment Administrative Records) of the Portuguese Ministry of Labour and Social Security, which is the main data source in Portugal, for the universe of employer enterprises. This is composed of all active enterprises with at least one paid employee during the period 1985 to 2007, which constitutes the so-called employer enterprise population.

According to the Eurostat/OECD definitions (2007), the core measure of births reflects the concept of employer enterprise birth. A birth amounts to the "creation of a combination of production factors with the restriction that no other enterprises are involved in the event" (Eurostat/OECD, 2007). Births do not include entries into the population which result from break-ups, spit-offs, mergers, restructuring of enterprises or reactivations of units which are dormant within a period of two years[4]. Thus, this population consists of enterprises that have at least one paid employee in its birth year and also of enterprises that, despite existing before the year in consideration, were below the one employee threshold.

An employer enterprise birth is thus counted in the dataset as a birth of an employer enterprise after it recruits its first employee, while complying with the above mentioned requisites.

The application of this specific methodology implied checking the previous two years before the firm's entry in the database (while fulfilling the one employee threshold), to account for possible reactivations. This caused enterprise births to be effectively accounted for from 1987 onwards, instead of 1985[5].

Thus, the considered target indicator for the measurement of firm births is the employer enterprise birth rate[6]. The employer enterprise birth rate is based on a numerator which follows the above definition for

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[1] This work reflects the opinions of the authors and not of the Ministry of Economics, Innovation and Development. Other usual disclaimers apply.
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[4] If a dormant unit is reactivated within two years, this is not considered a birth but a reactivation. Reactivations of enterprises are counted for the active enterprise population and not for the population of enterprise births.
[5] Although data is available since 1981, entries were not measured before 1985, due to reliability issues.

employer enterprise births, and a denominator which consists of the population of active enterprises with one or more employees during the reference period.

3. Entrepreneurship performance indicators for enterprise creation in Portugal
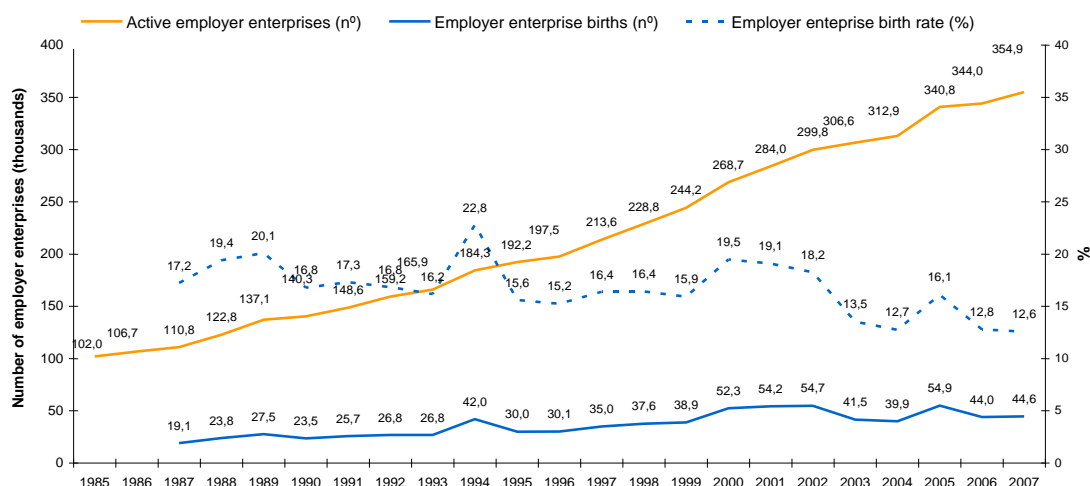
3.1. Employer enterprise births

The body of research published so far on entry, has engendered a series of persistent and compelling stylized facts about firm dynamics, which are observed in a wide spectrum of countries (Geroski, 1995; Bartelsman et al., 2005; Cabral, 2007; Klapper et al., 2009; Plehn-Djowich, 2009).

One of the less controversial stylised facts is that net entry is far less important than the gross flows of entry7 and exit that generate it. It is known that there are a high number of firms that enter and exit the market every year. Most of new entrants are more involved in the search process rather than in the effective increase of the number of competitors in the market (Bartelsman, 2004).

The analysis of the growth rate of Portuguese employer enterprise births shows a considerable level of turnover8 and volatility during the period 1987-2007. In what concerns enterprise births, four main "peaks" are clearly observable (Figure 1), 1989, 1994 with a 57% growth rate (year on year) and the highest birth rate throughout the period (22,8%), 2000 with 35% growth and 19,5% of birth rate and 2005 with a rate of growth 38% (corresponding to a birth rate of 16,1%).

Overall, the rhythm of growth of enterprise births has been decreasing since the 2000 "peak", exception made for 2005 (with a 37,6% growth rate), and the slight recovery occurred in 2007 (1,4%). In 2005, 16 out of 100 enterprises were new. In 2007, the birth rate was back to 2004´s level (12,6%).

Figure 1 - Employer enterprise births and birth rates*, 1987-2007

Source: Own calculations based on Quadros de Pessoal, GEP, Ministério do Trabalho e da Solidariedade Social.
Note: Employer Enteprises are enterprises which have at least one paid worker. Birth rates are calculated as the ratio of the number of employer enterprise births over the population of employer enterprises during the reference period.

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[6] The manual on "Business Demography Statistics" (Eurostat/OECD, 2007) considers three different indicators for the measurement of a firm's birth, providing higher levels of international comparability as the threshold rises.
[7] In fact, several measures of entry can be considered. According to Siegfried and Evans (1994), a net entry measure treats exits as negative entries, forcing the structural determinants of entry to be the same as the structural determinants of exit. Gross entry on the other had, refers to entry alone. However, gross entry does not reflect entry that matters for competition measurement, as entering firms may simple displace exiting firms. Moreover, this measurement might not reflect effective entry rates, that is the amount of firms that actually survive and do not abandon the market.
[8] Turnover is a measure of firm churning. It is defined as the sum of birth and death rates, that is the percentage of active firms that either enter or exit the market in a given year.

In the 20 year period starting in 1987, the annual average growth rate of employer enterprise births was 4,3% (Table 1), but from 1996 to 2000, an economic recovery period, it becomes substantially higher (14,9%), particularly when compared with the less favourable period of 1990-1995 (4,9%) and also to the period ranging from 2001 to 2005 (0,3%)[9]. The average birth rate also highlights this deceleration tendency, in particular from 2001. From 1990 to 1995, it averages 17,6%, decreases to 16,7% during 1996 to 2000 and continues to fall in the following five year period (15,9%).

Table 1 - Average birth rate and annual average growth of births

| Period	Average birth rate (%)	Annual Average Growth of Births (%)
1987-2007	16,7	4,3
1987-2000	17,5	8,1
2000-2007	15,6	-2,3
1990-1995	17,6	4,9
1996-2000	16,7	14,9
2001-2005	15,9	0,3

Source: Author's calculations based on Quadros de Pessoal GEP, MTSS

Various studies have documented substantial rates of entry (and exit) in a number of countries (Caves, 1998; Scarpetta et al., 2002; Masso et al., 2004; Ahn, 2001; Cabral, 2007; Klapper et al., 2008). Among the European countries, Portugal has one of the highest records of new firms relatively to the stock of existing enterprises, even when other universes and methodologies are considered (OECD/Eurostat, 2009; Eurostat, 2009; INE 2009; Scarpetta et al., 2002; Cabral, 2007; Bartelsman, 2004).

The Structural Business Statistics data by Eurostat (2009) shows that in 2005, Portugal had the second highest business entry rate among 20 countries (Figure 2). The same rank is found if we used instead our entry rate based on *Quadros de Pessoal* (Eurostat/OECD, 2007), or the entry rate from Statistics Portugal (INE, 2009), calculated for enterprises which employ more than one worker (which follows the same Eurostat/OECD´s methodology). In 2006, within a panel of 16 countries, Portugal ranks the third highest, after Estonia and Romania (INE, 2009) and would be ranked second if Statistics Portugal data (EIP) or *Quadros de Pessoal* (Eurostat/OECD, 2007) data would be used instead.

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[9] We observe a positive correlation between the GDP at current prices and the birth rate, within the period from 1996 to 2006 (47,7%) and a significant correlation between the lagged GDP at current prices and the birth rate (96,6%, significant at 1% level) and of the lagged GDP at the previous year prices and the birth rate (70,5%, significant at 5% level).

Figure 2 - Birth rates, according to the Business Demography Statistics by Eurostat and Birth rate for Portugal according to Statistics Portugal (EIP) and *Quadros de Pessoal* , ordered by 2005 and country
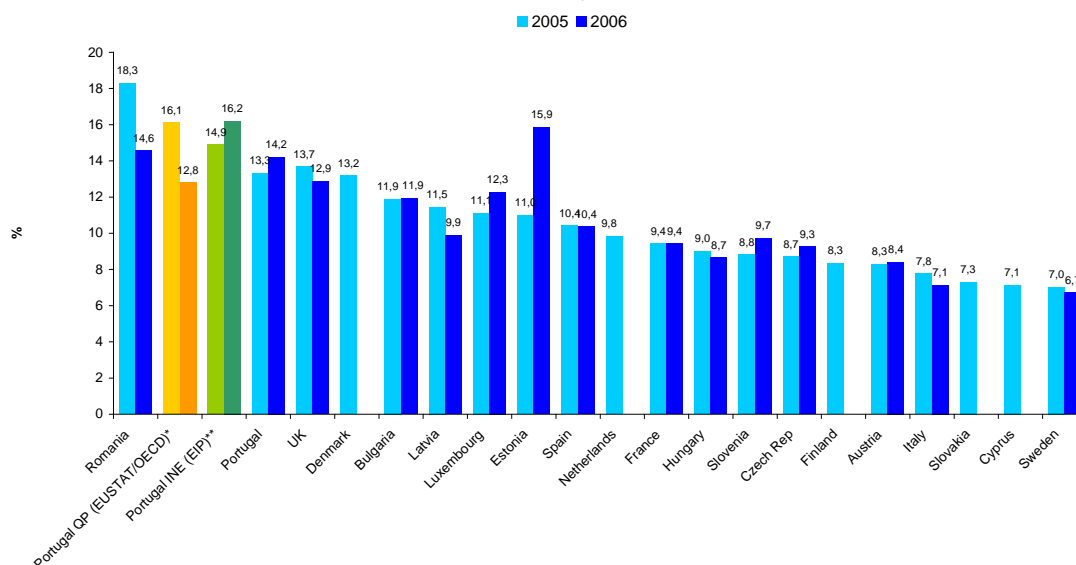
Source: Eurostat, Statistics Portugal for Portugal INE (EIP) data and author's calculations based on Quadros de Pessoal GEP, MTSS for Portugal QP (Eurostat/OECD)and SDBS Business Demography Indicators from the OECD (EIP).

Notes: Preliminary version of 2005 for Bulgaria, Romania, Portugal and Slovenia.
   * Employer enterprises according to the Eurostat/OECD methodology, based on Quadros de Pessoal.
   ** Statistitics Portugal data, for enterprises with more than 1 paid employee (employer enterprises).

3.2. Employer enterprise births by size class

The vast majority of enterprises in OECD countries (OECD, 2000) and in the European Union (Storey, 1994; Eurostat, 2009) are small and medium enterprises (SMEs). The weight of SMEs in the economy has been increasing in many countries (OECD, 2000) due to the predominance of the service sector, as larger firms outsource more functions and as developments in information technologies lower entry costs, allowing smaller firms to enter market niches.

Another stylized fact is that entry is more likely to occur in smaller size classes (Segarra and Callejón, 2002). Births (and deaths) are traditionally more concentrated in smaller size classes compared to the overall firm population (OECD/Eurostat, 2009). In general, due to the uncertainty regarding future profitability and the learning process firms incur only after entering the market, most firms prefer to enter small in order to have minimum costs in case of exit. On the other hand, firms with better information about their future success tend to enter with a bigger size[10]. Another possible cause is that firms start small, despite the adequacy in some industries to enter with a bigger scale, due to financing constraints (Cabral and Mata, 2003).

In Portugal, small firms are created at a faster pace than larger firms, gaining share in both enterprise and employment (Sarmento and Nunes, 2009). In the period comprised between 2000 and 2007, 48.259 new enterprises were created on average per year (Table 2). Among these, 40.297 are within the 1 to 4 employees size class (83,5% of total enterprises) and 48.011 are below the 50 employees range (99,5%).

During 1993, an year characterised by a widespread international economic crisis and speculative currency attacks within the European Monetary System, Portugal faced a negative GDP growth (-0,7%). Firms with over 50 employees were particularly hit (84,2% increase in deaths), but managed to grow substantially in the following year (from 205 to 361 enterprises). The year of 1994, initiated a period of economic recovery and was marked by the start of the second community support framework (QCAII). In

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[10] Firms that start up bigger also have a higher probability of survival. These constraints are larger in the service sector as a firm's current size dimension highly determines its survival chances (Nunes and Sarmento, 2010).

1994, the rate of growth of births was the highest of all the 1987-2007 period (57%), in particular for the size class of over 250 employees (600%). The second highest growth rate occurred in 2000 (35%), particularly in what concerns micro firms with less than 4 employees (38%).

Table 2 – Average employer enterprise births by periods and firm size

Period	Average entreprise births	Cumulative by Size Class (nº employees)					
		1 - 4	1 - 9	1 - 19	1-49	1 - 249	ALL
1987-2000	31.368	24.442	28.900	30.476	31.147	31.347	31.368
% of total	100	77,9	92,1	97,2	99,3	99,9	100,0
1987-2007	36.803	29.555	34.256	35.885	36.574	36.781	36.803
% of total	100	80,3	93,1	97,5	99,4	99,9	100,0
1992-1999	33.383	26.483	30.982	32.511	33.162	33.363	33.383
% of total	100	79,3	92,8	97,4	99,3	99,9	100,0
2000-2007	48.259	40.287	45.543	47.286	48.011	48.233	48.259
% of total	100	83,5	94,4	98,0	99,5	99,9	100,0

Source: Author's calculations based on Quadros de Pessoal GEP, MTSS

According to Table 2 and Figure 3, most of enterprise births occurred in the 1 to 4 employees' range, in particular during the period 2000-2007 (83,5%), when compared to the previous period of 1992-1999 (79,3% of total). The annual average rate of growth of the 1-4 size class firms is 1 p.p. above the economy's average (4,1%) from 1986 to 2007, only surpassed by the over 250 employees range with 6,4% of growth.

In 1995, the 1-4 size class firms obtained more than 80% of the share of total business (Table 1 in Annex I) and has shown a steady increase, at the expense of all other business size ranges (Figure 3). The shift-share analysis shows that the greatest contributions to the rate of growth of births comes mainly from the 1-4 size class (except for the year 2001 when it was mainly due to 5-9 and 10-19 size classes).

According to Eurostat (2009), Portugal has had the highest share of enterprises births in the 1 to 4 employees' size class (average of 2005 and 2006).

Figure 3 – Employer enterprise births by size class
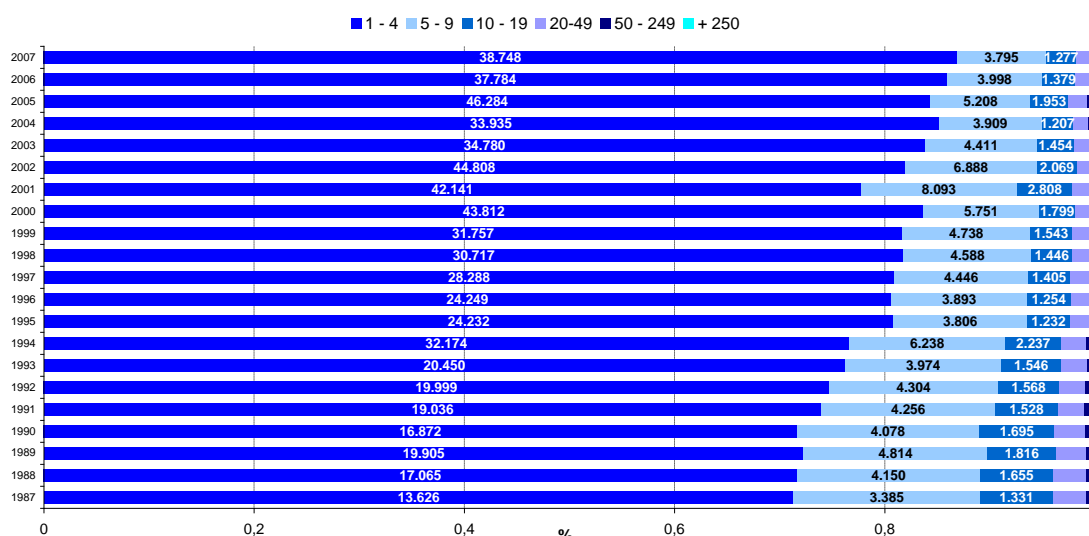
Source: Author's calculations based on Quadros de Pessoal GEP, MTSS

The decrease in birth rates in particular after 2001, is observed in all size classes (Figure 4). In 2006, enterprises with more than 250 employees suffered a sharper decline than other size class ranges (-65% of growth rate), but managed to recover in 2007 (with a growth of 83,3%).

Figure 4 - Birth rates by firm size

Source: Author's calculations based on Quadros de Pessoal GEP, MTSS

The increasing births of firms in smaller size classes (Figure 3), combined with a smaller average entrant size (Table 3) and specialisation effects towards industries with a smaller efficient scale, have led to a decline in average firm size in Portugal over time (Sarmento and Nunes, 2009).

Table 3 - Average firm size of new employer enterprises (Births)
(average number of employees)

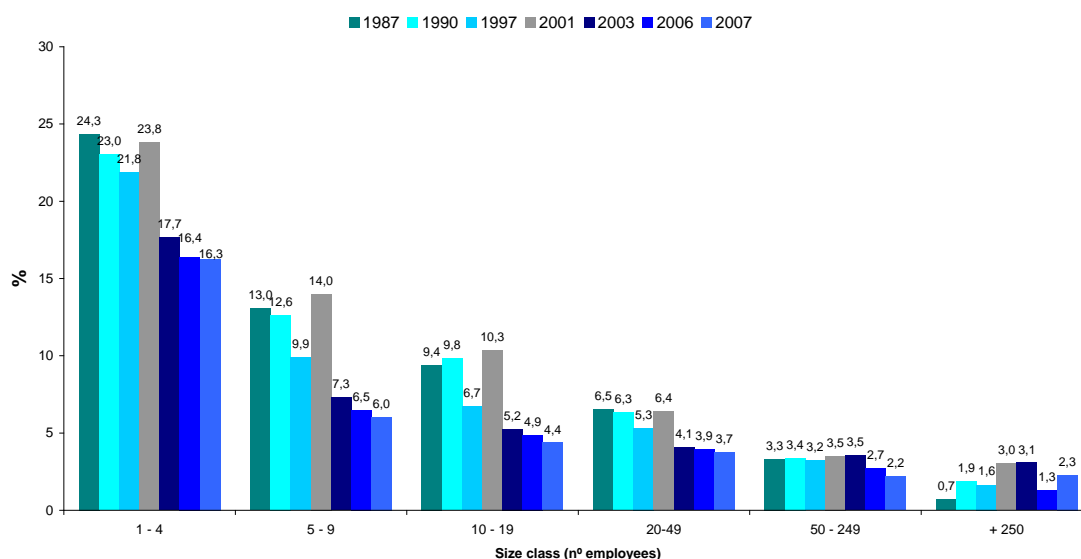| 1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
5,41	5,58	5,76	5,66	5,83	5,1	5,23	6,06	4,11	4,1	4,08	4,27	4,11	4,31	4,24	3,88	3,97	3,82	4,03	3,38	3,37

Source: Author's calculations based on Quadros de Pessoal GEP, MTSS

3.3. Employer enterprise births by regions

The creation of enterprises is also a primary indicator of the level of entrepreneurship, at the regional level. The regional distribution of start-up rates is relatively uneven across the seven NUT II regions (Table 4). Norte is responsible for most of the enterprise births in the country, with an average share of 36% of total enterprises, throughout the 20 year period considered (with a "peak" in 2005 when it reached a 44,4% share), with a birth rate greater than the national average (except for years 1991, 1992 and 2000). This region also presents the highest dispersion, followed by Centro and Lisboa.

Lisbon and Açores have smaller birth rates than the country's average throughout most of the observed period, while the Algarve is systematically the region with the highest birth rates in Portugal. In 2007, the Algarve had a birth rate of 15,3%, compared to a national birth rate of 12,6% (in 2001 there was a 4,3 p.p. difference relatively to the national average). In 2007, there were three regions with birth rates above the national average, Algarve, Lisboa and Norte.

Table 4 - Employer Enterprise Birth rates by NUT II (%)

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	1987-1995	1990-1995	1996-2001	2002-2007
Norte	18,6	20,5	20,4	17,4	17,1	15,9	16,7	23,4	16,1	15,5	16,8	17,1	16,7	19,3	20,6	18,8	14,3	13,4	19,9	12,9	12,8	18,4	17,9	17,9	15,3
Algarve	25,7	28,8	30,4	22,8	23,2	20,6	19,7	28,9	17,7	17,5	18,6	17,5	17,4	22,3	23,4	20,9	14,7	14,1	16,9	14,9	15,3	23,7	22,1	19,8	16,0
Centro	16,9	18,1	21,2	16,9	18,6	18,4	16,8	23,2	16,0	15,8	16,0	16,5	16,2	20,8	18,1	18,1	12,3	11,6	14,4	11,3	10,8	18,5	18,4	17,4	13,0
Lisboa	14,4	16,6	17,3	14,8	15,5	16,0	14,6	20,8	14,0	13,6	14,7	15,3	14,5	18,4	17,5	17,4	13,2	12,7	13,0	13,6	13,5	16,1	16,0	15,8	13,9
Alentejo	20,4	25,9	22,9	18,5	19,1	17,9	16,9	22,8	16,7	16,5	21,0	17,0	15,6	19,7	17,9	17,2	13,5	12,0	14,5	12,1	11,8	19,9	18,6	18,0	13,5
Açores	18,9	18,3	17,0	15,1	16,7	16,1	13,7	20,3	15,3	16,0	13,2	12,8	14,5	15,2	16,8	17,4	13,7	13,4	12,4	12,5	11,4	16,8	16,2	14,8	13,4
Madeira	15,9	16,6	17,4	16,6	16,9	17,6	17,7	25,1	17,6	16,3	15,9	17,2	17,5	17,4	19,4	18,3	16,6	14,8	13,2	13,6	12,0	18,3	18,8	17,4	14,6
Total	17,2	19,4	20,1	16,8	17,3	16,8	16,2	22,8	15,6	15,2	16,4	16,4	15,9	19,5	19,1	18,2	13,5	12,7	16,1	12,8	12,6	18,0	17,7	17,3	14,3

Source: Author's calculations based on Quadros de Pessoal GEP, MTSS

Most regions follow the general trend of decreasing birth rates (Table 4 and 5), in particular after 2000, a phenomena also observable by the decreasing annual average growth rates of enterprise births. The Algarve is the only region that manages to dispute this tendency and maintain a positive annual growth rate of enterprise births, during the period 2000 to 2007 (1,0%).

Colantone and Sleuwaegen (2008), when analysing entries and exits in eight European countries, point out that globalisation is bringing an increasing level of risk, tougher competitive pressure and increasing barriers to entry the market for potential entrepreneurs, which has resulted in declining entry rates.

Table 5 - Annual average growth rate of employer enterprise births by NUT II

NUTII	1987-2007	2000-2007
Norte	4,3%	-1,5%
Algarve	6,2%	1,0%
Centro	4,6%	-5,3%
Lisboa e Vale do Tejo	4,3%	-1,1%
Alentejo	3,1%	-4,2%
Açores	1,1%	-1,0%
Madeira	4,9%	-1,1%
Portugal	4,3%	-2,3%

Source: Author's calculations based on Quadros de Pessoal GEP, MTSS

In 1993, a year of economic downturn, the sharp decrease in birth rates was felt most severely in Lisbon. According to the shift-share decomposition provided in Table 3 in Annex I, this region depicts a negative contribution to the growth of enterprise births (-1,5 p.p. of an overall 0,2% of growth) followed by Centro (-0,5 p.p.), Açores, Alentejo and the Algarve. This tendency is counteracted by the growth in Norte (2,5 p.p. contribution to an overall 0,2% of growth) and Madeira (0,1 p.p.).

The 1994 peak in enterprise births was mostly due to the contributions of Norte (20,8 p.p. of the overall 56,6% of birth growth), Lisboa (15 p.p.) and the Algarve (4 p.p.), which experienced the highest birth rate in the country. According to the shift-share analysis, the peak of 2000 is explained by the contribution of enterprise births in Centro (10 p.p. to an overall birth growth of 34,6%), Norte (9,7 p.p.) and Lisboa (9,2 p.p.).

By combining the geographical with the size class dimension, we may observe the preponderance of small firms births in most regions (Table 6), in particular in Algarve (above 98,1% of enterprises are born with fewer than 20 employees throughout the period), Alentejo (above 97,7%), Centro (97,2%) and the Açores. Over the period, Norte is the region where relatively less firms are born with fewer than 20 employees.

Table 6 - Share of enterprises with fewer than 20 employees by NUT II region (%)

Regions	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Norte	96,8	97,5	96,9	97,4	97,3	97,7	97,4	98,0	97,4	97,6	97,4	97,8	98,0
Algarve	98,7	98,9	98,7	98,7	98,4	98,9	98,8	99,0	98,8	98,8	98,1	98,4	98,5
Centro	98,1	98,1	98,2	98,5	98,4	98,7	98,5	99,0	98,7	98,6	97,2	98,8	98,8
Lisboa	97,8	97,5	97,6	97,4	97,5	97,7	97,4	97,9	97,8	97,7	97,1	97,9	98,1
Alentejo	98,7	97,7	98,6	98,6	98,8	98,9	98,6	98,7	98,7	98,5	98,1	98,4	98,4
Açores	98,7	99,0	98,2	99,1	99,4	97,8	97,8	97,4	98,6	98,3	98,3	98,7	98,1
Madeira	97,0	96,4	98,0	97,6	97,5	98,1	96,6	97,8	98,3	97,4	98,9	97,9	97,3
Portugal	97,7	97,7	97,6	97,8	97,8	98,1	97,8	98,3	98,0	98,0	97,4	98,1	98,2

Source: Author's calculations based on Quadros de Pessoal GEP, MTSS

Average firm size of entrants has also been decreasing throughout the country's regions (Table 7), except for size class of 20-49 employees which, despite the natural fluctuations over this 12 year period, has been able to show systematic recoveries and maintain its average range between 25 and 31 employees throughout the period.

Until 2003, Açores had the smallest sized enterprises, in the size class 1-4 (1,8 employees on average). From 2005, it was overthrown by Norte (1,6). On the other hand, Lisbon has the biggest sized enterprises in the country in the size class of over 250 employees, although average firm size has been decreasing

considerably in recent years (1645 employees on average in 1989, 2628 in 2000 and 624 in 2007), followed by Centro and Norte, which recovers in 2007, the second place in this size class.

In higher birth rate years in Portugal, we observe an overall increase in firm dimension, but there is some heterogeneity throughout the Portuguese regions, in particular during the "peak" years of 2000 to 2002. The year of 1994, also characterised by a sharp increase in birth rates, shows a more homogenous regional impact on the average enterprises´ size[11] (except for Centro and the Açores), compared to the "peak" of 2000 to 2002, which had a more localised impact in respect to firm size increase in Lisbon, Açores and Madeira.

Table 7 - Average firm size of new firms disaggregated by NUTII and firm size

(nº employees)

	SC	Norte	Algarve	Centro	Lisboa	Alentejo	Açores	Madeira	TOTAL
1989	1 to 4	2,2	2,3	2,2	2,3	2,1	1,7	2,0	2,2
	5 to 9	6,4	6,4	6,4	6,3	6,3	6,1	6,5	6,4
	10 to 19	13,3	12,8	13,1	13,3	13,1	12,5	13,8	13,2
	20 to 49	29,3	27,7	28,5	29,5	28,6	30,0	29,4	29,1
	50 to 249	87,9	92,0	87,6	96,5	65,8	77,0	98,3	89,5
	250 or more	375,6		349,3	1645,1				972,8
	Total	6,1	4,3	5,0	7,0	4,3	2,7	5,4	5,8
1993	1 to 4	2,0	2,0	2,1	2,2	2,0	1,8	2,0	2,1
	5 to 9	6,4	6,2	6,3	6,3	6,2	6,3	6,6	6,3
	10 to 19	13,2	14,3	13,0	13,0	13,2	12,7	12,8	13,1
	20 to 49	29,0	26,0	29,2	29,4	28,6	25,2	31,5	29,1
	50 to 249	94,8	100,3	91,6	87,6	91,2	116,8	84,7	91,9
	250 or more	265,0		1034,3	4011,7				2200,4
	Total	4,9	3,8	5,1	6,5	4,1	4,4	5,0	5,2
1994	1 to 4	2,1	2,0	2,1	2,2	2,0	1,7	1,9	2,1
	5 to 9	6,4	6,2	6,3	6,3	6,3	6,1	6,5	6,3
	10 to 19	13,2	13,0	13,0	13,0	13,1	13,0	13,8	13,1
	20 to 49	29,1	27,4	29,1	29,7	28,6	26,8	27,0	29,1
	50 to 249	86,3	78,9	91,9	95,7	90,8	67,0	81,8	89,4
	250 or more	938,0	337,0	812,3	1648,6	280,0	606,0	456,0	1264,7
	Total	5,9	4,1	4,5	8,6	4,3	3,8	5,4	6,1
2000	1 to 4	1,9	1,9	1,9	1,9	1,9	1,6	2,0	1,9
	5 to 9	6,3	6,3	6,1	6,3	6,4	6,2	6,3	6,3
	10 to 19	13,0	12,9	12,7	13,3	12,7	13,0	12,7	13,0
	20 to 49	28,5	26,5	29,7	29,2	31,4	27,2	26,5	28,9
	50 to 249	98,2	72,5	82,6	97,2	103,2	91,0	98,1	94,7
	250 or more	435,6		364,5	2628,1		473,0		1826,0
	Total	4,0	2,9	3,1	6,6	3,1	3,9	4,3	4,3
2005	1 to 4	1,6	1,8	1,7	1,8	1,7	1,7	1,9	1,7
	5 to 9	6,4	6,3	6,3	6,3	6,4	6,2	6,2	6,3
	10 to 19	13,4	13,3	13,3	13,0	13,5	13,5	13,4	13,3
	20 to 49	29,6	30,4	29,7	29,9	29,6	30,2	26,7	29,7
	50 to 249	93,7	102,3	79,2	94,7	87,4	96,3	71,5	91,1
	250 or more	567,3		632,0	680,9	795,0			631,3
	Total	3,9	3,5	3,8	4,9	3,5	3,3	3,3	4,0
2007	1 to 4	1,6	1,7	1,7	1,7	1,7	1,7	1,8	1,7
	5 to 9	6,3	6,3	6,2	6,3	6,2	6,2	6,2	6,3
	10 to 19	13,2	13,2	13,1	13,1	13,3	13,0	13,1	13,2
	20 to 49	29,4	27,2	28,0	29,7	30,3	25,1	29,2	29,2
	50 to 249	87,4	95,9	81,3	99,8	79,8	123,0	67,4	91,1
	250 or more	526,0	276,0	338,0	623,9	423,0			554,8
	Total	3,4	3,0	2,7	3,9	3,1	3,5	3,7	3,4

Source: Author's calculations based on Quadros de Pessoal GEP, MTSS

3.4. Employer enterprise births by sectors

Another stylized fact is that turbulence is usually higher in services than in the manufacturing sector (OECD/Eurostat, 2009; Bartelsman et al., 2005; López-Garcia and Puente, 2006). For the period 2005 and 2006, the Eurostat/OECD (2009) observes that birth (and death) rates are significantly higher in the service sector for the vast majority of countries.

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[11] This is also due to its more limited impact over time, when compared to the remaining "peaks" of enterprise births. Still, enterprises which were created in 1994, managed to create peaks of survival during the following years, still visible 5 years later (GEE, 2010).

According to *Quadros de Pessoal*, the service sector has been reinforcing its position as the leading sector in the Portuguese economy, a phenomenon shared with a considerable amount of countries (OECD, 2005; Ahn, 2001), given the increasing reliance on intangibles, information technologies and globalisation (Colantone and Sleuwaegen , 2008), among other factors (Sarmento and Nunes, 2009).

In 2006, the service sector was responsible for 71,6% of all start-ups (+3 p.p. than in 1996), as depicted in Table 8, and 62% of total employment generated by new firm entries (+6 p.p. than in 1996), greater than the weight of this sector's overall employment in the economy (60,3% in 2006 and 50,1% in 1996) (Sarmento and Nunes, 2009).

Table 8 - Distribution of enterprise births, by broad sectors[12] (share, %)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Agriculture	4,5	4,6	5,2	4,1	3,8	3,5	3,5	3,7	3,9	4,3	14,9	5,8
Manufacturing	15,5	14,6	15,0	14,3	14,1	12,2	14,2	11,6	10,4	9,8	8,7	9,2
Services	68,9	68,9	66,1	65,9	64,7	65,4	59,5	65,2	71,4	72,4	64,5	71,6
Construction	11,1	11,9	13,7	15,7	17,4	19,0	22,8	19,4	14,2	13,5	11,9	13,3

Source: Author's calculations based on Quadros de Pessoal GEP, MTSS

Concerning birth rates, we observe considerable variations across Portuguese sectors (Figure 5). From 1998 to 2001, the most dynamic sector was "Construction", where birth rates surpassed 20%, accompanied by an increasing weight in the share of total births. From 1996 to 2001, the Construction sector gave the greatest contribution to the growth of enterprise births in the country, which is still maintained in 2003 and 2004 (Table 2 in Annex I).

In 2001, 29 out of each 100 were new enterprises in the construction sector (which represented 4,4% of total enterprises in the country in 2001)[13]. A similar trend can be found in other countries, particularly in Spain (Consejo Superior de Cámaras de Comercio en España, 2003).

From 1996, the service sector is ranked as having the second highest birth rate[14], taking the lead from 2003 onwards (in 2005, 16 out of 100 were new service enterprises). According to OECD/Eurostat (2009), in 2006, Portugal had the highest birth rate in the service sector, above 20 other countries.

Manufacturing birth rates have been decreasing since 2001, with a slight recovery in 2005, which was extended to all broad sectors.

At a more disaggregated level, the sectors with the highest average births during 1995-2006 (at one letter level of the Classification of Economic Activities, Rev. 2.1.) are "Public administration and defence; compulsory social security" (which also holds the highest annual average growth rate), "Fishing", "Agriculture, farming of animals, hunting and forestry", "Real estate, renting and business activities" and the "Construction" sector, which averages 18,4% during the period. From 2001 to 2006, the same sectors rank the highest birth rates.

[12] Broad sectors are services, manufacturing, Construction and Agriculture (and Fishing, that is the primary sector). Data is provided from 1995 only, due to the start of European System of Accounts in 1995, and up to 2006 due to the problems of compatibility with Classification of Economic Activities Revision 3, introduced in 2007.
[13] In the year following 1995, survival rates for the construction sector were the highest of all broad sectors during the 3 first years of activity (1996-1998). From 1999 onwards, firm survival in the service sector overcame survival in the construction sector, that kept on falling at a relatively higher rate than in other sectors (for the survival cohort 1995-2005) (Sarmento and Nunes, 2009).
[14] Nunes and Sarmento (2010) show that industries characterised by high entry rates at the moment of birth, find post-entry survival more difficult.

Figure 5 - Birth rates by broad sectors, 1995-2006 [15]
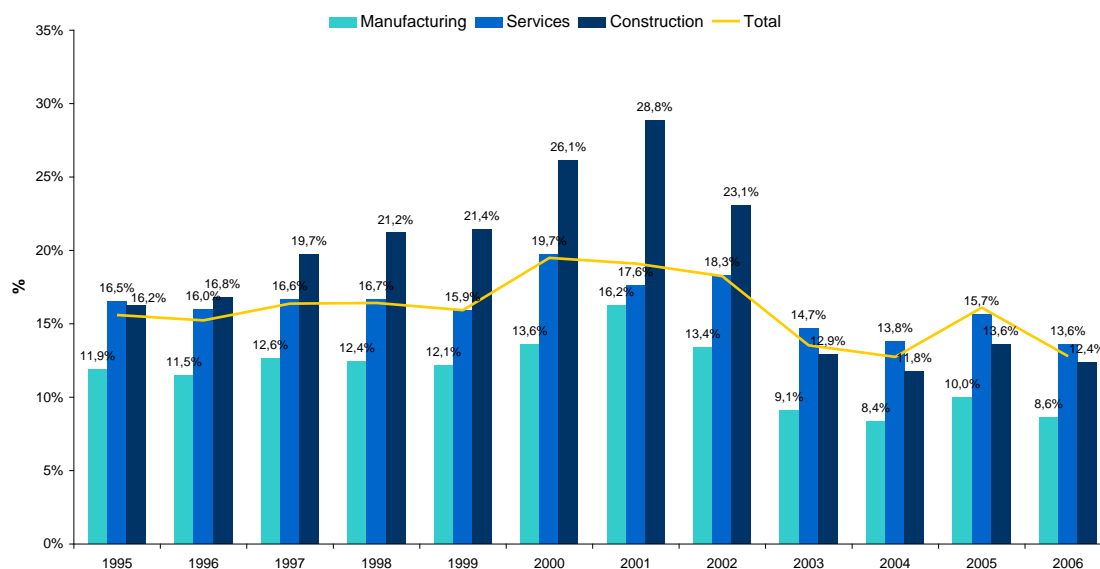
Source: Author's calculations based on Quadros de Pessoal GEP, MTSS

The same rankings are maintained when we consider an analysis by NUT II for the sub-period 2000 to 2006 (Tables 9 and 10). In the Açores and Alentejo, the fishing activity still engenders a considerable creation of enterprises. InMadeira, turism might be the main responsible for the increase in enterprise creation in the Real Estate[16] and Construction sectors.

From 1995 to 2000, Real Estate, mostly in the Norte and Lisbon regions, and Construction are the prevailing sectors in enterprise creation. The Construction sector, which has grown considerably in regions such as Algarve, Madeira, Açores, Alentejo and Lisboa, faces a slowdown during the following sub-period (2000-2006), both in enterprise and employment creation (Sarmento and Nunes, 2009).

The broad Manufacturing sector[17] shows the smallest birth rates in both sub-periods (Table 10), as well as in employment generation, especially after 2000 (Sarmento and Nunes, 2009). From 1995 to 2000, the Manufacturing sub-sector (D) has the lowest birth rates in Lisboa, Alentejo and Centro, while "Mining and Quarrying" grows below the country's average in Lisbon, Norte and Alentejo.

From 2000 to 2006, the "Mining and Quarrying" sub-sector faces an overall higher slowdown than Manufacturing (10,7% and 11,3%, respectively). Manufacturing is particularly hit by smaller birth rates, in regions such as Alentejo, Centro, Norte and Lisboa.

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[15] This disaggregation by NUT II is only provided after 1995 due to the start of SEC 95, and up to 2006 due to the problems of compatibility with CAE Rev. 3 after 2007.
[16] During the period 1995-2000, we can observe the importance of off-shore activities, as the financial intermediation sector plays a very important part in enterprise creation.
[17] Sectors C, D and E of CAE Rev. 2.1.

Table 9 – The three main sectors with the greatest birth rate by region and time period (%)

2000-2006

Region	Sector 1		Sector 2		Sector 3	
Norte	Public administration and defence; compulsory social security	46,7	Fishing	40,6	Agriculture, farming of animals, hunting and forestry	36,2
Algarve	Public administration and defence; compulsory social security	57,7	Production of electricity, of gas and of water supply	48,6	Mining and quarrying	44,3
Centro	Public administration and defence; compulsory social security	41,7	Fishing	33,4	Real estate, renting and business activities	22,0
Lisboa	Public administration and defence; compulsory social security	30,2	Fishing	22,1	Agriculture, farming of animals, hunting and forestry	20,8
Alentejo	Fishing	51,3	Public administration and defence; compulsory social security	35,6	Production of electricity, of gas and of water supply	24,4
Açores	Fishing	37,7	Public administration and defence; compulsory social security	34,7	Construction	28,4
Madeira	Public administration and defence; compulsory social security	18,5	Real estate, renting and business activities	17,0	Construction	16,0
Portugal	Public administration and defence; compulsory social security	41,3	Fishing	35,7	Agriculture, farming of animals, hunting and forestry	21,1

1995-2000

Region	Sector 1		Sector 2		Sector 3	
Norte	Real estate, renting and business activities	22,9	Fishing	21,9	Agriculture, farming of animals, hunting and forestry	21,6
Algarve	Construction	22,6	Hotels and restaurants	21,4	Financial intermediation	21,3
Centro	Transport, storage and communication	23,4	Production of electricity, of gas and of water supply	23,2	Real estate, renting and business activities	22,8
Lisboa	Real estate, renting and business activities	20,4	Construction	19,1	Fishing	18,3
Alentejo	Fishing	29,2	Transport, storage and communication	25,9	Construction	25,5
Açores	Fishing	29,3	Construction	22,5	Agriculture, farming of animals, hunting and forestry	21,9
Madeira	Public administration and defence; compulsory social security	27,3	Financial intermediation	25,6	Construction	25,8
Portugal	Real estate, renting and business activities	21,4	Construction	21,0	Transport, storage and communication	19,3

Source: Author's calculations based on Quadros de Pessoal GEP, MTSS

Table 10 - The three main sectors with the lowest birth rate by region and time period (%)

2000-2006

Region	Sector 1		Sector 2		Sector 3	
Norte	Mining and quarrying	8,9	Manufacturing	9,6	Health and social work	12,5
Algarve	Hotels and restaurants	20,4	Health and social work	21,2	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	22,3
Centro	Mining and quarrying	9,3	Manufacturing	9,1	Health and social work	12,4
Lisboa	Manufacturing	9,6	Financial intermediation	10,1	Mining and quarrying	10,7
Alentejo	Mining and quarrying	7,5	Manufacturing	9,0	Health and social work	9,3
Açores	Production of electricity, of gas and of water supply	4,5	Mining and quarrying	8,4	Health and social work	9,5
Madeira	Mining and quarrying	5,7	Education	9,6	Manufacturing	9,9
Portugal	Mining and quarrying	10,7	Manufacturing	11,3	Health and social work	12,7

1995-2000

Region	Sector 1		Sector 2		Sector 3	
Norte	Mining and quarrying	12,3	Manufacturing	13,2	Production of electricity, of gas and of water supply	13,8
Algarve	Production of electricity, of gas and of water supply	10,8	Manufacturing	12,4	Mining and quarrying	14,1
Centro	Manufacturing	11,5	Mining and quarrying	15,1	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	15,6
Lisboa	Mining and quarrying	7,6	Public administration and defence; compulsory social security	10,0	Manufacturing	10,8
Alentejo	Mining and quarrying	11,3	Education	12,2	Manufacturing	11,3
Açores	Production of electricity, of gas and of water supply	0,0	Mining and quarrying	6,7	Health and social work	9,5
Madeira	Mining and quarrying	8,4	Manufacturing	11,9	Production of electricity, of gas and of water supply	14,3
Portugal	Manufacturing	12,4	Mining and quarrying	12,5	Education	13,7

Source: Author's calculations based on Quadros de Pessoal GEP, MTSS

Births of small enterprises are concentrated in the service sector (OECD/Eurostat, 2009). In Portugal, more small enterprises (with fewer than 20 employees) are born in the Services sector relatively to other sectors, with the exception of Agriculture and Fishing, where firms are born predominantly in this size class (Table 11).

The proportion of firms born below this threshold is higher than the total weight of these enterprises in the population, revealing that newcomers have on average a smaller size than incumbents. This is also verified for all sectors and time periods (Sarmento and Nunes, 2009).

From the first sub-period to the second, there are proportionately more enterprises being born with fewer than 20 employees in all sectors, particularly in manufacturing, which reveals the greatest decrease on average size. Throughout the period, entrants (and exiting firms) are smaller than the average size of firms already in operation[18].

Table 11 – Average share of enterprises births with fewer than 20 employees
(new enterprises with fewer than 20 employees as a % of total by sector)

	< 20 employees					
	Agriculture and fishing	Manufacturing	Services	Construction	Total (Births) (sectors A-Q)	Total (enterprises) (sectors A-Q)
1995-2007	99,1%	94,3%	98,5%	97,8%	97,9%	92,4%
1995-1999	98,8%	93,8%	98,5%	97,8%	97,7%	91,5%
2000-2007	99,2%	94,6%	98,5%	97,9%	98,0%	92,8%

Source: Author's calculations based on Quadros de Pessoal GEP, MTSS

5. Firm size distribution

Another stylized fact is that the creation of new firms, which are in general of a smaller size than incumbents, make the firm distribution right skewed, with proportionally more smaller firms than large firms with respect to the lognormal distribution. Cabral and Mata (2003) show for a given cohort of Portuguese firms, that the distribution of log of size is very skewed at birth but then becomes more symmetric over time[19]. Following the same methodology, we also applied a nonparametric estimation method, a gaussian kernel density smoother with a bandwidth of 0,5 to the logartithm of firm size for enterprise births to test if firm size (expressed as the log of the employment of new firms) distribution is stable and approximately lognormal for the population of active new enterprises. We have found a distribution with a distinct shape from the Normal distribution, confirming Cabral and Mata´s (2003) conclusions[20]. Our results also show that firm size distribution is skewed to the right and is not stable over time (Figure 6). We also find that firm size distribution of employer enterprise births is shifting over time to smaller sized firms, in line with the total economy and enterprise deaths (Sarmento and Nunes, 2009).

[18] The small size of new entrants is a relevant factor when attempting to explain their lower survival changes that is, the high mortality rate that affects many small sized businesses in their first years of operation (Nunes e Sarmento, 2010).
[19] Similar results have been found for other countries where the pattern of right-skeweness
[20] It is important to keep in mind that the type of firm distribution obtained depends heavily on the type of data source considered (Cabral, 2007).

Figure 6 - Firm size distribution of 1985, 1995 and 2005 cohorts of entrants

kernel = gaussian, bandwidth = 0.5000
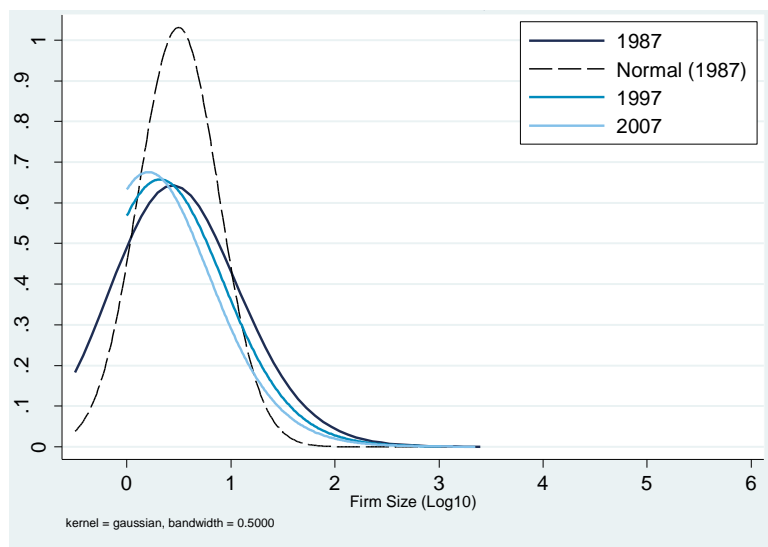
Source: Author's calculations based on Quadros de Pessoal GEP, MTSS

5. Conclusions

Employer enterprise births have increased at an annual average growth rate of 4,3%, from 1987 to 2007, with periods of stronger growth, such as from 1996 to 2000 (14,9%) and deceleration, from 2000 to 2007 (-2,3%). There are four instances worth noting, the "peak" of enterprise births in 1989, 1994, 2000/2001 and 2005. After 2000, birth rates have been slowing down throughout all regions, sectors and size classes. Despite this fact, Portugal has one of the highest records of new firm creation relatively to the stock of existing enterprises, even when other universes and methodologies are considered. According to Eurostat, in 2005 and 2006, Portugal had the second and the third highest birth rate in Europe, respectively.

There is a clear trend in the creation of smaller enterprises, in particular in the 1-4 size class in most regions and in all economic sectors, which is in line with a tendency also observable in other countries in Europe. Moreover, according to Eurostat (2009), Portugal presents the highest share of enterprises births in the 1-4 employees' size class (average 2005 and 2006). We also observe a decline in the average size of enterprise births over time, from 5,41 in 1987 to 3,37 employees in 2007, on average.

Norte is the region with the highest number of births and share of enterprises in the country, while Algarve is the region with the highest birth rate in Portugal, where firms are created with the smallest average size.

Portugal is increasingly a service-based economy, where Services occupy the pole position in enterprise creation since 2003. According to the OECD/Eurostat (2009), in 2006, Portugal had the highest birth rate in the service sector, above 20 other countries. The Construction sector had the highest birth rates from 1996 to 2001 and the highest contributions to enterprise birth growth, but suffered a sharp decline after 2001, together with the Manufacturing sector.

Firm size distribution of employer enterprise births is skewed to the right, with proportionally more smaller than larger firms and has been shifting over time towards smaller sized firms.

We acknowledge that birth rates cannot be considered in isolation from death rates and the overall turnover analysis, needed to acquire a global picture on firm demographics and productivity growth in Portugal. These other dynamics will be approached in further studies.

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ANNEX I - Shift-share analysis

Table 1 - Contributions to the rate of growth of employer enterprise births by firm size, 1995-2007

Size Class	Structure / Share (%)							1996 growth y.o.y (%)	1996 contributions to growth		1997 growth y.o.y (%)	1997 contributions to growth		1998 growth y.o.y (%)	1998 contributions to growth		1999 growth y.o.y (%)	1999 contributions to growth		2000 growth y.o.y (%)	2000 contributions to growth		2001 growth y.o.y (%)	2001 contributions to growth	
	1995	1996	1997	1998	1999	2000	2001		p.p.	%		p.p.	%		p.p.	%		p.p.	%		p.p.	%		p.p.	%
TOTAL	100,0	100,0	100,0	100,0	100,0	100,0	100,0	0,4	0,4	100,0	16,2	16,2	100,0	7,4	7,4	100,0	3,5	3,5	100,0	34,6	34,6	100,0	3,6	3,6	100,0
1-4	80,8	80,6	80,9	81,8	81,7	83,7	77,7	0,1	0,1	15,3	16,7	13,4	82,8	8,6	6,9	93,3	3,4	2,8	78,9	38,0	31,0	89,5	-3,8	-3,2	-88,7
5-9	12,7	12,9	12,7	12,2	12,2	11,0	14,9	2,3	0,3	78,4	14,2	1,8	11,3	3,2	0,4	5,5	3,3	0,4	11,4	21,4	2,6	7,5	40,7	4,5	124,4
10 - 19	4,1	4,2	4,0	3,8	4,0	3,4	5,2	1,8	0,1	19,8	12,0	0,5	3,1	2,9	0,1	1,6	6,7	0,3	7,4	16,6	0,7	1,9	56,1	1,9	53,6
20-49	1,8	1,7	1,8	1,6	1,6	1,4	1,7	-3,7	-0,1	-18,0	22,7	0,4	2,4	-4,3	-0,1	-1,0	4,0	0,1	1,8	15,4	0,2	0,7	28,9	0,4	11,2
50 - 249	0,53	0,54	0,51	0,49	0,50	0,45	0,41	2,5	0,0	3,6	10,5	0,1	0,3	2,8	0,0	0,2	6,0	0,0	0,8	21,0	0,1	0,3	-5,1	0,0	-0,6
+ 250	0,04	0,04	0,04	0,07	0,06	0,04	0,05	9,1	0,0	0,9	8,3	0,0	0,0	100,0	0,0	0,5	-15,4	0,0	-0,3	0,0	0,0	0,0	22,7	0,0	0,3

Size Class	Structure / Share (%)							2002 growth y.o.y (%)	2002 contributions to growth		2003 growth y.o.y (%)	2003 contributions to growth		2004 growth y.o.y (%)	2004 contributions to growth		2005 growth y.o.y (%)	2005 contributions to growth		2006 growth y.o.y (%)	2006 contributions to growth		2007 growth y.o.y (%)	2007 contributions to growth	
	2001	2002	2003	2004	2005	2006	2007		p.p.	%		p.p.	%		p.p.	%		p.p.	%		p.p.	%		p.p.	%
TOTAL	100,0	100,0	100,0	100,0	100,0	100,0	100,0	0,9	0,9	100,0	-24,2	-24,2	100,0	-3,9	-3,9	100,0	37,6	37,6	100,0	-19,8	-19,8	100,0	1,4	1,4	100,0
1-4	77,7	81,9	83,9	85,1	84,4	85,9	86,9	6,3	4,9	563,8	-22,4	-18,3	75,8	-2,4	-2,0	52,6	36,4	31,0	82,3	-18,4	-15,5	78,1	2,6	2,2	152,8
5-9	14,9	12,6	10,6	9,8	9,5	9,1	8,5	-14,9	-2,2	-254,8	-36,0	-4,5	18,7	-11,4	-1,2	31,3	33,2	3,3	8,7	-23,2	-2,2	11,1	-5,1	-0,5	-32,2
10 - 19	5,2	3,8	3,5	3,0	3,6	3,1	2,9	-26,3	-1,4	-156,2	-29,7	-1,1	4,6	-17,0	-0,6	15,4	61,8	1,9	5,0	-29,4	-1,0	5,3	-7,4	-0,2	-16,2
20-49	1,7	1,3	1,4	1,4	1,9	1,4	1,4	-23,7	-0,4	-46,9	-18,5	-0,2	1,0	-3,4	0,0	1,2	84,5	1,2	3,2	-39,7	-0,8	3,8	-1,4	0,0	-1,4
50 - 249	0,41	0,35	0,53	0,56	0,64	0,41	0,34	-13,8	-0,1	-6,6	13,0	0,0	-0,2	1,8	0,0	-0,2	57,2	0,3	0,8	-47,9	-0,3	1,5	-15,9	-0,1	-4,6
+ 250	0,05	0,05	0,06	0,08	0,06	0,03	0,05	11,1	0,0	0,6	-13,3	0,0	0,0	15,4	0,0	-0,2	13,3	0,0	0,0	-64,7	0,0	0,2	83,3	0,0	1,6

Source: Author's calculations based on Quadros de Pessoal GEP, MTSS

Table 2 - Contributions to the rate of growth of employer enterprise births by sectors, 1995-2007

Region	Structure Share (%) 1995	1996	1997	1998	1999	2000	2001	1996 growth y.o.y (%)	p.p.	%	1997 growth y.o.y (%)	p.p.	%	1998 growth y.o.y (%)	p.p.	%	1999 growth y.o.y (%)	p.p.	%	2000 growth y.o.y (%)	p.p.	%	2001 growth y.o.y (%)	p.p.	%
PORTUGAL	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**0,4**	**0,4**	**100,0**	**16,2**	**16,2**	**100,0**	**7,4**	**7,4**	**100,0**	**3,5**	**3,5**	**100,0**	**34,6**	**34,6**	**100,0**	**3,6**	**3,6**	**100,0**
A	4,3	4,5	5,1	4,0	3,7	3,3	3,4	4,1	0,2	47,7	33,2	1,5	9,2	-16,3	-0,8	-11,3	-4,9	-0,2	-5,5	22,4	0,8	2,4	6,0	0,2	5,6
B	0,2	0,1	0,1	0,1	0,2	0,1	0,1	-24,4	0,0	-9,9	14,7	0,0	0,1	-17,9	0,0	-0,3	96,9	0,1	2,4	0,0	0,0	0,0	-20,6	0,0	-0,7
C	0,4	0,3	0,3	0,3	0,3	0,2	0,3	-20,0	-0,1	-18,9	45,2	0,1	0,8	1,6	0,0	0,1	-21,0	-0,1	-2,0	26,5	0,1	0,2	31,5	0,1	2,1
D	15,1	14,3	14,6	14,0	13,8	11,9	13,9	-4,7	-0,7	-190,1	18,2	2,6	16,1	2,8	0,4	5,6	2,2	0,3	8,9	15,8	2,2	6,3	21,1	2,5	69,6
E	0,1	0,0	0,0	0,0	0,0	0,1	0,1	-50,0	0,0	-7,2	112,5	0,0	0,2	-76,5	0,0	-0,5	100,0	0,0	0,3	300,0	0,1	0,2	-12,5	0,0	-0,2
F	11,1	11,9	13,7	15,7	17,4	19,0	22,8	7,2	0,8	217,1	33,7	4,0	24,7	23,4	3,2	42,9	14,8	2,3	66,0	46,8	8,1	23,5	24,5	4,7	129,5
G	34,1	33,2	30,7	30,3	28,8	28,0	25,1	-2,3	-0,8	-207,2	7,6	2,5	15,6	5,8	1,8	24,1	-1,7	-0,5	-14,9	31,2	9,0	25,9	-7,3	-2,0	-56,6
H	14,3	14,9	13,8	13,1	12,8	12,1	10,9	4,7	0,7	181,1	7,4	1,1	6,8	2,2	0,3	4,1	1,3	0,2	4,8	27,2	3,5	10,1	-6,7	-0,8	-22,5
I	2,9	3,2	3,0	3,5	3,6	4,9	5,1	8,5	0,3	67,6	11,3	0,4	2,2	22,1	0,7	9,0	6,8	0,2	6,7	83,7	3,0	8,6	8,6	0,4	11,6
J	0,5	0,4	0,6	0,6	0,5	0,5	0,5	-8,8	0,0	-11,7	58,2	0,3	1,6	-0,5	0,0	0,0	-0,9	0,0	-0,2	37,3	0,2	0,6	-4,9	0,0	-0,7
K	8,9	8,8	9,1	9,8	10,1	11,6	10,4	-1,0	-0,1	-23,4	20,1	1,8	10,9	15,3	1,4	18,7	7,3	0,7	20,4	54,5	5,5	15,9	-7,4	-0,9	-23,9
L	0,1	0,1	0,1	0,1	0,1	0,1	0,1	56,3	0,0	8,1	56,0	0,0	0,3	-2,6	0,0	0,0	-10,5	0,0	-0,3	5,9	0,0	0,0	13,9	0,0	0,3
M	0,7	0,8	0,9	0,8	1,0	1,0	0,8	12,6	0,1	25,2	29,6	0,2	1,5	-11,4	-0,1	-1,4	30,3	0,2	6,6	36,1	0,3	1,0	-12,6	-0,1	-3,4
N	2,9	3,1	3,3	3,2	3,2	2,9	2,6	8,3	0,2	64,9	21,5	0,7	4,1	4,5	0,1	2,0	5,6	0,2	5,1	22,2	0,7	2,1	-7,7	-0,2	-6,3
O	4,5	4,3	4,5	4,7	4,6	4,3	4,0	-3,5	-0,2	-42,3	22,3	1,0	5,9	11,5	0,5	7,0	1,4	0,1	1,8	24,1	1,1	3,2	-3,6	-0,2	-4,2

Region	Structure Share (%) 2000	2001	2002	2003	2004	2005	2006	2001 growth y.o.y (%)	p.p.	%	2002 growth y.o.y (%)	p.p.	%	2003 growth y.o.y (%)	p.p.	%	2004 growth y.o.y (%)	p.p.	%	2005 growth y.o.y (%)	p.p.	%	2006 growth y.o.y (%)	p.p.	%
PORTUGAL	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**3,6**	**3,6**	**100,0**	**0,9**	**0,9**	**100,0**	**-24,2**	**-24,2**	**100,0**	**-3,9**	**-3,9**	**100,0**	**37,6**	**37,6**	**100,0**	**-19,8**	**-19,8**	**100,0**
A	3,3	3,4	3,6	3,5	3,9	13,8	5,1	6,0	0,2	5,6	5,1	0,2	20,1	-25,2	-0,9	3,7	7,5	0,3	-6,8	383,3	15,1	40,0	-70,5	-9,7	49,0
B	0,1	0,1	0,2	0,4	0,3	1,1	0,7	-20,6	0,0	-0,7	84,0	0,1	8,9	83,7	0,1	-0,6	-18,3	-0,1	1,9	344,9	1,2	3,2	-48,7	-0,5	2,7
C	0,2	0,3	0,2	0,2	0,2	0,2	0,2	31,5	0,1	2,1	-19,0	-0,1	-6,6	-39,4	-0,1	0,4	-2,5	0,0	0,1	12,8	0,0	0,1	-18,2	0,0	0,1
D	11,9	13,9	11,4	10,2	9,6	8,5	9,0	21,1	2,5	69,6	-17,4	-2,4	-275,9	-32,0	-3,6	15,0	-9,6	-1,0	25,2	22,1	2,1	5,6	-15,0	-1,3	6,4
E	0,1	0,1	0,0	0,0	0,1	0,1	0,1	-12,5	0,0	-0,2	-42,9	0,0	-2,5	-6,3	0,0	0,0	53,3	0,0	-0,5	73,9	0,0	0,1	-37,5	0,0	0,1
F	19,0	22,8	19,4	14,2	13,5	11,9	13,3	24,5	4,7	129,5	-14,0	-3,2	-367,0	-44,5	-8,7	35,8	-9,0	-1,3	33,1	21,3	2,9	7,6	-10,0	-1,2	6,0
G	28,0	25,1	26,9	29,7	29,2	23,5	26,7	-7,3	-2,0	-56,6	8,3	2,1	238,5	-16,4	-4,4	18,2	-5,6	-1,7	42,9	10,8	3,1	8,3	-9,0	-2,1	10,6
H	12,1	10,9	11,2	13,2	13,6	11,3	13,2	-6,7	-0,8	-22,5	3,5	0,4	44,2	-10,4	-1,2	4,8	-1,5	-0,2	5,2	14,5	2,0	5,2	-6,0	-0,7	3,4
I	4,9	5,1	5,6	4,9	4,8	3,3	4,0	8,6	0,4	11,6	11,2	0,6	65,8	-34,2	-1,9	8,0	-4,8	-0,2	6,0	-6,3	-0,3	-0,8	-2,3	-0,1	0,4
J	0,5	0,5	0,5	0,7	0,6	0,6	0,6	-4,9	0,0	-0,7	9,2	0,0	5,3	-7,4	0,0	0,2	-12,3	-0,1	2,1	30,6	0,2	0,5	-19,0	-0,1	0,6
K	11,6	10,4	12,0	12,8	13,6	11,9	15,2	-7,4	-0,9	-23,9	16,6	1,7	197,0	-19,3	-2,3	9,6	2,4	0,3	-7,9	20,6	2,8	7,5	2,0	0,2	-1,2
L	0,1	0,1	0,3	0,2	0,4	2,4	0,7	13,9	0,0	0,3	339,0	0,3	29,4	-45,6	-0,1	0,6	54,1	0,1	-3,3	754,3	2,9	7,6	-76,4	-1,8	9,0
M	1,0	0,8	0,9	0,9	1,0	2,4	1,5	-12,6	-0,1	-3,4	13,9	0,1	13,1	-25,8	-0,2	1,0	10,9	0,1	-2,6	213,4	2,2	5,9	-49,1	-1,2	5,9
N	2,9	2,6	2,8	3,3	3,3	3,1	3,1	-7,7	-0,2	-6,3	8,5	0,2	25,4	-10,7	-0,3	1,2	-4,9	-0,2	4,2	31,2	1,0	2,7	-19,2	-0,6	3,0
O	4,3	4,0	4,8	5,7	5,9	6,1	6,6	-3,6	-0,2	-4,2	23,0	0,9	104,4	-10,4	-0,5	2,1	-0,2	0,0	0,3	41,0	2,4	6,5	-12,2	-0,7	3,7

Source: Author's calculations based on Quadros de Pessoal GEP, MTSS

Table 3 - Contributions to the rate of growth of employer enterprise births by NUT II region, 1989-2007

Structure / 1990–1995

Size Class	Share (%) 1989	1990	1991	1992	1993	1994	1995	1990 growth y.o.y (%)	1990 p.p.	1990 %	1991 growth y.o.y (%)	1991 p.p.	1991 %	1992 growth y.o.y (%)	1992 p.p.	1992 %	1993 growth y.o.y (%)	1993 p.p.	1993 %	1994 growth y.o.y (%)	1994 p.p.	1994 %	1995 growth y.o.y (%)	1995 p.p.	1995 %
TOTAL	100,0	100,0	100,0	100,0	100,0	100,0	100,0	-14,5	-14,5	100,0	9,3	9,3	100,0	4,1	4,1	100,0	0,2	0,2	100,0	56,6	56,6	100,0	-28,6	-28,6	100,0
Norte	35,0	36,1	34,0	32,2	34,7	35,4	35,6	-11,7	-4,1	28,2	2,7	1,0	10,6	-1,3	-0,5	-11,2	7,8	2,5	1375,5	60,1	20,8	36,8	-28,2	-10,0	35,0
Algarve	6,1	5,5	5,7	5,4	5,4	5,9	5,3	-23,1	-1,4	9,8	13,5	0,7	8,0	-2,4	-0,1	-3,4	-0,2	0,0	-6,1	72,0	3,9	6,8	-35,4	-2,1	7,3
Centro	20,0	19,0	20,9	21,6	21,1	20,7	21,2	-18,9	-3,8	26,1	20,3	3,8	41,5	7,7	1,6	39,4	-2,3	-0,5	-267,3	53,8	11,3	20,0	-26,9	-5,6	19,4
Lisboa	26,6	26,9	27,0	28,7	27,2	26,9	25,9	-13,4	-3,6	24,5	9,6	2,6	28,0	10,5	2,8	69,9	-5,1	-1,5	-804,1	54,9	14,9	26,4	-31,3	-8,4	29,4
Alentejo	8,9	8,6	8,5	8,0	7,8	7,1	7,7	-17,0	-1,5	10,4	7,0	0,6	6,6	-1,1	-0,1	-2,4	-2,7	-0,2	-118,4	42,5	3,3	5,9	-23,0	-1,6	5,7
Açores	1,9	2,1	2,2	2,2	1,9	1,9	2,0	-8,3	-0,2	1,1	14,9	0,3	3,3	4,0	0,1	2,1	-13,7	-0,3	-161,2	57,1	1,1	1,9	-21,8	-0,4	1,4
Madeira	1,5	1,7	1,8	1,9	2,1	2,1	2,2	1,5	0,0	-0,2	10,7	0,2	2,0	12,8	0,2	5,6	7,8	0,1	81,6	59,6	1,2	2,2	-24,5	-0,5	1,8
Estrangeiro	0,0	0,0	0,0	0,0	0,0	0,0	0,0	-100,0	0,0	0,0													0,0	0,0	0,0

Structure / 1996–2001

Size Class	Share (%) 1995	1996	1997	1998	1999	2000	2001	1996 growth y.o.y (%)	1996 p.p.	1996 %	1997 growth y.o.y (%)	1997 p.p.	1997 %	1998 growth y.o.y (%)	1998 p.p.	1998 %	1999 growth y.o.y (%)	1999 p.p.	1999 %	2000 growth y.o.y (%)	2000 p.p.	2000 %	2001 growth y.o.y (%)	2001 p.p.	2001 %
TOTAL	100,0	100,0	100,0	100,0	100,0	100,0	100,0	0,4	0,4	100,0	16,2	16,2	100,0	7,4	7,4	100,0	3,5	3,5	100,0	34,6	34,6	100,0	3,6	3,6	100,0
Norte	35,6	34,0	35,4	36,1	36,7	34,5	37,1	-4,3	-1,5	-409,9	21,1	7,2	44,2	9,5	3,4	45,2	5,3	1,9	54,9	26,4	9,7	28,0	11,5	4,0	110,1
Algarve	5,3	5,6	5,5	5,1	5,3	5,6	6,4	4,9	0,3	71,2	15,2	0,8	5,2	-0,5	0,0	-0,4	6,6	0,3	9,6	43,5	2,3	6,6	17,3	1,0	27,0
Centro	21,2	22,3	20,8	21,6	22,2	24,0	21,4	5,6	1,2	323,4	8,3	1,8	11,4	11,7	2,4	32,6	6,4	1,4	39,7	45,2	10,0	29,0	-7,4	-1,8	-49,3
Lisboa	25,9	25,9	24,9	25,6	24,5	25,1	24,4	0,4	0,1	29,7	11,8	3,0	18,8	10,4	2,6	34,7	-0,8	-0,2	-5,9	37,6	9,2	26,6	0,7	0,2	5,2
Alentejo	7,7	7,9	9,9	8,0	7,4	7,7	7,2	2,8	0,2	58,6	46,2	3,6	22,4	-12,9	-1,3	-17,1	-4,5	-0,4	-10,3	40,0	3,0	8,5	-2,9	-0,2	-6,1
Açores	2,0	2,2	1,6	1,5	1,7	1,4	1,6	10,1	0,2	55,9	-15,7	-0,4	-2,2	-1,2	0,0	-0,3	18,5	0,3	7,9	11,1	0,2	0,5	14,7	0,2	5,8
Madeira	2,2	2,1	1,8	2,1	2,1	1,8	2,0	-4,8	-0,1	-28,8	1,3	0,0	0,2	21,7	0,4	5,3	7,2	0,1	4,2	10,5	0,2	0,7	14,9	0,3	7,3
Estrangeiro	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	-100,0	0,0	-0,1						

Structure / 2002–2007

Size Class	Share (%) 2001	2002	2003	2004	2005	2006	2007	2002 growth y.o.y (%)	2002 p.p.	2002 %	2003 growth y.o.y (%)	2003 p.p.	2003 %	2004 growth y.o.y (%)	2004 p.p.	2004 %	2005 growth y.o.y (%)	2005 p.p.	2005 %	2006 growth y.o.y (%)	2006 p.p.	2006 %	2007 growth y.o.y (%)	2007 p.p.	2007 %
TOTAL	100,0	100,0	100,0	100,0	100,0	100,0	100,0	0,9	0,9	100,0	-24,2	-24,2	100,0	-3,9	-3,9	100,0	37,6	37,6	100,0	-19,8	-19,8	100,0	1,4	1,4	100,0
Norte	37,1	35,0	36,1	36,2	44,4	36,0	36,3	-4,8	-1,8	-205,5	-21,8	-7,6	31,6	-3,7	-1,3	34,5	68,8	24,9	66,1	-34,9	-15,5	78,0	2,2	0,8	55,3
Algarve	6,4	6,2	5,9	6,2	5,8	6,6	7,1	-1,8	-0,1	-13,1	-27,3	-1,7	7,0	0,6	0,0	-0,9	29,4	1,8	4,9	-9,1	-0,5	2,7	8,6	0,6	39,5
Centro	21,4	22,9	20,8	20,7	20,3	19,9	19,2	7,7	1,7	189,6	-31,0	-7,1	29,3	-4,5	-0,9	24,4	34,9	7,2	19,2	-21,3	-4,3	21,8	-2,1	-0,4	-29,2
Lisboa	24,4	25,1	25,3	25,8	20,0	26,7	27,2	4,0	1,0	111,2	-23,7	-6,0	24,6	-2,0	-0,5	12,9	6,9	1,8	4,7	7,2	1,4	-7,2	3,3	0,9	60,9
Alentejo	7,2	7,2	7,6	6,9	6,6	6,8	6,7	0,3	0,0	2,5	-19,8	-1,4	5,9	-13,1	-1,0	25,7	31,9	2,2	5,8	-17,2	-1,1	5,7	0,1	0,0	0,3
Açores	1,6	1,7	1,8	1,9	1,3	1,7	1,5	8,6	0,1	15,4	-19,7	-0,3	1,4	1,6	0,0	-0,7	-5,3	-0,1	-0,3	4,9	0,1	-0,3	-7,9	-0,1	-9,4
Madeira	2,0	1,9	2,5	2,4	1,6	2,2	1,9	0,0	0,0	0,0	-3,3	-0,1	0,3	-6,5	-0,2	4,2	-6,6	-0,2	-0,4	7,4	0,1	-0,6	-11,0	-0,2	-16,8
Estrangeiro	0,0	0,0	0,0	0,0	0,0	0,0	0,0	-100,0	0,0	-0,2	0,0	0,0	0,0										-50,0	0,0	-0,6

Source: Author's calculations based on Quadros de Pessoal GEP, MT.