HOW FLEXIBLE ARE SMALL FIRMS? AN ANALYSIS ON THE DETERMINANTS OF FLEXIBILITY*

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Working Paper 0416

* Acknowledgements: An earlier version of this paper was presented at the ERF Eleventh Annual Conference (14-16 December 2004, Beirut, Lebanon). We thank our discussant Alia El Mahdy and participants for their valuable comments.

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Abstract

Although the standard microeconomic analysis is usually based on the assumption of the existence of a “representative firm,” it is known, as early as the time of the classical economists, that industrial economies are characterized by persistent heterogeneity among firms. Flexibility is one of the main sources of heterogeneity that is used to explain the vitality of small firms. It is suggested that small firms are more flexible than large firms; therefore, they can survive in an uncertain environment. This paper studies four sources of flexibility (technology, employment, networking, and entry/exit) in Turkish manufacturing industries. Whereas there are no differences between small and large firms in terms of flexibility of technology and employment practices, dynamic aspects, i.e. entry, exit, and growth processes are the main sources of small firm flexibility.

ملخص

بالرغم من أن تحليل الاقتصاد الجزئي عادة ما يعتمد على افتراض وجود "مؤسسة نموذجية"، إلا أنه من المعروف منذ عهد العلماء الاقتصاديين التقليديين أن الاقتصاد الصناعي يمتاز بكونه ذو عناصر دائمة التغير بين المؤسسات. من أهم مصادر تغير العناصر والتي يتم استخدامها لشرح نشاط المؤسسات الصغيرة هو عنصر المرونة، حيث يعتقد أن المؤسسات الصغيرة أكثر مرونة من المؤسسات الضخمة، و هو ما يسمح لها بالبقاء بثبات في ظل ظروف متقلبة. يقوم هذا البحث بدراسة أربع مصادر للمرونة في الصناعات التركية (التكنولوجيا، والتوظيف، والشبكات والدخول والخروج)، و قد ظهر أن المصدر الأساسي لمرونة المؤسسات الصغيرة يتمثل في الجوانب الديناميكية، أي في عمليات الدخول، والخروج، والنمو، بينما لا يوجد اختلاف كبير بين المؤسسات الصغيرة وتلك الكبيرة فيما يخص مرونة ممارسات التكنولوجيا والتوظيف.

1. Introduction

Although the standard microeconomic analysis is usually based on the assumption of the existence of a "representative firm", it is known, as early as the time of the classical economists, that industrial economies are characterized by persistent heterogeneity among firms. For example, in spite of their apparent advantages in mobilizing resources and controlling markets, large firms co-exist with small firms even in the most developed countries. The heterogeneity among firms is explained by heterogeneity of technologies available and strategies adopted under uncertainty. There is not a single "best practice technology" that fits all firms; but there are various alternative technologies that can be suitable for different strategies.

In this context, the issue of flexibility has received considerable attention as an explanation for the co-existence of large and small firms within the same industry. Stigler (1939) first introduced the concepts of flexibility and adaptability, and claimed that small firms are able to compete successfully with large, more static-efficient producers because they use more flexible production technologies.

Mills and Schumann (1985), who provided empirical evidence for the trade-off in the US manufacturing industries, analyzed the trade-off between flexibility and static cost efficiency in a formal model. Similarly, Zimmermann (1995) and Das, Chappell and Shughart II (1993) showed that production flexibility explains size distribution of firms across industries. While large firms enjoy the advantage of static production efficiency, flexible production technologies of small firms enable them to respond better to changing demand conditions. Thus, the heterogeneity of firms can be explained by the fact that the choice between specialization and flexibility involves a fundamental non-convexity (Von Ungern-Sternberg, 1990).

Recent literature on small firms also emphasizes the importance of flexibility as a key competitive advantage of small firms (see Carlsson, 1989a; Dhawan, 2001). The economic crises and increased economic uncertainty since the early 1970s established an environment in which small firms could be more competitive than large firms. As a result, the share of small firms had a tendency to increase in most of the developed countries in the 1970s and 1980s (Carlsson and Taymaz, 1985).

This paper examines the flexibility of small firms compared to large firms in a developing economy. In-depth analysis of the sources of flexibility is the novel feature of our study. Specifically, we look at *four* sources of flexibility and their impact on small and large firms' competitiveness (Weiss, 2001): flexibility in technology, flexibility in labor, systemic flexibility, and dynamic flexibility. By using the data on Turkish manufacturing firms, we compare the degree of flexibility in small and large firms through using various measures that reflect these four aspects/sources of flexibility. This analysis allows us to identify the factors that determine the differences between small and large firms, and, hence, to analyze their dynamics.

In this paper, Section 2 summarizes various aspects of flexibility and introduces the measures that are used to quantify these aspects; Section 3 explains the data sources and variables, and presents the comparison of flexibility in small and large firms; and Section 4 summarizes main findings.

2. The Concept of Flexibility

The Industrial Economics literature, at least since Stigler (1939), has explicitly recognized the fact that firms may adopt different technologies that are best suited for their strategies. In this context, the concept of "flexibility" has been extensively used to explain the differences between small and large firms. It is suggested that large firms could be more productive and

even more profitable than small firms, but small firms still survive because they are more flexible. Flexibility makes small firms adaptable to changing conditions. In other words, small firms have lower adaptation costs: if the environment changes (demand fluctuates, consumers demand different products, relative factor prices change, new production technologies are generated, etc.), small firms, due to their flexibility, can adapt to new conditions rapidly and less costly.

What makes small firms more flexible? There is an extensive literature on the sources of flexibility. Various researchers have emphasized different aspects of flexibility. We can classify all these aspects into four categories: technology, employment, systemic, and dynamic flexibility.

2.1. Flexibility in Technology (Manufacturing Flexibility)

Flexibility can be achieved by adopting flexible manufacturing technologies ("flexibility in technology"). There are numerous studies on manufacturing flexibility (for surveys on manufacturing flexibility, see Beach *et al*., 2000; De Toni and Tonchia, 1998). These studies suggest that there are two typical types of manufacturing technologies: flexible, which is based on computer assisted technologies (CAD, CAM, etc.), and rigid, which forms the basis of mass production. Mass production technologies can achieve lower unit costs at the capacity output level, but they are not flexible in the sense that changes in output volume and/or product characteristics lead to substantial increases in unit costs. These technologies are optimized to produce standard products at very large volumes. On the other hand, flexible manufacturing technologies allow rapid and less costly changes in machine set-up by means of software control. These technologies achieve relatively constant unit costs for a broad range of output and are not sensitive to changes in product characteristics. Therefore, small firms can profitably adopt flexible manufacturing technologies (Carlsson, 1989b).

Flexible technologies have weakened the link between unit costs and volume and output, and have made "just-in-time" production possible.[1] Because they produce their products when orders are received from consumers; and, therefore, ask suppliers to provide input as needed, small, flexible firms can lower their input and output inventories, and in extreme cases, keep no inventories at all. The alternative for just-in-time production is the just-in-case production where firms employing rigid, mass production technologies tend to keep high volumes of output inventories to reduce fluctuations in production volume. Of course, reductions in inventories have significant implications for production costs as well, because inventory costs could be substantial especially if real interest rates are high.

An analysis for flexibility in technology requires data on the rate of diffusion of specific technologies. Since we do not have detailed data for all sectors, we use proxy measures such as shares of final goods and work-in-process inventories for manufacturing flexibility. These measures can allow us to compare small and large firms across a wide range of industries because firms can enhance manufacturing flexibility through organizational changes as well.

2.2. Flexibility in Labor

Secondly, flexibility of the firm can be achieved by adopting flexible employment relationships and/or adopting flexible forms of employment ("flexibility in labor"). The notion of a flexible firm, as first developed by Atkinson (1984) in his influential paper, is based on the concept of labor flexibility. Firms that have flexible employment can rapidly adjust to changes in economic environment. Atkinson identified three types of flexibility related to employment: numerical flexibility, financial flexibility, and functional flexibility.

1 There are numerous terms used to define new flexible production systems. "Lean production" is one of the most popular terms.

Numerical flexibility is the case when the number of employees and the number of hours worked can be increased or decreased depending on labor demand. In other words, numerical flexibility refers to the rapid adjustment in employment in line with short-term changes in demand level for the final product so that the firm employs exactly what it needs to employ (Haskel, Kersley and Martin, 1997). Employment of part-time, temporary, and contract workers is seen as a way to enhance numerical flexibility; and many governments in recent years have adopted various measures that make labor markets and firms more flexible (Friesen, 1997).

Financial (wage) flexibility is the case where the wage rate depends on firm-specific factors, such as financial position, demand changes, etc. Financial flexibility requires wage setting mechanisms at the firm level. The pressure observed in recent years on weakening the national and sectoral level collective bargaining systems in favor of firm-level wage settlements reflects the trend toward increasing financial flexibility. Although the concept refers to adjustment in wages, what is usually meant by financial flexibility is the downward flexibility of real and/or nominal wages.

Functional flexibility is the case where employees can quickly and smoothly be deployed between different activities and tasks. Functional flexibility may require multi-skills if the employee is expected to perform tasks that require different skills. Thus, functional flexibility may enhance the employment of skilled workers. Functional flexibility involves intensification of work because by assigning workers to different tasks according to demand fluctuations it reduces slack or idle time and increases utilization of labor. Of course, firms need to have broader job descriptions and generic job titles in order to enhance functional flexibility. This is also a contentious issue between firms and labor unions who prefer precisely defined job descriptions.

There are opposing views on the effects of labor flexibility on economic performance. On the one hand, a group of researchers claim that labor market flexibility is required for well-functioning of competitive markets, and, hence, for efficient allocation of resources. Since employment protection and rigidities in wage setting are costs incurred by firms, they have profound effects on their decisions (OECD, 1999; Heckman and Pagés, 2002; Scarpetta and Tressel, 2002). It is suggested that stricter labor market regulations may lead to higher unemployment (and lower output) and change the composition of unemployment (in favor of long-term unemployment) because they affect the flows to and from employment, i.e., hiring and layoffs. Some researchers, however, suggest that excessive labor market flexibility may hinder investment in training and innovative activities, diminish the accumulation of human and knowledge capital, and, hence, have a negative impact on growth and employment in the long run (Michie and Sheehan, 2003; Kleinknecht, 1998).

The discussion on labor flexibility indicates that firms with higher labor flexibility may tend to have higher labor turnover (because hiring and firing are easier and achieved at low cost), may prefer more atypical employment relationships, and prefer flexible payment systems. We use various measures on labor turnover, working time, and payment systems to analyze numerical and financial flexibility. Since we do not have the data on multi-skilling, we do not analyze functional flexibility.

2.3. Systemic Flexibility

Flexibility in technology and labor are related to the internal organization of the firm. However, as Piore and Sabel (1984) show, small firms can enhance efficiency and flexibility by developing a network in which they benefit from collective learning and sharing common resources. The flexibility arising from networking is referred to as “systemic flexibility” by De Propris (2001). De Propris claims that Stiglerian flexibility alone (via labor adjustments)

does not explain "how in the last two decades flexibility (in output quantity and mix) has been sought and achieved by firms through a process of production segmentation", and suggests that systemic flexibility leads both individual firms and the entire production system to be flexible in terms of both output quantity and output mix. "Systemic flexibility ensures, therefore, that the flexibility advantage is not enjoyed exclusively by one firm, but is shared among all firms participating in the production system. We would argue that this is a crucial element for the sustainable development of local systems of production and, thereby, of regional economies." (De Propris, 2001).

Unfortunately, the data we use do not allow us to identify the extent and nature of networking among firms. Because of the lack of data, we focus on subcontracting relations as a specific form of networking. We use the share of subcontracted output (output subcontracted by buyer firms) and the share of subcontracted inputs (inputs supplied by subcontractors) as measures of networking. Of course, as Taylor and Thrift (1982) showed long ago, subcontracting can be seen as a relationship in which large contactors benefit at the expense of small subcontractors. In other words, large firms can use subcontracting to improve their flexibility.

2.4. Dynamic Flexibility

The literature on industrial dynamics has documented that, in almost all countries and all sectors, the rate of firm turnover is quite high, and that small firms contribute more to this process. It is a well-documented, stylized fact that small firms largely account for entrants and exits (Caves, 1998). This process, called "creative destruction" by Schumpeter, is essential in generating new employment opportunities, and creating an innovative environment where new ideas (new products, new processes, new organizational forms, etc.) are developed and tested. Acs and Audretsch (1990) convincingly showed that small, new firms play a disproportionately more important role in developing new products and processes. Moreover, the dynamism generated by the entry and exit process contributes to employment generation and mitigates the negative impact of economic fluctuation. In order to test the role played by small and large firms in the entry, exit, and growth process, we will look at entry and exit rates, survival functions, and growth rates by firm size.

3. Flexibility of Small and Large Firms in Turkish Manufacturing

We use panel data on all manufacturing establishments (employing at least 10 people) in the period 1993-2001.[2] Since there are some differences in size distribution across industries, we define "small" and "large" firms relative to industries (industries are defined at the ISIC Rev.2 4-digit level). Thus, the term "small" or "large" firm refers to those firms employing less or more than the (geometric) average of the industry in which the firm operates.

The following variables are used to measure various aspects of flexibility:

Entry and exit rates are defined as the ratio of the number of entrants and exits to total number of firms. We also define the entry and exit rates in terms of the number of employees, but the results were almost the same. Entry and exit rates are used to measure dynamic flexibility.

We use two variables to measure manufacturing flexibility (flexibility in technology): *input inventories* (the proportion of input and work-in-process inventories[3] to total value of inputs consumed in a year) and *output inventories* (the proportion of output inventories to total output in a year). As discussed in the previous section, those firms that use flexible

2 The SIS collects data at the establishment level. Since most of the firms in Turkey have only one establishment, we use the terms "establishment" and "firm" synonymously in this paper. The data for 2002 were not available at the time of writing this paper.

3 "Inventories" refer to the average value of beginning-of-the-year and end-of-year inventories.

technologies (lean production systems) would have low levels of input and output inventories.

For labor flexibility, we use five variables.[4] *The share of overtime wage payments in total wage bill, average daily working time,* and *the share of second and third shifts in total number of hours worked* reflect the extent to which firms revert to overtime and shift work. These variables are related to the intensity of work. *The share of bonuses, social contributions, and payments in kind in total wage bill* reflects the "irregular" part of the wage bill. Since the firm can change the irregular payments easily, this variable is used as a proxy for financial (wage) flexibility. Finally, we use rates of retirement, firing, and hiring, i.e., labor turnover rates, as direct measures of numerical flexibility, because they are determined by the costs of hiring and firing.

Finally, we use *the share of subcontracted inputs in total inputs* and *the share of subcontracted output in total output* as measures of systemic flexibility. If a firm is a pure subcontractor, the share of subcontracted output will be equal to one. If a firm out-sources all of its inputs to subcontractors, then the share of subcontracted inputs will be equal to one.

Table 1 presents the data on the number of firms, the number of employees, and the average plant size (APS, the number of employees per establishment) for two categories, small and large firms, where "small" and "large" are defined relative to the (geometric) average of the industry. In 2001, there were about 6500 small and 4900 large establishments in our database. An average small establishment employs about 25 people and an average large establishment about 200 people. There are about 1 million people employed by these firms, and 15% of employees work for small firms.

The number of firms experienced two sharp declines in the last decade, the first in 1994 (4.2% drop in the number of firms) and the second in 1999 (8.6%). The number of employees followed a similar pattern. Employment declined sharply in 1994 (4.3%), 1999 (7.6), and 2001 (3.0%). The reason behind the decline in the number of firms and employees in these years is evident in Figure 1 that depicts the annual growth rate of GNP for the period 1992-2003. Although the average annual growth rate of GNP is around 6.9% in "normal" years, it was -6.1%, -6.1% and -9.4% during recessions in 1994, 1999, and 2001 respectively. The decline in output in 2001 did not lead to employment loss to the same extent, but the data on employment from the Household Labor Force Statistics for recent years indicate that the 2001 crisis led to a long-term negative impact on employment.

We will look at some performance indicators for small and large firms before comparing the flexibility measures. Figure 2 presents the data on profit margin (profit/sales ratio, left axis) and value added margin (profit/value added, right axis) for small and large firms for the period 1993-2001.[5] As may be expected, large firms are more profitable than small firms. It is an interesting observation that there is no significant decline in profit margins during economic crises; on the contrary, the value added margin increased in 1994 and 2001 for both small and large firms as a result of deep cuts in real wages.

Although large firms are more profitable, small firms experience much higher (employment) growth rates (see Figure 3). Employment growth rates are much lower during economic crises (1994, 1999, and 2001); but small firms, on average, grow 5 percentage points faster than large firms throughout the same periods. Changes in number of hours worked are more

4 There are other measures, such as the share of part-time workers, flexible employment practices, etc., that are used to assess the degree of labor flexibility. Unfortunately, the choice of measures was restricted by data availability.

5 In order to eliminate sector specific effects, we also calculated all these variables as deviations from industry means, but the results were qualitatively the same. Therefore, we present simple average values in this paper.

volatile and pro-cyclical as a result of labor hoarding. It is interesting to observe that there is no significant difference in labor hoarding between small and large firms.

The growth rates are calculated, by definition, for only surviving firms. Non-survivors, i.e., those that exit from the market, are not included in calculating the average growth rates. However, as documented for all countries, small firms have higher exit probability, and the net employment effect depends on exit/survival rates. Figure 4 depicts the data on survival rates for three cohorts of firms in our data. The 5-year survival rate is about only 40% for small entrants. In other words, if a new firm starts small, the probability that the firm will survive at least 5 years is only 40%. The 5-year survival rate is higher for large entrants (about 60%).[6] The data provide evidence to the argument that the survival rate is much lower for small firms, but those small firms that survive achieve much higher growth rates. Then, what is the net impact on employment generation?

Figure 5 shows the indices of employment for 1994, 1995, and 1996 entrants. Entrants are classified as "small" and "large" depending on their entry size. The value of index at age 0 (entry year) is equal to 1 (total employment generated at the time of entry). There seems to be no difference in terms of net employment generation between small and large firms. In other words, employment losses due to high exit rate compensate for employment generation due to high growth rates for small firms. The average net employment for both small and large firms is around 90% in 5 years: 10% of jobs generated by small and large entrants are lost in five years. These figures reveal that entrants play a very important role in employment generation. For example, 12% of 1.1 million jobs available in 2001 were generated by firms that were established in a three-year period (1994-1996); and 40% of jobs generated by these new firms were due to small entrants.

There is a huge difference between exit and entry rates for small and large firms. Entry and exit rates are about 15% for small firms, whereas they are only about 5-6% for large firms. Entry rates are slightly higher than exit rates for both small and large entrants so that the number of firms increases over time. There was a sharp reduction in entry rates in 1999 that could have been caused, at least partially, by two devastating earthquakes that hit the heavily industrialized Marmara region. Higher rates of entry and exit for small firms indicate dynamism caused by successes as well as failures.

Manufacturing flexibility indicators are depicted in Figure 7. Large firms tend to keep slightly higher proportion of output inventories, especially when the demand increases rapidly. There is, however, no difference in terms of input inventories. The data on input and output inventories reveal that small firms are not significantly more flexible than large firms, and they do not have any cost advantage over large firms in this respect.

Figure 8 presents the data on the average daily working time for production workers. Contrary to our prior expectations, large firms have longer daily working time; and for both small and large firms, average daily working time tends to increase over time. The difference between small and large firms is quite small (only 0.5%), but it is statistically significant (at the 1% level) and is inclined to continue. Figure 9 provides additional evidence for overtime work. The share of overtime payments in total wage bill for production workers is much higher in large firms because of two reasons: first, as shown in figure 8, overtime work is more prevalent in large firms; second, large firms pay (more) for overtime work. However, although the average daily working time tends to increase, the share of overtime payments remains at the same level throughout the period.

Figure 10 shows the share of second and third shifts in the total number of hours worked. As in the case of overtime work, large firms operate longer in second and third shifts, and the

6 The difference between survival functions is statistically significant at the 1% level.

difference is substantial. Moreover, the share of second and third shifts increases gradually over time. The data on overtime and shift work seem to suggest that work is more intensive in large firms than in small firms.

The share of bonuses, social contributions, and payments in kind in total wage bill is depicted in Figure 11. It is evident that irregular payments are much more important for large firms. Although the difference declines to some extent over time, it is still 7-8 percentage points higher in large firms than in small firms.

Rates of retirement, hiring, and firing are shown in Figure 12. Although retirement rates are somewhat higher in large firms, they are quite low for both small and large firms (less than 1.5%) and do not contribute much to labor turnover. Rates of hiring and firing are around 14%, and are slightly higher for large firms than. This is also contrary to our prior expectations, because it is supposed that small firms have higher numerical flexibility. Although unionization rates are much higher in large firms, and small firms are more likely to benefit from "informal" practices, our data reveal definitely that large firms enjoy the same level of numerical flexibility as small firms do. Moreover, they seem to have higher financial (wage) flexibility and to adopt more intensive forms of work arrangements.

Systematic flexibility measures are shown in Figure 13. As may be expected, there is a division of labor between small and large firms. Large firms have lower subcontracted output share and higher subcontracted input share than small firms. In other words, large firms are more likely to be contractors, whereas small firms tend to be subcontractors. This form of subcontracting relationship will, of course, provide flexibility for large firms who can transfer risks and costs to small subcontractors.

4. Conclusion

Our analysis shows that in Turkish manufacturing industries:

- there is no difference in manufacturing flexibility between small and large firms;
- there is almost no difference in labor flexibility between small and large firms (large firms could even have higher wage flexibility and intensive work arrangements);
- there is an unequal relationship between small and large firms in subcontracting relations that could enhance systemic flexibility of small and large firms; and
- dynamic flexibility (entry, exit, and growth) is much higher in small firms than large firms.

In other words, there seems to be no difference between large and small firms in terms of internal aspects of flexibility (technology and labor). Large firms benefit from new, flexible technologies almost to the same extent as small firms do. In spite of the stricter employment protection legislation and unionization rates for large firms, employment relations in large firms are also as flexible as in small firms. There are, however, some differences in "external" aspects of flexibility. Large firms, being mostly "contractors", tend to benefit from subcontracting while small firms are more likely to be subcontractors. The most important difference between small and large firms is observed in the case of dynamic flexibility, i.e., the entry, exit, and growth processes. Small firms enter to and exit from the market at much higher proportions; and those small firms that can survive achieve very high growth rates. In other words, there is not much difference in flexibility at the firm level, but, as a *group*, small firms are more flexible in the sense that the size of small firms, as a group, can rapidly adjust to changing conditions through entry and exit processes.

Our results have critical policy implications. Since small firms are not intrinsically more flexible than large firms, they do not have any advantages in terms of flexibility; and SME policies that aim to exploit flexibility advantages of small firms are likely to be unsuccessful.

Moreover, since small firms are not more flexible in technology and employment than large firms, there may not be a real trade-off between dynamic efficiency (flexibility) and static efficiency. This result implies that economies of scale and scope and technical efficiency may play a very important role in determining competitiveness of small firms.

The main contribution of small firms seems to be due to their dynamism. Small firms constitute a large part of entrants and, therefore, exits. This process, as emphasized by many evolutionary economists, is a wasteful process. SME-support policies should aim at making this process more efficient by providing resources for fast-growers and avoiding a good deal of support for failing firms. Because failure seems to provide necessary lessons learned for success and long-term growth, SME-support policies should encourage experimentation (entry) and entrepreneurship without stigmatizing business failure.

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Figure 1: GNP Growth Rate in Turkey, 1992-2003 (%)

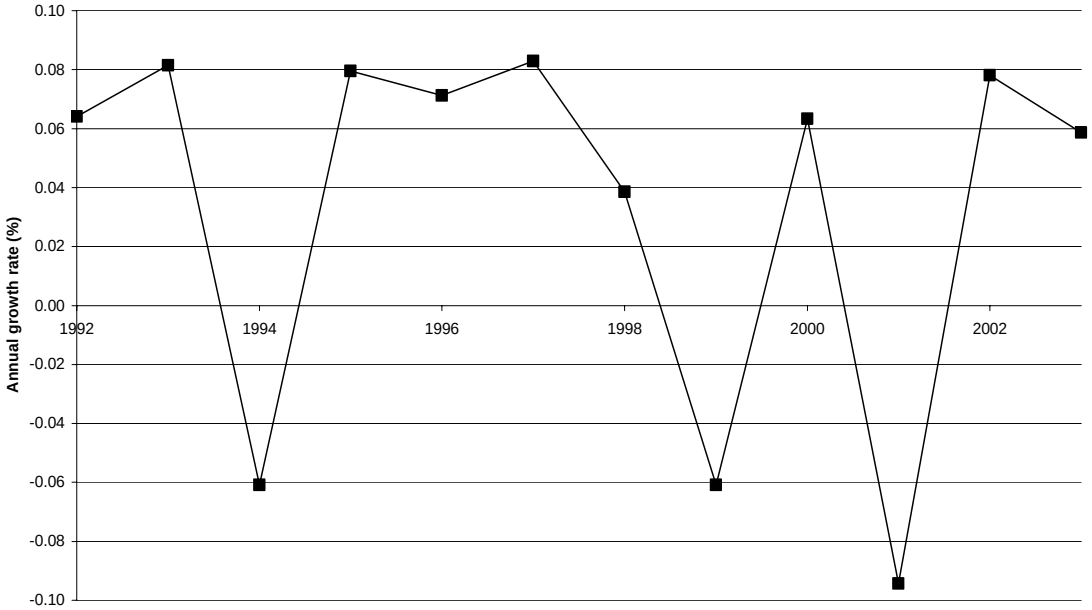

Figure 2: Profit Margins

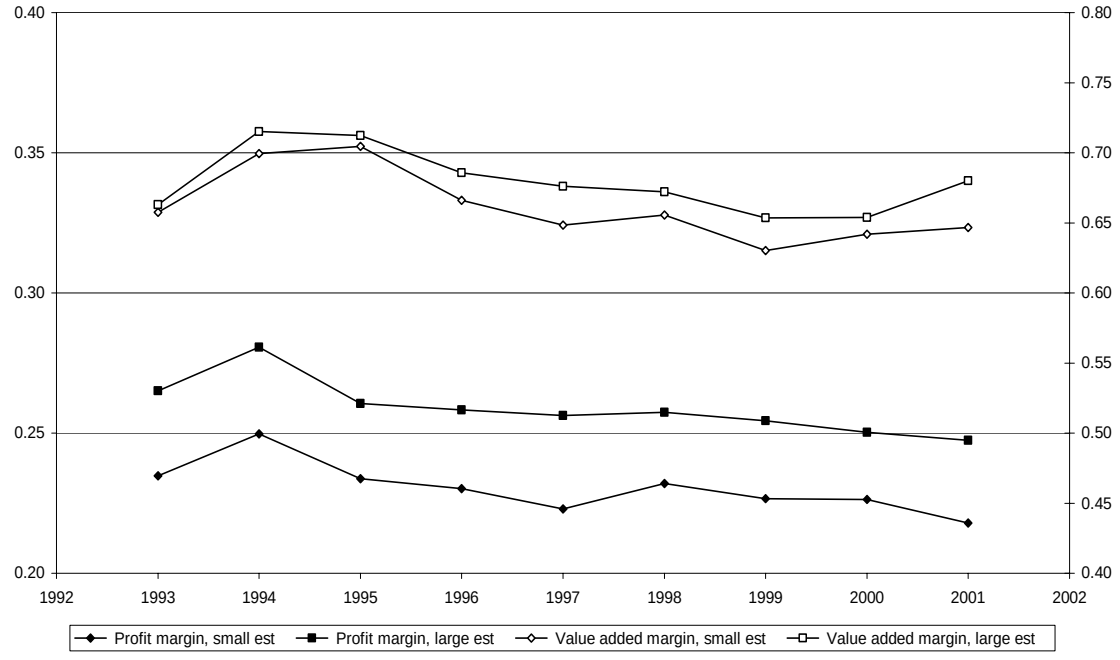

Figure 3: Growth Rates

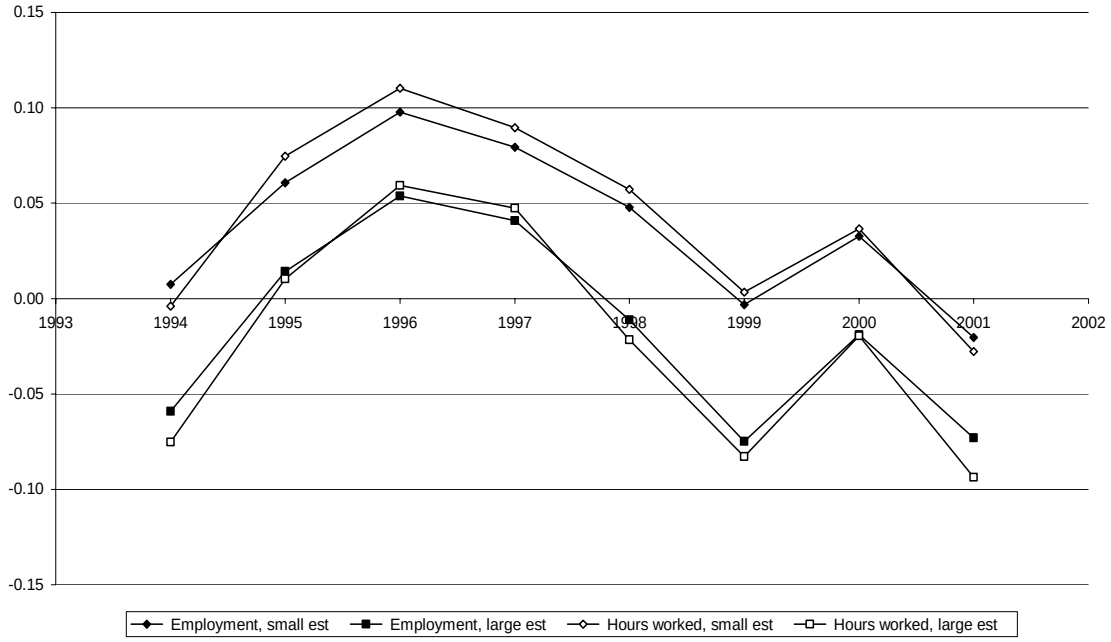

Figure 4: Survival Rates, 1994-1996 Cohorts

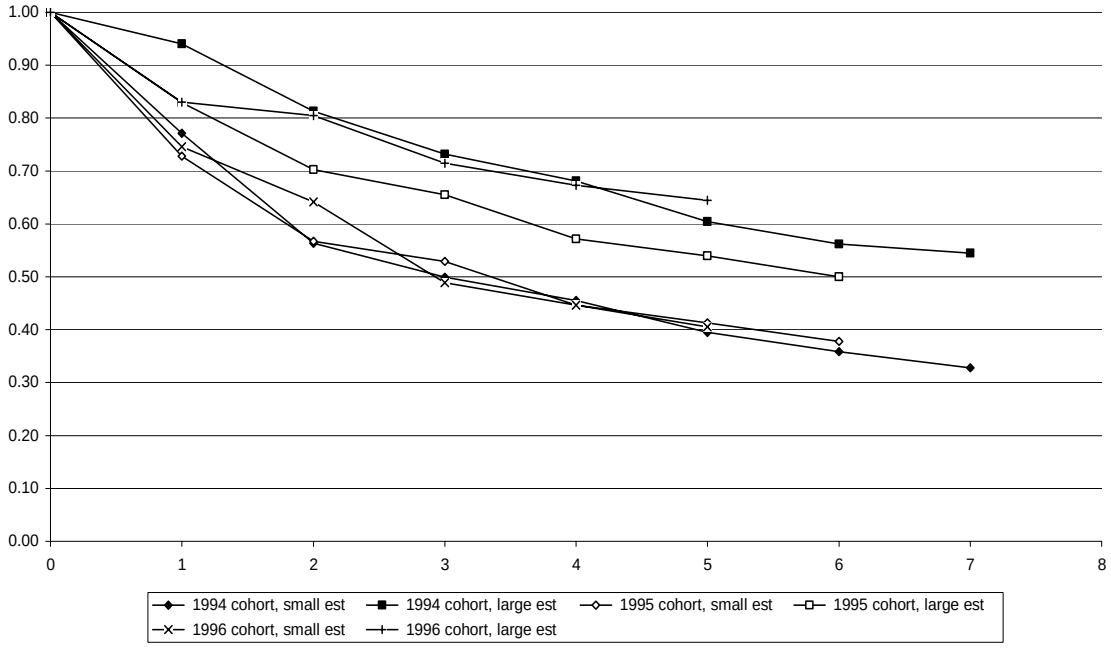

Figure 5: Employment Generation Rates

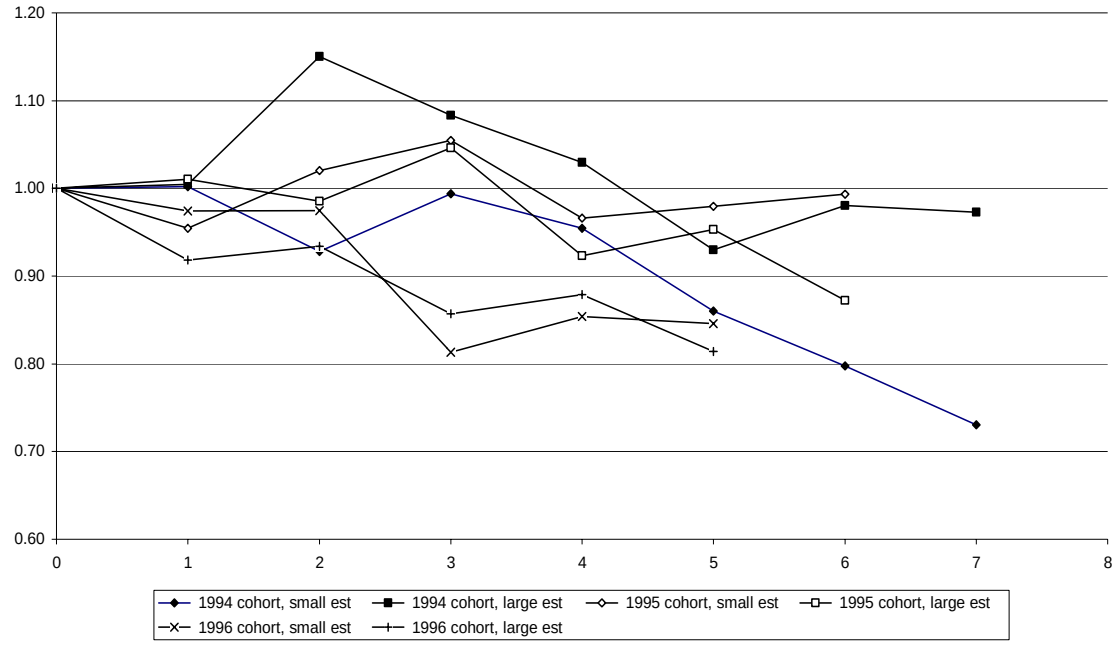

Figure 6: Entry and Exit Rates

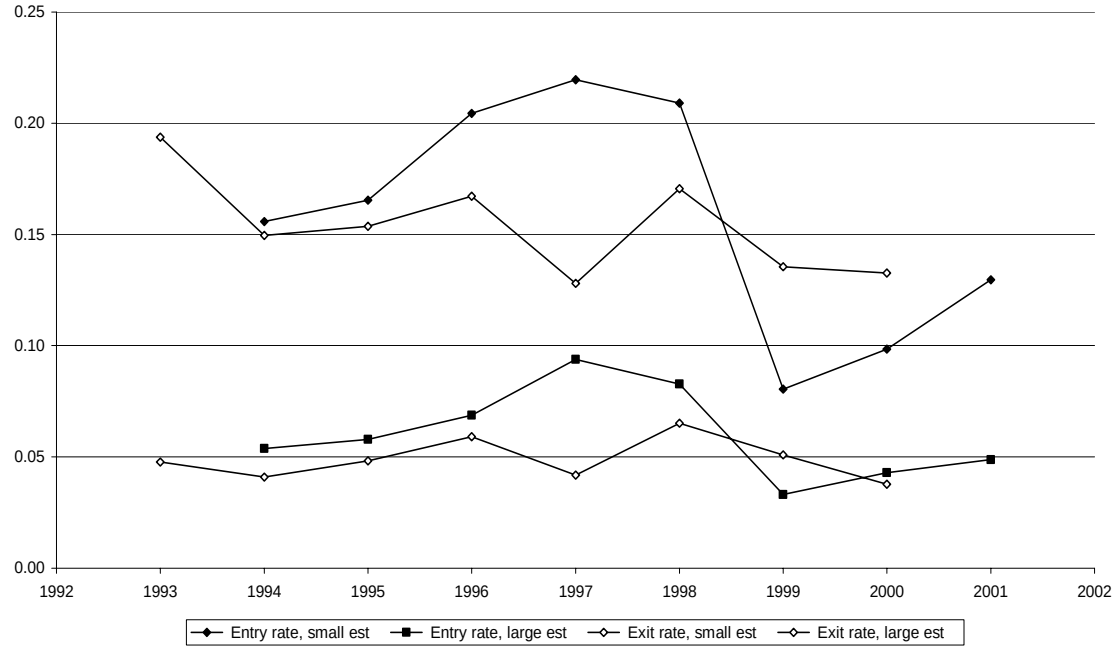

Figure 7: Manufacturing Flexibility Indicators

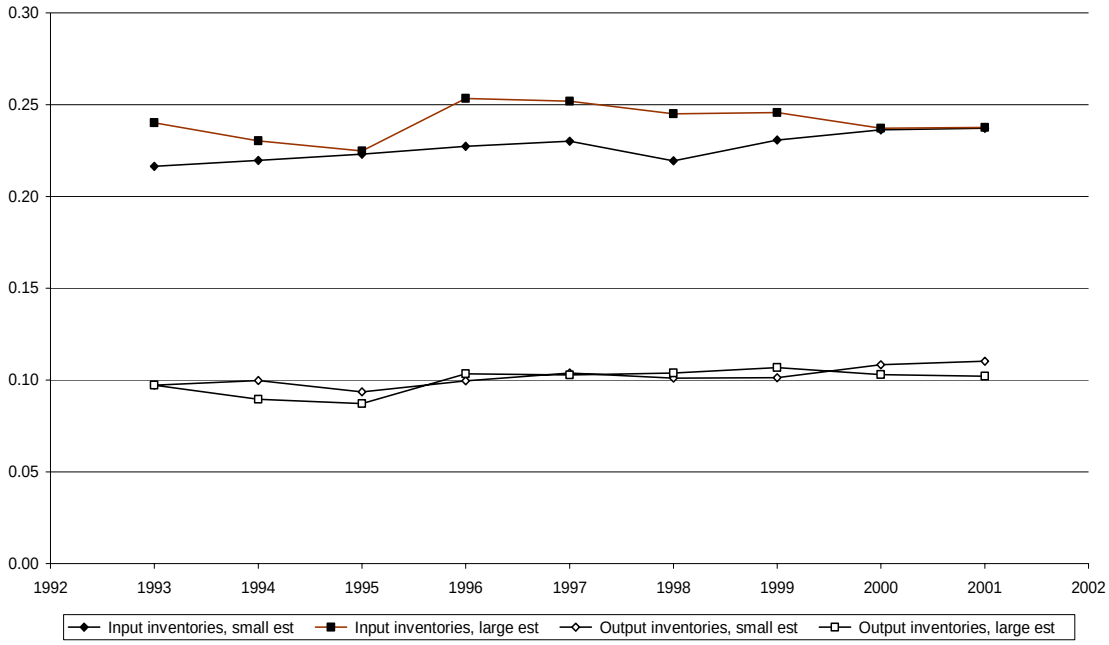

Figure 8: Employment Flexibility Indicators, Average Daily Working Time

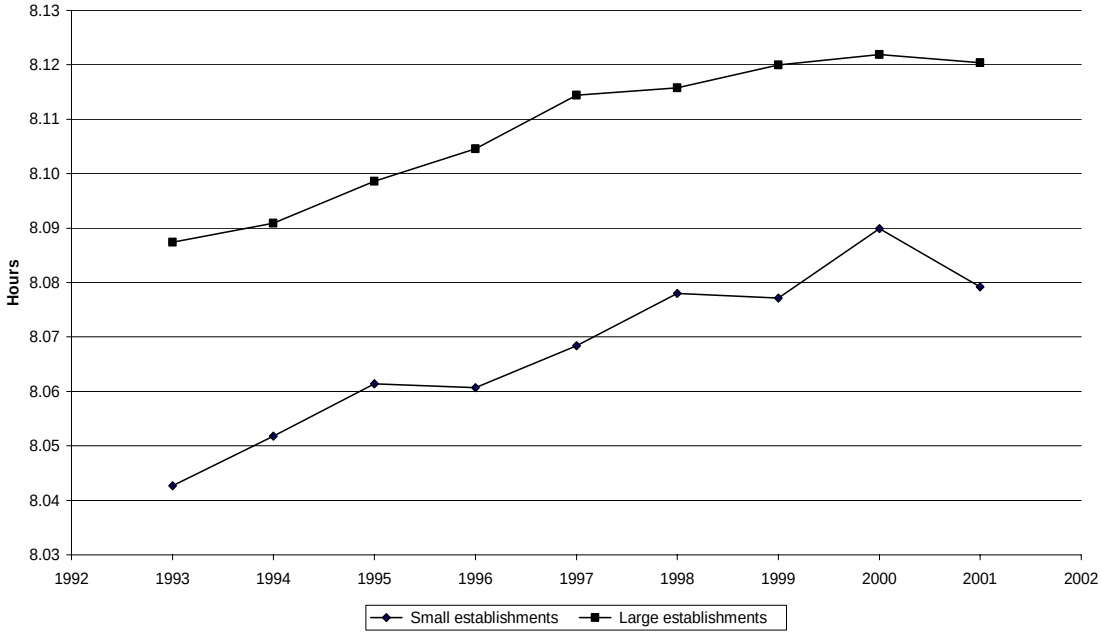

Figure 9: Wage Flexibility Indicators, Share of Overtime Wages

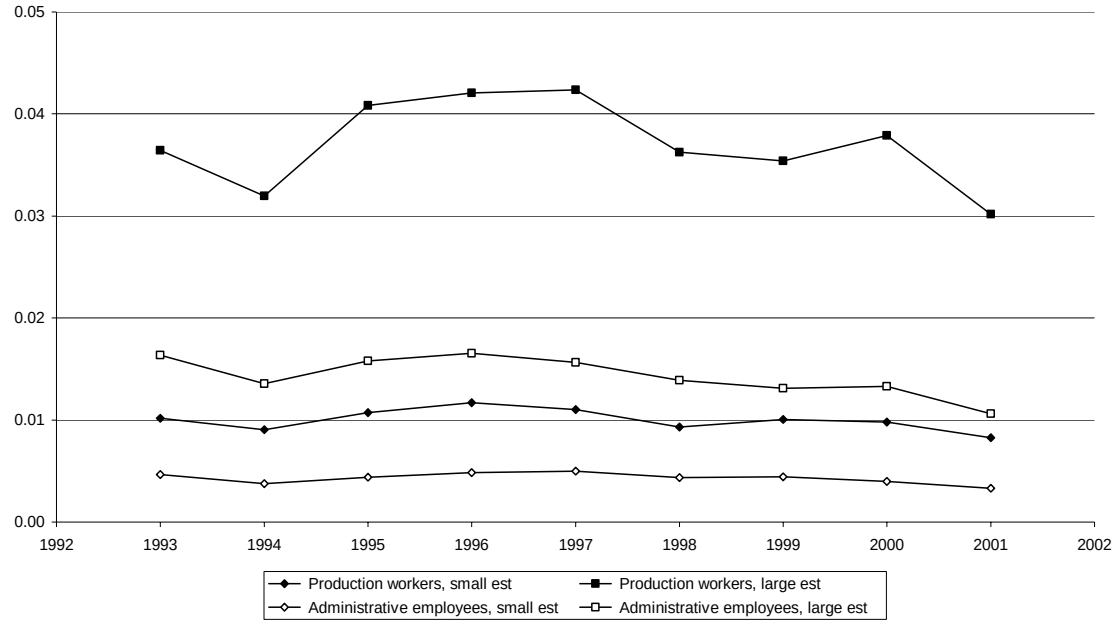

Figure 10: Employment Flexibility Indicators, Share of 2nd and 3rd Shift Work

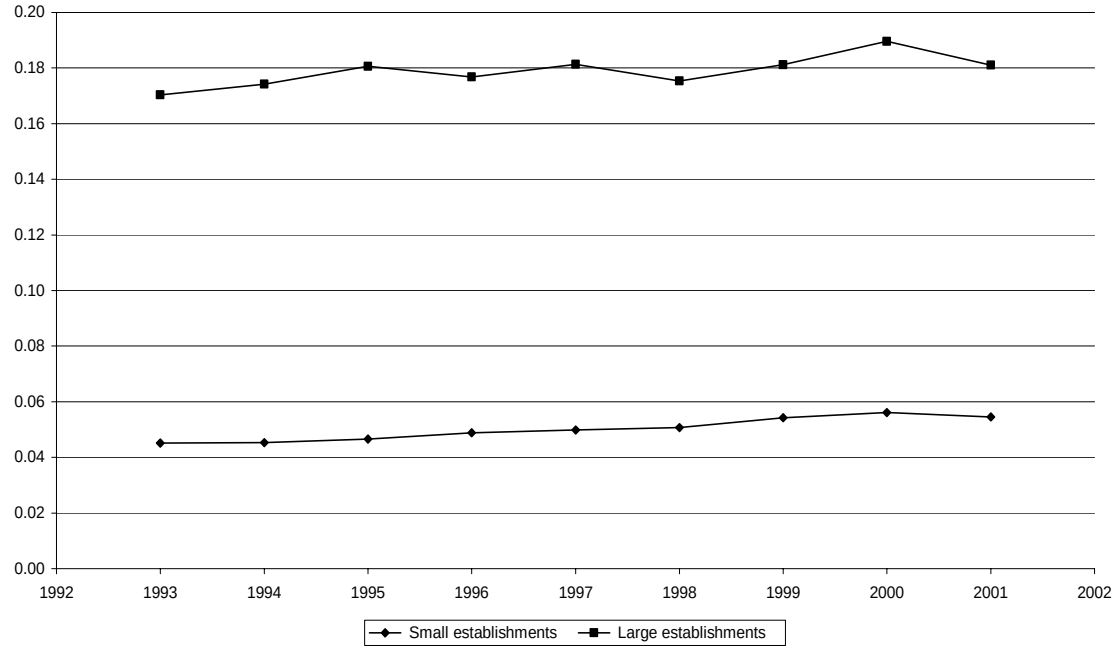

Figure 11: Wage Flexibility Indicators, Share of Bonuses

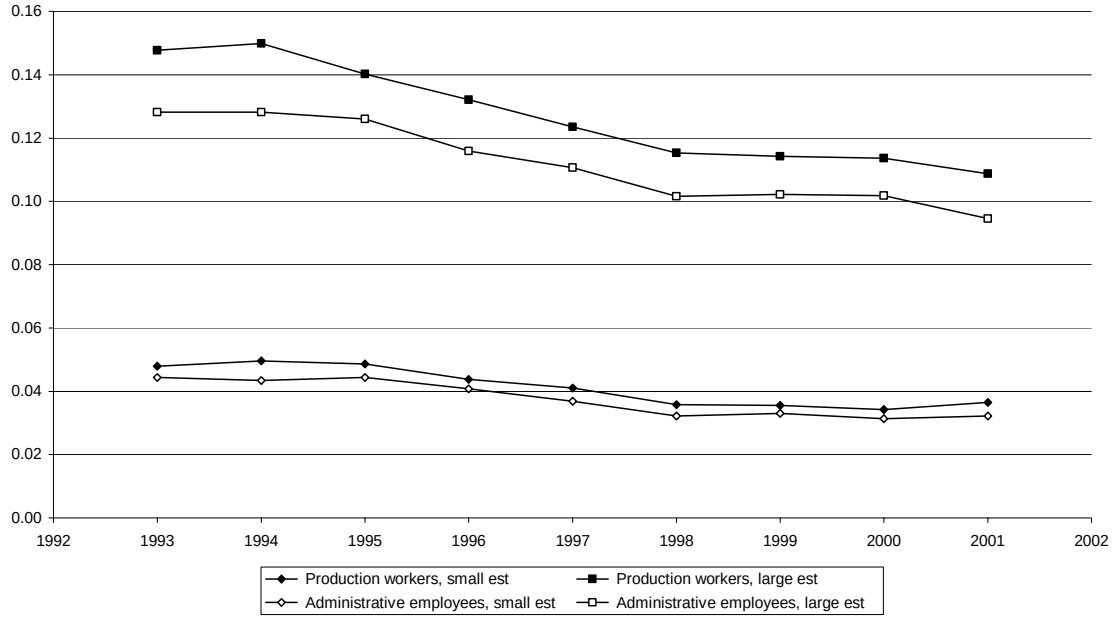

Figure 12: Employment Flexibility Measures, Labor Turnover

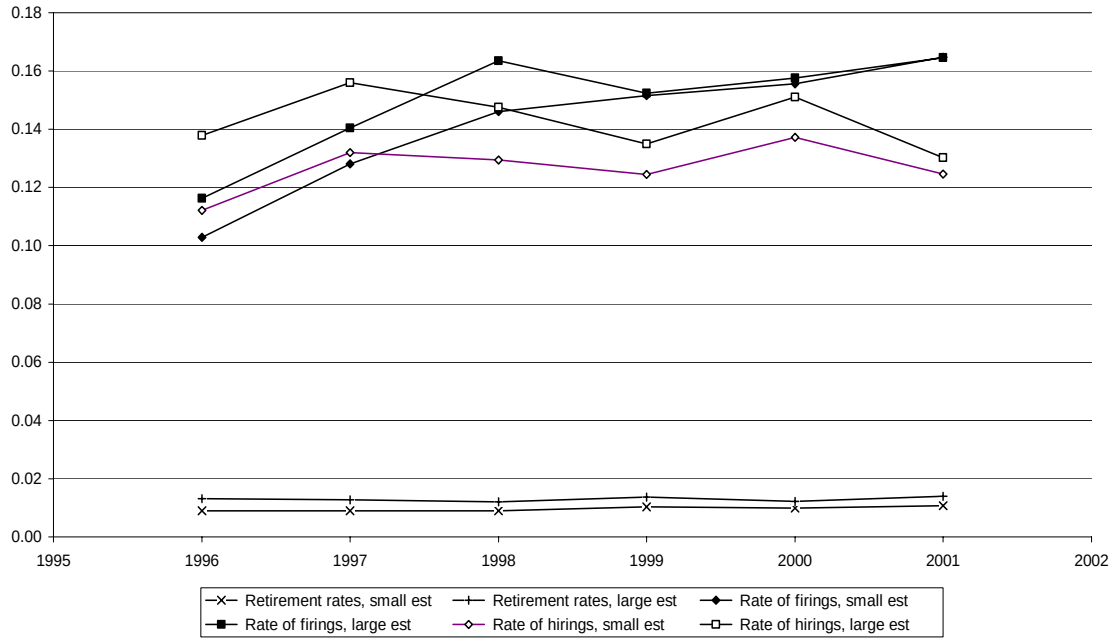

Figure 13: Systemic Flexibility Measures

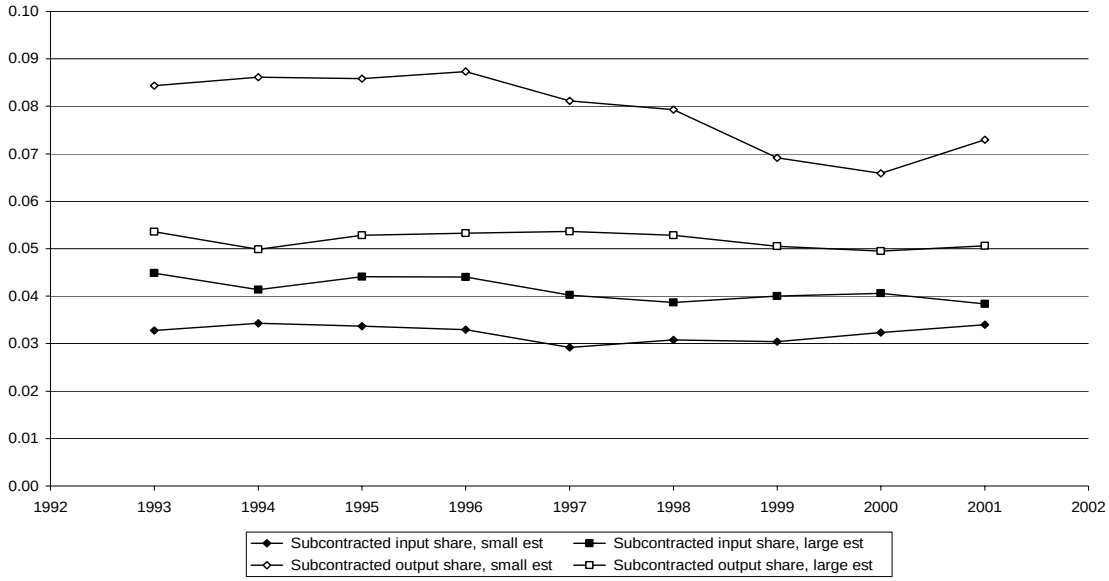

Table 1: Number of Establishments and Employees

	Small Establishments			Large Establishments		
	Estab	**Employ**	**APS**	**Estab**	**Employ**	**APS**
1993	5995	131104	22	4572	848376	186
1994	5754	127777	22	4373	809144	185
1995	5838	137545	24	4354	826019	190
1996	6050	144910	24	4540	895003	197
1997	6492	156694	24	4880	983328	202
1998	7009	169438	24	5313	1036259	195
1999	6395	159401	25	4867	954129	196
2000	6354	161868	25	4760	968314	203
2001	6445	159323	25	4866	937494	193