WORK IN PROGRESS; NOT FOR CIRCULATION OUTSIDE NBER-SNS GROUP.

# INDUSTRIAL POLICY, EMPLOYER SIZE AND ECONOMIC PERFORMANCE IN SWEDEN REVISITED (working title)*

Steven J. Davis[1] and Magnus Henrekson[2]

First Draft: September 20, 2005

*Abstract*.

*JEL* Classification: L52, J21, H30. More???

*Keywords*: Industrial Policy, Size Distribution, Industry Structure, Swedish Economic Performance. More??

[1]The University of Chicago Graduate School of Business
5807 South Woodlawn Avenue
Chicago, IL 60637
USA
Phone: +1-773-702-7312
Fax: +1-773-834-0733
e-mail: steve.davis@gsbsjd.uchicago.edu

[2]Department of Economics
Stockholm School of Economics
P. O. Box 6501
S-113 83 Stockholm
SWEDEN
Phone: +46-8-736 92 02
Fax: +46-8-31 32 07
e-mail: Magnus.Henrekson@hhs.se

We thank xx and yy for helpful comments and suggestions. Robin Douhan and Per Thulin provided excellent research assistance. We gratefully acknowledge financial support from zz. Needless to say, we are responsible for errors and shortcomings.

## 1. Introduction

Nine studies comprising the NBER-SNS project on *The Welfare State in Transition* were completed in 1995.[1] The project research team, ten American and ten Swedish economists, first gathered in Stockholm during the fall of 1992 amidst the worst crisis to face the Swedish economy since the 1930s. Output fell sharply for the second year in a row in 1992, interest rates skyrocketed, and unemployment reached levels not seen for half a century. Moreover, as of the early 1990s the long-term growth performance of the Swedish economy had been weak for more than two decades, leading to a sizable drop in per capita income relative to other advanced economies. This backdrop of immediate crisis and longer term stagnation fostered a strong sense of urgency in the research team, which undoubtedly contributed to the overall success of the project.

Looking back, it is clear that the Swedish economy turned around in 1993–94. Since then, growth has been impressive from a European perspective, and one must return to Sweden's golden age in the 1960s to find comparable rates of output growth. But these output gains came with a worrisome lack of job creation. Aggregate employment in 2004 is 6% off its 1990 level, despite a nearly 5% population increase. Hours worked per person of working age (20–64 years) in 2004 are a mere 1% above their 1993 level and 10% below the 1990 level. Thus, in terms of employment performance, the Swedish economy remains mired in stagnation. This disappointing employment performance is all the more striking today, given Sweden's strong record of output growth since 1993.

Our explanation for Sweden's weak employment performance emphasizes a particular cluster of institutions. Here, "institutions" refer to the rules of the game that govern the conduct of economic activity and that shape "the social structure of payoffs."[2] The *institutional setup* denotes a particular institutional package that constitutes an economic system.[3] An institutional explanation stresses certain rules of the game as key determinants of economic performance. We do not provide an exhaustive characterization of Sweden's institutional setup, because a modern society has many formal and informal institutions that differ greatly in terms of economic significance. Some judgement is required to identify and characterize the key institutions. To form a compelling analysis and interpretation of economic performance, this judgment needs to be backed up by evidence.

One way to assess the significance of particular institutions is to investigate whether they explain notable outcome differences across countries and distinctive aspects of economic organization and performance within countries. We have pursued this approach in several studies, often with a focus on Sweden.[4] Much of our previous work, including our original contribution to the NBER-SNS project, evaluates the consequences of Swedish institutions by

[1] The studies were published in Freeman, Topel and Swedenborg (1997).

[2] The term is borrowed from Baumol (1990). Institutions have moved to the fore of mainstream explanations for economic performance, especially over the longer term. See, for example, North and Weingast (1989), Rodrik et al. (2004) and Acemoglou et al. (2005).

[3] As the SNS-NBER study made clear, the Swedish welfare state can be seen as an economic model, or system, defined by a particular mix of institutions. The mix of institutions and the interactions among them are key determinants of economic performance. For instance, the combination of high marginal tax rates and a narrow pre-tax wage dispersion discourage labor supply under the Swedish model, but this effect can be and has been mitigated by mechanisms that limit access to highly subsidized services to employed persons (Lindbeck 1982).

[4] See Davis (2005), Davis and Henrekson (1997, 1999, 2005a, 2005b), Henrekson and Johansson (1999), Henrekson and Jakobsson (2001) and Henrekson (2005).

comparing Swedish outcomes to those in the United States, a country with a very different institutional setup. Our previous work also features many-country comparisons that treat Sweden and the United States as two among many points along an institutional or policy spectrum. Under both approaches, we relate distinctive aspects of the institutional setup in Sweden and other countries to various outcomes. Evidence that particular institutions influence several different outcome variables in the directions implied by economic reasoning lends greater confidence to the view that they matter in a significant way.

In our choice of outcome variables, we also seek to shed light on the mechanisms by which institutions affect economic performance. We investigate whether and how particular policies and institutional arrangements affect the allocation and use of capital and labor inputs. We also seek to reach judgments about the economic efficiency of these effects. To that end, we sometimes interpret U.S. outcomes as emerging from an institutional setup that yields a relatively efficient deployment of capital and labor inputs. Based on this premise, we find evidence that several aspects of Sweden's institutional setup encourage the misallocation of physical capital between industries, less efficient organizational forms for carrying out productive activity, and an inefficient allocation of work time within the market sector and between the market and home sectors. Inferences of this sort do not prove that the U.S. institutional setup is superior to the Swedish setup, but they do highlight certain costs that should be weighed against any benefits of the Swedish institutional setup.

Several elements of Sweden's institutional setup figure prominently in our explanation for its weak employment performance: high tax rates on labor income and consumption expenditures, wage-setting arrangements that generate a compressed wage structure, business tax policies that favor capital-intensive industries and technologies, and a variety of policies and institutional arrangements that disfavor younger and smaller businesses. This last category includes income tax policies that penalize wealth accumulation in the form of individual and family-owned small businesses, a pension system that steers equity capital and loanable funds to large corporations, and legally mandated job-security provisions that weigh more heavily on smaller businesses.

We are delighted that SNS has decided to revisit the issues studied in the early 1990s; gives us the opportunity to see whether our approach and explanations stands up against recent developments.

Hence, the purpose of this study is to explore whether and to what extent recent developments in the performance and structure of the Swedish economy are consistent with our previous analysis….

Organization

Section 2 summarizes our earlier studies

Section 3 highlights the most important empirical developments in the Swedish economy: growth, industry structure, size distribution of employment..

Section 4 explores the rules of the game, changes and likely effects. Also includes a comparative analysis of the growth-elasticity of employment, which shows that..

Section 5 concludes.

## 2. Outline and synthesis of our earlier work

As already noted our main premise in earlier has been that that the institutional setup is an important driving force behind the change in the industry structure and economic performance in important respects. Our analysis strongly suggests that endogenous adjustment of the organization of economic activity to institutional constraints and exogenous structural forces (globalization etc) are major explanations behind important developments in the Swedish economy in the most recent decade as well.

### 2.1 Recapitulation of our 1997 and SBE follow up study

In our original study for the NBER-SNS project and in an extension and generalization of that study (Davis and Henrekson 1997, 1999) we show that the economic environment in Sweden prior to 1990 strongly disfavored younger and smaller businesses, preferentially treated capital-intensive firms and sectors, and discouraged direct individual and family ownership of businesses relative to institutional ownership. The Swedish tax system played a major role in each of these respects. Its effects on the industry distribution and the organization of business activity were reinforced by several other aspects of the economic environment: employment security laws that effectively imposed greater burdens on smaller businesses, credit market regulations that favored more established and capital-intensive firms, a national pension system that contributed to the dominant position of institutional investors and large firms, a centralized wage-setting institution that disadvantaged smaller employers by compressing relative wages, and a rapid expansion of the public sector into areas of the economy that would otherwise have offered considerable scope for self employment and small business activity.

We presented several pieces of evidence in support of our thesis that these aspects of the economic environment had important effects on the industry distribution of employment and the organization of business activity in Sweden. First, taking the U.S. industry distribution as a benchmark that reflects a comparatively neutral set of policies and institutions, Sweden‘s employment distribution as of the mid 1980s was sharply tilted away from low-wage industries and industries with greater employment shares for smaller firms and establishments. Second, throughout the 1970s and 1980s Sweden had the lowest rate of self employment among all OECD countries. Third, Sweden has an unusually high share of employment in large firms compared to other European countries and an unusually high concentration of corporate ownership and control.

### 2.2 Recapitulation of Wage-Setting Paper

Sweden has a highly compressed wage structure. A large body of evidence attributes this wage compression to the nature of Sweden’s wage-setting arrangements, as discussed at length in Davis and Henrekson (2005b). Evidence that institutions help shape the wage structure leads directly to other questions about their role in determining outcomes. For

example, how do labor market institutions that compress wage differentials affect the industry distribution of employment? The economic logic behind this question is straightforward: If relative wages influence the allocation of workers and cooperating factors of production, then institutional forces that compress wage differentials also affect the structure of employment.

To address the question, our earlier work examines the evolution of Sweden's industry distribution of employment from 1960 to 1994 and compares it to the U.S. distribution over the same period. Specifically, we relate the evolution of U.S.-Swedish differences in the industry distribution to the structure of relative wages between and within industries. We find that centralized wage setting alters the industry structure of employment in three directions: away from low-wage industries, away from high-wage industries and away from industries with high wage dispersion among workers. These effects intensified as centralized wage-spreading spread through the Swedish economy, and they reversed after the dissolution of centralized wage setting. The effects are large, at their peak accounting for 40 percent of U.S.-Swedish differences in industry structure. They also account for much of the evolution in the U.S.-Swedish differences between 1970 and 1994.

### 2.3 Tax Effects on Employment and Industry Structure

Taxes on labor income and consumption expenditures encourage households to substitute home-produced goods and services for those supplied by the market. They also encourage substitution towards untaxed production activity in the underground or shadow economy. These substitution responses are relatively easy for certain goods and services such as meal preparation and cleaning services, and relatively difficult for others such as automobile production and surgery. As a result, high tax rates push work activity out of the formal market sector *and* systematically alter the mix of market-based production activities.

Davis and Henrekson (2005a) investigate these effects in a sample of rich countries with reasonably comparable data. They find that higher tax rates on labor income and consumption expenditures lead to less work activity in the formal market sector, a larger shadow economy, and an altered industry mix.[5] Consider, for example, a 12.8 percentage point difference in the tax rate between two countries, which amounts to a unit standard deviation in the cross section of their sample. Using data for the mid-1990s and their preferred specification, Davis and Henrekson find that a tax increase of this size leads to 122 fewer hours worked per adult per year in the formal market sector, a drop of 4.9 percentage points in the employment-population ratio, and a rise in the shadow economy equal to 3.8 percent of GDP. It also lowers by 10 to 30 percent the economy-wide share of production and employment in tax-sensitive sectors such as eating, drinking and lodging establishments. These estimates reflect the direct effect of taxes on labor supply and labor demand plus the effects of tax-funded welfare and social insurance programs on labor supply incentives.

### 2.5 Summarize and lay down what is really important

[5] Many other studies also investigate the role of tax rates in cross-country differences in work activity and the size of the shadow economy. See Davis and Henrekson (2005a) for references.

# 3. Empirics

## 3.1 The Output Growth Record

In the early 1990s, discussion of Sweden's economic problems focused on the slow pace of long-term growth. Beginning in the mid to late 1960s, the growth of Swedish GDP slowed relative to earlier decades and other rich countries. Swedish income per capita fell from 3rd or 4th place among OECD countries in 1970 to 17th place in 1993(?), dropping some twenty percentage points relative to the OECD average (Lindbeck 1997, Henrekson 2001).

Since the low point in 1993, the Swedish growth record has been impressive relative to the contemporaneous performance in other OECD countries and relative to the previous two decades in Sweden. As shown in *Table X* the average growth rate in the 1994–2004 period has been almost 3 percent p.a., well above the EU-15 and OECD averages, and in terms of per capita GDP Sweden has even outperformed the US. The Swedish economy has not experienced growth rates this high since the 1960s, a decade often seen as the Golden Age of the Swedish Model.[6] No doubt, part of the high growth rate, particularly in the mid 1990s, can be attributed to catching up following the deep contraction in the 1990s.

*Table X* Real GDP growth in Sweden, the US, EU-15, and the OECD, 1994/95–2004 (% p.a.)

| | GDP | | GDP per capita | |
|---|---|---|---|---|
| | 1994–2004 | 1995–2004 | 1994–2004 | 1995–2004 |
| Sweden | 2.93 | 2.82 | 2.64 | 2.57 |
| US | 3.37 | 3.30 | 2.15 | 2.07 |
| EU-15 | 2.29 | 2.24 | 1.95 | 1.91 |
| OECD | 2.77 | 2.72 | 1.92* | 1.86* |

* Data on population for OECD total not available for 2004, data for 1994-2003 and 1995-2003 used.
*Source*: *OECD Economic Outlook* (online: SourceOECD); data for EU-15 from *EuroStat* (online).

Even more importantly, the high relative growth rates have not been fully translated into improvements in relative income. Following Lindbeck (1997) *Figure WZ* displays PPP-adjusted GDP per capita in Sweden relative to the average of the 23 rich OECD countries for the period 1950–2004. The period 1950–92 is covered by data from *PWT* and 1970–98 by data from the OECD. Thus the two series overlap in 1970–92 and they have been calibrated to achieve concurrence in 1970. The two series follow a virtually identical time path between 1970 and 1992. This PPP-comparison shows the well-know pattern that Swedish income began to develop unfavorably relative to other rich countries in the mid 1960s and this relative decline lasted for roughly three decades. A low point was reached in 1993 when PPP-adjusted income per capita was 90 percent of the average for the rich OECD countries. Since then Swedish relative income has increased by two percentage points, which is much less than one would expect from the positive growth rate differential relative to the OECD reported in *Table X*. This is due to the fact that the relative decline in Swedish terms-of-trade makes the

[6] The average GDP growth rate in Sweden was 4.10% in 1966–70, 5.2% in 1961–65 and 3.4% in 1951–60 (Statistics Sweden).

gain in PPP-adjusted relative income much smaller than one would expect when comparing real growth rates that are not PPP-adjusted (Håkansson and Lindbeck 2005).

*Figure WZ* Purchasing Power Parity Adjusted GDP per Capita in Sweden as a Percentage of the OECD Average according to *Penn World Tables* (1950–92) and the OECD Statistics, (1970–2003).

enclosed

*Note*: OECD is defined as OECD excluding Mexico, Turkey, Poland, South Korea, Hungary and the Czech Republic, i.e., Lindbeck's (1997) "23 rich OECD countries". The OECD-statistics concern current PPPs while *Penn World Tables* (*PWT*) concerns fixed PPPs in 1985 dollars (variable: *RGDPCH*). The *PWT* comparison has been achieved by a population-weighting of the income levels in the respective countries, and then the resulting series has been scaled so that the 1970 level is identical to the level of the OECD series in 1970.
*Source*: *Penn World Tables* and OECD, *National Accounts* (online: SourceOECD), February 2005.

Given our focus it is important to decompose total growth to identify its origin. In particular, it is worth taking a closer look at growth in the market sector.[7] This is done in *Table Y*, where we can note that more than half (24 percentage points) of total growth of 45 percent in the 1994–2004 period consisted of growth in the production of goods and virtually all of this was growth in manufacturing. Hence, almost exactly half of the growth in the Swedish nongovernment economy took place in manufacturing – a sector that has been in relative decline in almost all rich countries since the 1960s and that was judged to have bleak long-term prospects in Sweden 15 years ago. Manufacturing growth has in turn been driven by a few industries, notably Electrical and optical products (dominated by telecommunications), Motor vehicles, Chemicals, and to some extent forest-related industries.

[7] When measuring GDP from the production side Statistics Sweden calls this "Total market producers and producers for own final use". This roughly corresponds to total production excluding government production. However, it should be noted that incorporated production units wholly-owned by the government such as the postal service, housing owned and run by local governments, and incorporated public hospitals are classified as market producers.

*Table Y* Decomposition of Swedish Nongovernment GDP Growth, 1994–2004.

| | Share of total value added, % 1994 | Value added growth, % 1994–2004 | Contribution to total real value added growth, 1994–2004 |
|---|---|---|---|
| **Total market producers and producers for own final use** | **100.00** | **44.86** | **44.86** |
| Producers of goods | 40.56 | 58.10 | 23.70 |
| Producers of services | 59.44 | 35.40 | 21.16 |
| | | | |
| **Producers of goods** | **40.56** | **58.10** | **23.70** |
| Agriculture, forestry, fishing | 3.25 | 11.43 | 0.36 |
| Mining and quarrying | 0.45 | 4.01 | 0.02 |
| Manufacturing | 26.74 | 86.82 | 22.52 |
| Electricity, gas and water works | 3.94 | 3.68 | 0.14 |
| Construction industry | 6.18 | 11.09 | 0.66 |
| | | | |
| **Producers of services** | **59.44** | **35.40** | **21.16** |
| Wholesale and retail sale | 13.38 | 41.29 | 5.64 |
| Hotels and restaurants | 1.74 | 32.49 | 0.58 |
| Transport, storage and communication | 9.62 | 44.06 | 4.33 |
| Financial institutions and insurance companies | 5.44 | 31.35 | 1.74 |
| Real estate, renting and business service companies | 25.71 | 25.12 | 6.60 |
| Educational, health and social work establishment | 1.46 | 77.61 | 1.16 |
| Other community and personal service establishment | 2.09 | 52.28 | 1.11 |
| | | | |
| **Manufacturing** | **26.74** | **86.82** | **22.52** |
| Food product, beverage and tobacco industry | 2.42 | 9.62 | 0.13 |
| Textiles, clothing and leather industry | 0.41 | –7.36 | –0.02 |
| Wood and wood products | 1.27 | 67.32 | 0.46 |
| Pulp and papers; publishers and printers | 4.28 | 5.85 | 0.14 |
| Coke and petroleum products | 0.27 | 137.31 | 0.20 |
| Chemicals | 2.29 | 108.92 | 1.35 |
| Rubber and plastic products | 0.72 | 39.65 | 0.15 |
| Other non-metallic mineral products | 0.65 | 24.75 | 0.09 |
| Basic metals; fabricated metal products | 3.58 | 28.64 | 0.55 |
| Machinery and equipment n.e.c. | 3.32 | 43.08 | 0.77 |
| Electrical and optical products | 3.25 | 931.18 | 16.39 |
| Transport equipment | 3.65 | 109.57 | 2.16 |
| Manufacturing industry n.e.c. | 0.65 | 38.50 | 0.14 |

*Note*: Growth figures are based on non-additive chain-linked constant prices, reference year 2000. Contribution to total growth 1994–2004 should be regarded as a rough approximation due to the non-additiveness of the chain-linked series.

*Source*: Statistics Sweden (SCB) and own calculations.

Looking at the growth in service production most of aggregate growth emanates from Real estate, renting and business services, Wholesale and retail trade and Transportation. In percentage terms Educational, health and social work and Other personal services have grown the most, although from very low levels. We will revert to this observation and try to couple it to pertinent institutional developments below.

Still, it is striking that growth may largely be attributed to goods production and professional services that are likely to be indirectly tied to goods production. This is also largely consistent with our previous finding showing that Swedish policies and institutions favored firms and

industries characterized by high capital intensity and large firms. Does employment growth and shifts in employment follow similar patterns?

### 3.2 The Employment Record

*Table XZ* presents the change in employment rather than value added in the nongovernment production sector in the 1994–2004 period. Total nongovernment employment grew by a bit more than 11 percent, and more than 100 percent of this employment growth was in the service sector, while employment in manufacturing remained unchanged despite total value added growth of 87 percent. Sizable contributions to total employment growth came overwhelmingly from three sectors: Wholesale and retail trade, Real estate, renting and business services, and Education, health and social work.

*Figures Z1* and *Z2* display the size distribution of employment in adjusted for company group in the whole Swedish business sector and manufacturing in 1994 and 2004. Over time the size distribution of employment became more and more concentrated in large firms (often groups/combines). Keeping in mind methodological problems this was more so in Sweden than in virtually all other European countries (Henrekson and Johansson 1999), although a sizeable share of total employment was made up of the very smallest firms. In the most recent decade, however, there has been a shift away from the very largest firms both in manufacturing and the business sector as a whole towards medium-sized firms. One may also note that there is a slight shift away from employment in the smallest firms. This is consistent with the fact that the number of self-employed, which increased by roughly ten percent in 1985–95 declined by 7 percent from 1995 to 2004.

*Table XZ* Decomposition of the Employment Change in the Swedish Nongovernment Production Sector, 1994–2004.

| | Share of total employment, 1994 | Employment growth, 1994–2004 | Contribution to total employment growth, 1994–2004 |
|---|---|---|---|
| **Total market producers and producers for own final use** | **100.00** | **11.52** | **11.52** |
| Producers of goods | 41.88 | –0.50 | –0.21 |
| Producers of services | 58.12 | 20.18 | 11.73 |
| | | | |
| **Producers of goods** | **41.88** | **–0.50** | **–0.21** |
| Agriculture, forestry, fishing | 5.15 | –22.18 | –1.14 |
| Mining and quarrying | 0.33 | –11.63 | –0.04 |
| Manufacturing | 27.14 | –0.30 | –0.08 |
| Electricity, gas and water works | 1.22 | –5.70 | –0.07 |
| Construction industry | 8.03 | 13.97 | 1.12 |
| | | | |
| **Producers of services** | **58.12** | **20.18** | **11.73** |
| Wholesale and retail sale | 19.96 | 9.35 | 1.87 |
| Hotels and restaurants | 4.02 | 14.24 | 0.57 |
| Transport, storage and communication | 10.60 | –0.95 | –0.10 |
| Financial institutions and insurance companies | 3.24 | 11.95 | 0.39 |
| Real estate, renting and business service companies | 12.34 | 48.79 | 6.02 |
| Educational, health and social work establishment | 3.46 | 67.41 | 2.33 |
| Other community and personal service establishment | 4.51 | 14.49 | 0.65 |
| | | | |
| **Manufacturing** | **27.14** | **–0.30** | **–0.08** |
| Food product, beverage and tobacco | 2.57 | –7.84 | –0.20 |
| Textiles, clothing and leather industry | 0.66 | –30.99 | –0.21 |
| Wood and wood products | 1.40 | 2.21 | 0.03 |
| Wood and wood products | 3.92 | –20.75 | –0.81 |
| Pulp and papers; publishers and printers | 0.12 | –10.00 | –0.01 |
| Coke and petroleum products | 1.28 | 16.97 | 0.22 |
| Chemicals | 0.90 | 0.00 | 0.00 |
| Rubber and plastic products | 0.69 | 0.56 | 0.00 |
| Other non-metallic mineral products | 3.69 | 11.64 | 0.43 |
| Basic metals; fabricated metal products | 2.54 | 8.31 | 0.29 |
| Machinery and equipment n.e.c. | 3.12 | –8.45 | –0.26 |
| Electrical and optical products | 3.18 | 16.69 | 0.53 |
| Transport equipment | 2.09 | –4.45 | –0.09 |

*Note*: The third column is calculated as the first column multiplied by the second and divided by 100.
*Source*: Statistics Sweden (SCB) and own calculations.

*Figure Z1* The Size Distribution of Employment in the Swedish Business Sector Adjusted for Company Group, 1993 and 2004

*Source*: Statistics Sweden and NUTEK (1994).

*Figure Z2* The Size Distribution of Employment in Swedish Manufacturing Adjusted for Company Group, 1994 and 2004

*Source*: Statistics Sweden and Industriförbundet (1995).

In the wake of the crisis in the early 1990s unemployment soared to levels not experienced since the Great Depression and the employment rate fell by roughly ten percentage points in just a few years. In our original study we noted that all employment growth in Sweden since 1950 was due to increased government employment, an observation that called into question the employment-creating capability of the business sector. *Figure Z3* is an update of these data and it shows a rebound in the number of jobs, so that roughly half of the jobs lost have been regained. The entire increase is in nongovernment employment and business sector jobs are up by 400,000 since the 1993 low point. However, it is important to note that a sizable share of the relative increase in business sector jobs is a statistical artifact. For instance, when a private but publicly funded school substitutes for a municipal school or when a regional government incorporates its hospitals this transfers the activity to the market sector.

*Figure Z3* Cumulative Change of Employment and Population, Sweden 1950–2004.

*Source*: Statistics Sweden and own calculations.

### 3.3 The Hours Worked Record

The aggregate employment data presented in section 3.2 give an incomplete picture since absenteeism of various kinds has increased sharply in the last decade. Definitions of employment and unemployment statistics are seldom straightforward and they also change over time making comparability difficult. According to official statistics the employment rate measured as the total number of persons defined in the statistics as employed relative to population aged 20–64 increased from 73.9 to 77.0 percent from 1997 to 2004. However, large groups such as those on sick leave, some of the students and conscripts, some categories on unpaid leave, people on paid parental leave and people on temporary leave to care for a sick child are defined as employed.

Open unemployment was a 5.5 percent in 2004, a figure that obviously does not fully reflect the degree of joblessness and disability in the economy. A number of more comprehensive measures have therefore been suggested. They generally include all or part of the following categories: people on sick leave, on parental leave, on leave to take care of family members, on unpaid leave and, participants in labor market programs, discouraged workers (including "involuntary" students") and people on welfare and the pre-retired (either paid by the government or through a buyout from a previous employer). It is virtually impossible to agree on an exact number, but it is fair to say that depending on how it is calculated total unemployment is on the order of 18–24% (see, e.g., Edling 2005).

Moreover, a more reliable indicator of the employment-creating capacity of the economy may be had by examining the development of the number of hours worked. *Figure Z4* displays the number of hours worked per person. Looking at employment this way it becomes immediately apparent that the increase in the number of persons recorded as employed has

been offset by a decline in average hours worked per person employed after 1999. Since 1990 the share of active-age population has also increased, and hence the increase in hours worked becomes even bleaker when it is related to those groups. For instance, the average number of hours worked among 16–64-year olds increased by a mere 16 hours or less than 1.5 percent from its 1993 low point until 2004.

*Figure Z4* Average Annual Hours Worked per Person, Sweden 1990–2004.

*Source*: Statistics Sweden.

We should also note that these data on hours worked are derived from self-reported interviews of a sample of people and not from actual observations. Average actual hours worked per person employed is reported to be on the order of 1,630 hours per year. Given an average of 27 days of paid vacation and 11 days of holidays a year this would imply an average effective work week on the order of 37 hours per employed. One may note here that Statistics Sweden revised their estimates of the annual number of hours worked per person employed strongly upward in the early 2000s. E.g., the figure for 1997 (as reported in OECD, *Employment Outlook*) was revised upward by 78 hours for the year 1997, and the average number of hours worked per person employed is reported to be on the order of 200 hours more per year than in countries like Germany and Norway. *Prima facie*, such differences are hard to believe.

Given the incidence of part-time work, absenteeism caused by sick leave, parental leave, training etc. among those counted as employed this could be an exaggeration. This is strongly indicated by the fact that the actual number of hours worked among *full-time* employees in the private sector was reported to be 1,581 hours per year in 2004.[8] These data have been collected from members of the Confederation of Swedish Employers for many years. It is based on a sample of 200 firms. The number concerns people who are contracted to work full time, and it should be noted that absenteeism of every kind as well as part-time work is more common in the public sector.

In summary, we may conclude that despite high growth rates for more than a decade, there has been little net job creation in the Swedish economy. There has been a considerable shift in the composition of employment towards the non-government sector. Large part, perhaps even all, of the recorded increase in employment since the bottom in the mid 1990s could be a statistical artifact and caused by measurement error. This is so striking that we find it worthwhile to look deeper into this and make a more systematic comparison of the job-creating capacity of the Swedish economy.

### 3.4 The Responsiveness of Employment to Output

The discussion above draws attention to Sweden's disappointing employment record over the past dozen years. Despite rapid output growth since 1993, employment remains more than a quarter million below its 1990 peak. The longer term employment performance of the Swedish private sector is also anemic. From 1950 to 2004, the number of Swedes 16–64 years

[8] *Source*: Svenskt Näringslivs Tidsanvändningsstatistik, a quarterly publication.

of age rose by 1.16 million persons. Over the same period, private sector employment rose by a mere 115 thousand persons, just ten percent of the gain in working-age population.

Motivated by these disappointing aspects of the Swedish employment record, we take up two questions. First, in terms of employment responsiveness to output growth, how does Sweden compare to other countries in recent decades? Our interest in this question centers on the longer term relationship between employment and output, not the short-run cyclical relationship that often draws attention. Second, is there a systematic cross-country relationship between employment performance and the industrial distribution of employment? If so, what does this relationship tell us about the character of the "missing jobs" in countries with weak employment records?

*Table ELAS* addresses the first question by examining the responsiveness of aggregate employment to aggregate output over the past quarter century in 35 countries. We measure responsiveness by the slope coefficient in a regression of log employment on the log real GDP. As seen in the table, Sweden's employment responsiveness is lower than any other OECD country except for two transition economies, Poland and the Czech Republic. Indeed, Sweden's responsiveness coefficient is actually negative. In contrast, the coefficient exceeds .2 for most countries, and it exceeds .4 in the United States and other countries with strong employment records in recent decades.

*Table ELAS* Employment Responsiveness to Aggregate Output.

| OECD Members | Sample Period | Elasticity | OECD Members, Transition Economies | Sample Period | Elasticity |
|---|---|---|---|---|---|
| Sweden | 1980–2004 | –0,05 | Poland | 1993–2004 | –0,17 |
| Finland | 1980–2004 | –0,01 | Czech Republic | 1993–2004 | –0,16 |
| Italy | 1980–2004 | 0,06 | Slovak Republic | 1994–2004 | –0,01 |
| Austria | 1980–2004 | 0,16 | Hungary | 1991–2004 | 0,03 |
| Germany | 1991–2004 | 0,18 | | | |
| Luxembourg | 1980–2004 | 0,22 | | | |
| Denmark | 1980–2004 | 0,25 | **Non-OECD** | | |
| Norway | 1980–2004 | 0,25 | Taiwan | 1980–2004 | 0,25 |
| France | 1980–2004 | 0,26 | Hong Kong | 1982–2004 | 0,29 |
| Japan | 1980–2004 | 0,28 | Singapore | 1980–2004 | 0,28 |
| United Kingdom | 1980–2004 | 0,27 | Chile | 1985–2003 | 0,35 |
| Belgium | 1980–2004 | 0,28 | Israel | 1992–2004 | 0,77 |
| Greece | 1980–2004 | 0,29 | | | |
| Republic of Korea | 1980–2004 | 0,33 | | | |
| Turkey | 1980–2004 | 0,37 | | | |
| Portugal | 1980–2004 | 0,38 | | | |
| Ireland | 1980–2004 | 0,41 | | | |
| New Zealand | 1980–2004 | 0,42 | | | |
| Iceland | 1980–2004 | 0,46 | | | |
| United States | 1980–2004 | 0,48 | | | |
| Australia | 1980–2004 | 0,54 | | | |
| Canada | 1980–2004 | 0,56 | | | |
| Spain | 1980–2004 | 0,58 | | | |
| Netherlands | 1980–2004 | 0,63 | | | |
| Switzerland | 1980–2004 | 0,71 | | | |
| Mexico | 1991–2004 | 0,82 | | | |

*Sources*: Authors' calculations on data from OECD sources for OECD members and from national sources for other countries.
*Notes*: The elasticity is computed as the slope coefficient in an OLS regression of the natural log of total employment on the natural log of real GDP, using annual data for the indicated time period.

Summing up the message of Table ELAS, most countries exhibit a positive longer term connection between employment and output, but the connection broke down in Sweden. This message supports our broad theme that a combination of high taxes, restrictive labor market regulations, institutionally induced wage compression, and a relative favoring of industries with little potential for employment creation has retarded the growth of Swedish employment (even relative to that of output).

What type of employment is missing in Sweden and other countries with weak employment records? Where are the missing jobs? Based on our earlier work (Davis and Henrekson 1997, 2005a, 2005b), we hypothesize that the missing jobs are concentrated in industries that rely heavily on less skilled workers and that produce goods and services with ready substitutes in the underground economy or in home production. To test this hypothesis, we relate the responsiveness coefficients reported in *Table ELAS* to the share of employment accounted for by the following group of service industries: retail trade; the repair of personal and household

goods; the sale, maintenance and repair of motor vehicles; hotels and restaurants; other community, social and personal services; and private households with employed persons.[9]

*Figure E/S* Employment Elasticity to Output from 1980 to 2004 Plotted Against the Share of Employment in Selected Services.

Enclosed

*Notes*: This figure plots the elasticity of total employment with respect to output (from Table ELAS) against the share circa 2000 of aggregate employment in the following industries:

- Retail trade, including repair of personal and household goods but excluding the sale, maintenance and repair of motor vehicles (ISIC 52)
- Hotels and restaurants, including other lodging, bars and canteens (ISIC 55)
- Maintenance and repair of motor vehicles (ISIC 502)
- Other community, social and personal services: sewage and refuge disposal, sanitation and similar activities (ISIC 90); activities of membership organizations, n.e.c. (ISIC 91); recreational, cultural and sporting activities (ISIC 92); other services such as washing and cleaning of clothing products, hairdressing, funeral services and other personal services (ISIC 93)
- Private households with employed persons (ISIC 95)

The industry codes and industrial classifications are based on the ISIC Rev. 3, described at http://unstats.un.org/unsd/cr/registry/.

As seen in *Figure E/S*, countries with high employment responsiveness tend to have a higher share of employment in this broad industry group. A 10 percentage point increase in the share of employment in the broad industry group is associated with a 23 basis point increase in the employment responsiveness coefficient. This result supports the view that output growth produces little employment growth in countries like Sweden, because these countries suppress job creation in a range of private sector service activities. The result also supports the broader theme that production activities in these service industries are "on the margin" with respect to market versus non-market provision. Hence, policy makers should be especially wary not to crowd them out of the market.

### 3.5 Ownership and Corporate Governance

As already noted, before the 1990/91 tax reform the combined effect of taxation on capital gains, wealth, profits and dividends forcibly discouraged individuals from owning firms and from wealth accumulation in general. Moreover, the tax system encouraged debt financing, which can be expected to benefit large capital-intensive firms with close ties to specific financial institutions. The expected change in ownership structure actually took place: during the post-war period, the household ownership share of listed stock fell sharply from 75 percent in 1950 to 18 percent in 1990, while the institutional share rose commensurately (Norrman and McLure 1997).

There were also numerous legal impediments to foreign ownership both directly or as shareholders in listed firms (Reiter 2001). However, following the removal of all foreign exchange controls and all barriers to foreign ownership of Swedish firms and real-estate, a number of changes ensued. First, the foreign ownership share of listed shares began to increase rapidly. As shown in *Figure 4a* the foreign ownership share went from 7 percent in 1989 when foreign exchange controls were lifted to 40 percent ten years later. Domestic

[9] Data limitations prevent us from carving out only a subset of other community, social and personal services.

institutions lowered their share almost as much. The foreign ownership share decreased somewhat again in 2001–2002 following the sharp drop in the valuation of firms in the IT sector.

*Figure 4a* Distribution of ownership of Swedish listed shares across ownership categories, 1988–2004 (per cent).

Enclosed

*Source*: Statistics Sweden and OM Stockholm Stock Exchange.

Until the late 1980s, foreigners established themselves in Sweden mainly by making greenfield investments. But after ASEA merged with Brown Boveri in 1987, to become a Swiss-based company, many – often very large – Swedish firms have been acquired by foreign owners. As shown in *Figure 5a*, the number of employees in wholly foreign-owned companies (in most cases wholly-owned subsidiaries or branches to foreign multinationals) has grown rapidly in Sweden over the last two decades. In 1980, approximately 113,000 Swedes were employed in foreign firms. By 2003, this figure had risen to 564,000 and almost out of four employees in the business sector (23 percent) worked for a foreign firm (ITPS 2005).[10]

*Figure 5a* Employees in foreign-owned firms in Sweden and their share of all employees in the Swedish private sector, 1980–2004.

Enclosed

*Source:* Strandell (2000) and ITPS (2005).

### 3.5 Concluding comments

Round up section 3 by laying down main results and pointing towards the urgent need to discuss the development in terms of the institutional setup we have developed in previous work.

## 4. Pertinent institutional developments

Is the performance of and the structural changes in the Swedish economy in the most recent decades consistent with our earlier studies and with what could be expected from changes in key institutions during the 1990s and early 2000s? This is the broad question we set out to explore in this section.

[10] The trend is similar in all industrialized countries, but much more pronounced in Sweden. In the latter half of the-1990s, inward FDIs were very large in Sweden both in an absolute sense and compared to other countries. On average, they corresponded to 55 percent of total gross investment. This figure may be compared to a corresponding level of 31 percent in Ireland, the country which is usually mentioned in this context (UNCTAD, *World Investment Report* and OECD, *Employment Outlook*).

### 4.1 Taxes on Labor and Consumption

Taxes on labor and consumption encourage substitution from the legal market sector to home production and the underground economy. To appreciate the power of taxes to depress employment and distort production decisions, consider the choice between market provision and home production in the simple case with no capital inputs. The household opts for the least-cost source of supply. In the absence of taxes, we can express the household's decision rule as

$$\text{Choose market provision if: } W^B H^B > W^P H^P \;\Leftrightarrow\; \frac{W^B H^B}{W^P H^P} > 1, \tag{1}$$

where $W^P$ is the wage rate of the professional supplier in the market, $H^P$ is the production time required by the professional, $W^B$ is the opportunity cost of household time, and $H^B$ is the time input required in household production. According to (1), the law of comparative advantage governs the choice of production sector. The household opts for self supply when it has comparative advantage at the production activity in question and for market provision when the professional has comparative advantage. This decision rule is socially efficient in the sense of minimizing the value of scarce time resources used up in production.

Taxes break this link between privately optimal decisions and socially efficient outcomes. To see this point, let *t* denote the tax rate on the household's labor income, let *s* denote the payroll tax rate on the professional's compensation, and let *m* denote the tax rate on consumption expenditures. The decision rule for the choice of production sector becomes

$$\text{Choose market provision if: } \frac{W^B}{W^H}\frac{H^B}{H^P} > \frac{(1+s)(1+m)}{1-t}. \tag{2}$$

As seen in (2), higher tax rates raise the threshold comparative advantage ratio at which the market solution dominates. The private choice of production sector is now governed by a tax-distorted law of comparative advantage.[11] Too few tasks are carried out in the market sector because of taxes, and too little time is spent working in the market. Conversely, too many tasks are carried out in the household (or underground) sector, and too much time is spent working outside the formal market sector.

As taxes rise, marginal producers in the market sector are displaced by less efficient producers in the household sector. This displacement effect lowers average productivity computed over the market and household sectors, but it raises official productivity measures because they do not encompass the household sector.[12] Hence, the displacement effect leads official statistics to overstate true productivity in high-tax societies relative to that of low-tax societies.

How big is the tax distortion to the comparative advantage ratio in Sweden? In other words, how big is the tax factor on the right side of (2)? *Figure YW* draws on data compiled by Du Rietz to answer this question for three types of Swedish workers. Tax factors rose steadily after 1952. By the late 1970s, they reached levels near 4 for industrial workers, above 5 for

[11] Davis and Henrekson (2005a) derive analogous decision rules when production requires capital and labor.

[12] If firms differ in their ability to evade taxes, then taxes need not crowd out the least productive firms. In this case, taxes can lower average productivity and raise average pre-tax production costs within the formal market sector. See Palda (1998) for an analysis of this issue.

white-collar workers and above 8 for executives. The tax factors declined somewhat in the 1980s, dropped sharply with the tax reform of 1990/91, and crept upwards in recent years as the result of higher tax rates at the local government level. As of 2004, Swedish tax factors stand at 2.54 for industrial workers, 3.44 for white-collar workers and 3.85 for executives. Though well below levels in the 1970s and 1980s, tax factors in this range are a powerful incentive to shift production and employment out of the formal market sector. As a result, large parts of the service sector face harsh competition with unpaid work and the black market. These tax effects are amplified by institutions that compress the wage distribution, as we explain below.

*Figure YW* Tax-Distorted Comparative Advantage Ratios for Industrial Workers, White-Collar Workers and Executives in Sweden, 1952–2004 (percent).

Enclosed

*Source*: Du Rietz (1994) and new calculations supplied by Du Rietz.
*Notes*: There are only three observations for the 1950s: 1952, 1955 and 1958. From 1960 there are annual observations. The tax factor for each category is evaluated at mean earnings each year. ”Executive” is defined as an individual in the management group (below the CEO) in a private firm. The tax factor includes mandatory social security contributions paid by the employer or the employee, the marginal income tax and indirect taxes on private consumption (all income is assumed to be spent for private consumption purposes). Property taxes are excluded. The tax wedges for executives and average white-collar workers coincide between 1991 and 1998.

To asses whether tax factors in the relevant range significantly alter the composition of market-based activity, Davis and Henrekson (2005a) consider fourteen rich countries with comparable data on tax rates and the industry distribution of market activity. They identify tax-sensitive industries on a priori grounds, then investigate whether such industries have lower employment and output shares in high-tax countries. As seen in *Figure TF*, employment and output shares are markedly lower in a broad group of tax-sensitive industries that includes retail trade, hotel and restaurants and consumer repair services.[13] An increase in the tax factor of 25 basis points lowers the employment share in this industry group by 2.4 percentage points, or 12 percent of industry employment evaluated at the mean. Similarly, a 25 basis point rise lowers the value-added share by an estimated 1.9 points (13 percent). It is also shown that the share of market activity accounted for by eating, drinking and lodging establishments is twice as sensitive to the tax factor as the broader industry group considered in *Figure TF*. In contrast, the share of employment in manufacturing shows a positive, statistically insignificant relationship to the tax factor. These cross-country patterns support the view that taxes on labor and consumption distort the choice of production sector and, in the process, depress employment in the formal market economy.

[13] Domestic household help, child care services and personal services are likely to be among the most tax-sensitive activities, but they are excluded in Figure TF because of data limitations. In particular, these activities are not classified in the same way across countries, or they are not reported at a sufficiently disaggregated level.

*Figure TF* Taxes and the Share of Measured Activity in Trade, Eating, Drinking, Lodging and Consumer Repair Services, 14 Rich Countries in 1995.

Enclosed

*Source*: Reproduced from Davis and Henrekson (2005a).
*Note*: Each panel shows a scatter plot and an ordinary least squares regression line with standard error of the slope coefficient in parentheses. See Davis and Henrekson for details regarding the data and the calculation of the tax factors.

Taxes on labor income and consumption expenditures also alter relative labor demands in a potentially important manner. Tax-sensitive industries include eating and drinking establishments, laundry and cleaning services, child care, consumer repair services, domestic household help, and most personal services. As suggested by this list, tax-sensitive sectors tend to rely heavily on less skilled workers with lower schooling and wages. Hence, uniform tax rates on labor and consumption have disproportionately large negative effects on the demand for less skilled workers, depressing their relative wages and employment opportunities.

### 4.2 Wage Compression and the Choice of Production Sector

Sweden has a history of institutional arrangements that compress wage differentials and reduce overall wage dispersion. These institutions reinforce tax-induced distortions in the choice between market provision and home production. To this point, consider first the impact of institutional forces that raise wages for less-skilled, lower wage workers. As we just remarked, activities with easy substitution between home and market production rely heavily on less-skilled workers in the production process. Hence, wage floors for less-skilled workers raise the cost of production by a larger percentage in activities with greater scope for substitution between home and market production. In this respect, wage floors for less-skilled workers reinforce the departures from comparative advantage induced by taxes on labor and consumption. Second, institutional forces that reduce wages for skilled workers affect the choice between home production and market provision for high-wage workers in the same way as higher labor income taxes. In this respect, too, labor market institutions that compress pre-tax wage differentials reinforce tax-induced departures from the law of comparative advantage in the choice between market and non-market production.

### 4.3 Corporate Taxation

The substantial tax-favoring of debt financing presupposed strictly regulated capital markets. However, the tax system remained virtually unchanged while capital markets where deregulated, creating an asset-price bubble in the latter half of the 1980s (Jonung 1994; Norrman and McLure 1997). The tax system was eventually reformed in 1990/91.[14] The corporate tax rate was cut in half in 1991 and is currently 28 percent. The introduction of a uniform 30 percent flat capital income tax rate and the abolition of wealth taxation on unlisted stock in 1992 favored individual equity investments relative to the earlier situation. The highest marginal tax rate has been lowered from close to 90 percent around 1980 to roughly 56 percent in 2005.

[14] Agell, Englund and Södersten (1998) provides a detailed examination of the tax reform.

In a series of reforms between 1985 and 1994, the distortions in tax wedges across different owners and sources of finance were to a large extent evened out. After 1995, the differences in tax wedges increased once again, largely following the previous pattern. See *Table ZW*.

When the restrictions on foreign ownership were lifted (Reiter 2001), the focus shifted to the relative treatment of foreign and Swedish owners. The new system represented a significant step towards neutrality among Swedish owners. However, the tax burden on Swedish individual ownership remained heavier than the tax burden on individual ownership in most other countries (see Henrekson and Jakobsson 2005).

The combined effect of foreign and Swedish taxation is a favoring of all kinds of foreign ownership relative to Swedish individual ownership. The more favorable tax situation of foreign owners implies that their pre-tax required rates of return can be lower than those of Swedish owners (except for Swedish tax-exempt institutions), i.e., foreign owners, *ceteris paribus*, can pay a higher price for Swedish corporate assets than Swedish (rival) owners.

*Table ZW* Effective marginal tax rates for different combinations of owners and sources of finance, 1980, 1991, 1994 and 2001 (10% real pre-tax rate of return at actual inflation rates).

| | Debt | New share issues | Retained earnings |
|---|---|---|---|
| *1980* | | | |
| Households | 58.2 | 136.6 | 51.9 |
| Tax exempt institutions | –83.4 | –11.6 | 11.2 |
| Insurance companies | –54.9 | 38.4 | 28.7 |
| *1991* | | | |
| Households | 31.7 | 61.8 | 54.2 |
| Tax exempt institutions | –9.4 | 4.0 | 18.7 |
| Insurance companies | 14.4 | 33.3 | 31.6 |
| *1994* | | | |
| Households | 32.0/27.0† | 28.3/18.3† | 36.5/26.5† |
| Tax exempt institutions | –14.9 | 21.8 | 21.8 |
| Insurance companies | 0.7 | 32.3 | 33.8 |
| *2001* | | | |
| Households | 29.7/24.7† | 61.0/51.0† | 44.1/34.1† |
| Tax exempt institutions | –1.4 | 23.6 | 23.6 |
| Insurance companies | 19.6 | 47.2 | 44.7 |

†Excluding wealth tax; the wealth tax on unlisted shares was abolished in 1992.

*Notes*: The calculations conform to the general framework developed in King and Fullerton (1984). The average holding period is assumed to be 10 years.

*Source*: Calculations provided by Jan Södersten; see Södersten (1993).

Looking at taxes from the level of owners of corporations; individuals even more discriminated against, new loop holes channeling individual wealth into equity funds; globalization and integration has made it easier for incumbents to own firms from abroad very tax efficiently and avoid personal taxation on ownership (draw on Henrekson and Jakobsson 2005). Also effective from 2005 gift and inheritance taxes abolished, while capital gains taxes retained, likely to benefit incumbents and discourage sale of firms to more competent owners rather than giving it to children. Changes in deductibility of stock option costs for firms in

2003 benefit firms with positive profits, while this instrument more suited as incentive mechanism in startups or high-risk/high expected returns ventures.

### 4.4 Incentives for Savings and Wealth Formation

**Institutionalization of savings has not decreased: public mandatory system now includes a funded part, the old AP-fund system used to be in bonds now reoriented towards stock market investments, new form of capital savings accounts that are withdrawn from wealth tax base, even more emphasis on complementary employer funded pension plans, banks market stock market funds, lock-in effect due to taxation (but bank can trade and change composition without tax effects).**

**Write a bit about small closely held firms, small improvements, but mostly for incumbent firms. New tax law effective from January 1, 2006, increasing capital gains at sales of small closely held firms and other changes.**

Briefly note that credit and capital markets fully deregulated so no direct effect there to be expected any more. But tax system strongly favors wealth accumulation in certain forms (equity funds etc). Wealth tax and property taxes retained and extremely high now relative to the risk free rate of interest, gives strong private incentives eve to avoid wealth tax by borrowing to finance your property holdings and keep your wealth in untaxed institutionalized forms. MH will explain this better.

### 4.5 Other policies

Some deregulatory measures on the labor market have also been taken. In 1997 a new type of employment contract was allowed, so-called prearranged temporary employment, which gives every firm an *unconditional* right to employ up to five persons for a maximum of one year. Another 1997 change made it possible to sign *local* collective agreements that replace the regulations in the law. This makes it possible, through local agreements, to annul tenure-based orders of priority in case of dismissal and to annul the right to reemployment for dismissed workers, and to extend the duration of temporary employment beyond 12 months. In practice, this benefits large firms strongly and also makes it necessary to be unionized otherwise the law applies by default. In 2001 firms with no more than 10 employees were allowed to except two employees from the "last-in – first-out" rule in case of redundancies. In practice, this gives some more room for flexibility than before. [New preliminary research by Lindbeck, Palme and Mats Persson showing that after 2001 change less absenteeism in small firms and also higher propensity to employ people with much previous sickness.] A law passed in 1993 paved the way for an expansion of temporary work businesses and staffing services. These firms expand at a rapid rate and already employ close to one percent of the workforce in the private sector.

Wage-setting; more deregulated now but also new forms of collective agreements that provide a frame for wage-setting (the so-called Industry Agreement). MH will look into this and see how it may have restrained wage-setting.

Several previously regulated product markets have also been deregulated, e.g., telecommunications (1993), electricity (1996), domestic airlines (1992), the financial sector

(1993) and postal services (1993). In addition, EU membership in 1995 and the generally increased integration of product and capital markets have contributed to the undermining of the old corporatist model.

On paper, there is quite a bit of scope for private entrepreneurs (schools, care providers etc) to compete with gov't production through voucher systems, but in practice this has been impaired by the current gov't implicitly favoring their own producers in a number of ways, and also by giving private producers contracts of short duration that makes necessary investments very risky (MH will look into this).
Also growth in some other components (restaurants, education, health and social services), need to be explained in later section also, part of it is private prod of gov't financed services, some of it due to inclusion of assessed black market activities in GDP, also increased obligations for firms to take responsibility for treatment of their employees, leads to whole new industries, moreover rapid growth in insurance market for private health care (to be documented by MH). **Dareblom.**

Round up this section by recapitulating results that growth, but of a certain kind, no employment creation and that this is largely consistent with both our earlier analyses and what could be expected from changes (or no changes) in rules of the game in recent decade.

**Re black market in restaurants:**
In *Skattestatistisk Årsbok* (2004, p. 238):
"The Swedish National Tax Board (*Skatteverket*) estimates, based on an extensive audit of the restaurant industry in the county of Dalecarlia , that the unreported revenue in the restaurant industry nationwide amounted to 37percent of total revenues of 20 billion kronor, or approximately 7billion kronor. The degree of tax evasion has subsequently accelerated. More recent estimates suggest that unreported revenues amount to roughly double in 2002, i.e. 15 billion kronor." (authors' translation)

15 billion kronor corresponds to x percent of total gross revenue in the restaurant business in 2002. (Robin will find this).

## 5. Conclusions

Stress that no employment creation and likely strong distortions in patterns of production and consumption (cf Sherwin Rosen).

Many institutional improvements in the 1980s and early 1990s. Some also after mid 1990s, but little and sometimes counterproductive. Overall institutional competition much stronger now (opening of China, India, Eastern Europe, ICT revolution, lowered transportation costs etc).

To be written.

# *References*


Acemoglu, Daron, Simon Johnson and James A. Robinson (2005), "Institutions as the Fundamental Cause of Long-Run Growth." In Philippe Aghion and Steve Durlauf, eds., *Handbook of Economic Growth*. Amsterdam: North-Holland.

Baumol, William J. (1990), "Entrepreneurship: Productive, Unproductive and Destructive." *Journal of Political Economy* 98(5), 893–921.

Davis, Steven J. (2005), "The Climate for Business Development and Employment Growht in Puerto Rico." Forthcoming in Susan M. Collins, Barry Bosworth and Miguel A. Soto-Class, eds., *The Economy of Puerto Rico: Restoring Growth*. Washington D.C.: Brookings Institution Press and Center for the New Economy.

Davis, Steven J., John Haltiwanger and Scott Schuh (1996), *Job Creation and Destruction*. Cambridge, MA: MIT Press.

Davis, Steven J. and Magnus Henrekson (1997), "Industrial Policy, Employer Size and Economic Performance in Sweden." In Richard B. Freeman, Robret Topel and Birgitta Swedenborg, eds., *The Welfare State in Transition*. Chicago: University of Chicago Press.

Davis, Steven J. and Magnus Henrekson (1999), "Explaining National Differences in the Size and Industry Structure of Employment." *Small Business Economics*, February.

Davis, Steven J. and Magnus Henrekson. (2005a), "Tax Effects on Work Activity, Industry Mix and Shadow Economy Size: Evidence from Rich-Country Comparisons." In R. Gomez Salvador *et al*., eds., *Labour Supply and the Incentives to Work in Europe*. Cheltenham, UK: Edward Elgar.

Davis, Steven J. and Magnus Henrekson. (2005b), "Wage-Setting Institutions as Industrial Policy." *Labour Economics* 12(3)3, 345–377.

Edling, Jan (2005), *Alla behövs. Blott arbetsmarknadspolitik skapar inga nya jobb*. Stockholm.

Freeman, Richard B. (1995), "The Large Welfare State as a System." *American Economic Review* 85(2), 16–21.

Freeman, Richard B., Robert Topel and Birgitta Swedenborg, editors (1997), *The Welfare State in Transition: Reforming the Swedish Model*. Chicago: The University of Chicago Press.

Håkansson, Christina and Assar Lindbeck (2005), "Korpi vilseleder igen. Replik. *Ekonomisk Debatt* 33(1), xx–yy.

Henrekson, Magnus (2001), "Swedish Economic Growth: A Favorable View of Reform." *Challenge* 44(4), 38–58.

Henrekson, Magnus (2005), "Entrepreneurship – A Wek Link in the Welfare State." *Industrial and Corporate Change* 13(3), xx–yy.

Henrekson, Magnus and Ulf Jakobsson (2001), "Where Schumpeter Was nearly Right – The Swedish Model and *Capitalism, Socialism and Democracy*." *Journal of Evolutionary Economics* 11(3), 331–358.

Henrekson, Magnus and Ulf Jakobsson (2005),"The Swedish Model of Corporate Ownership and Control in Transition." In Harry Huizinga and Lars Jonung, eds., *Who Will Own Europe? The Internationalisation of Asset Ownership in Europe*. Cambridge: Cambridge University Press.

Henrekson, Magnus and Dan Johansson (1999), ”Institutional Effects on the Evolution of the Size Distribution of Firms.” *Small Business Economics* 12(1), 11–23.

Industriförbundet (1995), *Det ekonomiska läget – Att återvinna välståndet*. Stockholm.

ITPS (2005), “Utlandsägda företag 2004.” S2005:006. Stockholm: Swedish Institute for Growth Policy Studies (ITPS).

Jonung, L. (1994), ”The Rise and Fall of Credit Controls: The Case of Sweden, 1939–89.” In Michael D. Bordo and Forrest Capie (eds.), *Monetary Regimes in Transition.* Cambridge: Cambridge University Press.

Lindbeck, Assar (1982), ”Tax Effects versus Budget Effects on Labor Supply.” *Economic Inquiry* 20(3), 473–489.

Lindbeck, Assar (1997), ”The Swedish Experiment.” *Journal of Economic Literature* **35**(3), 1273–1319.

Norrman, Erik and Charles E. McLure (1997), ”Tax Policy in Sweden.” In Richard B. Freeman, Robert Topel and Birgitta Swedenborg, eds., *The Welfare State in Transition.* Chicago: University of Chicago Press.

North, Douglass C. and Barry R. Weingast (1989), “Constitutions and Commitment: Evolution of Institutions Governing Public Choice in Seventeenth Century England.” *Journal of Economic History* 49(4), 803–832.

NUTEK (1994), *Småföretagen – Sveriges framtid?* B 1994:4. Stockholm: NUTEK Företag.

Palda, Filip (1998) “Evasive Ability and the Efficiency Cost of the Underground Economy.” *Canadian Journal of Economics* 31(5), 1118–1138.

Reiter, Joakim (2003) “Changing the Microfoundations of Corporatism: The Impact of Financial Globalisation on Swedish Corporate Ownership?” *New Political Economy* **8**(1), 103–126.

Rodrik, Dani, Arvind Subramanian, and Franco Trebbi (2004). “Institutions Rule: The Primacy of Institutions over Geography and Integration in Economic Development.” *Journal of Economic Growth* 9(2), 131–165.

Strandell, Ann-Christine (2000), ”Utlandsägda företag.” In *Svenskt näringsliv och näringspolitik 2000*. Stockholm: NUTEK Förlag.

Södersten, Jan (1993), ”Sweden.” In Dale W. Jorgenson and Robert Landau, eds., *Tax Reform and the Cost of Capital. An International Comparison*. Washington D.C.: Brookings.

**Purchasing Power Parity Adjusted GDP per Capita in Sweden as a Percentage of the OECD Average according to Penn World Tables (1950-92) and the OECD Statistics (1970-2003), OECD-23 = 100**

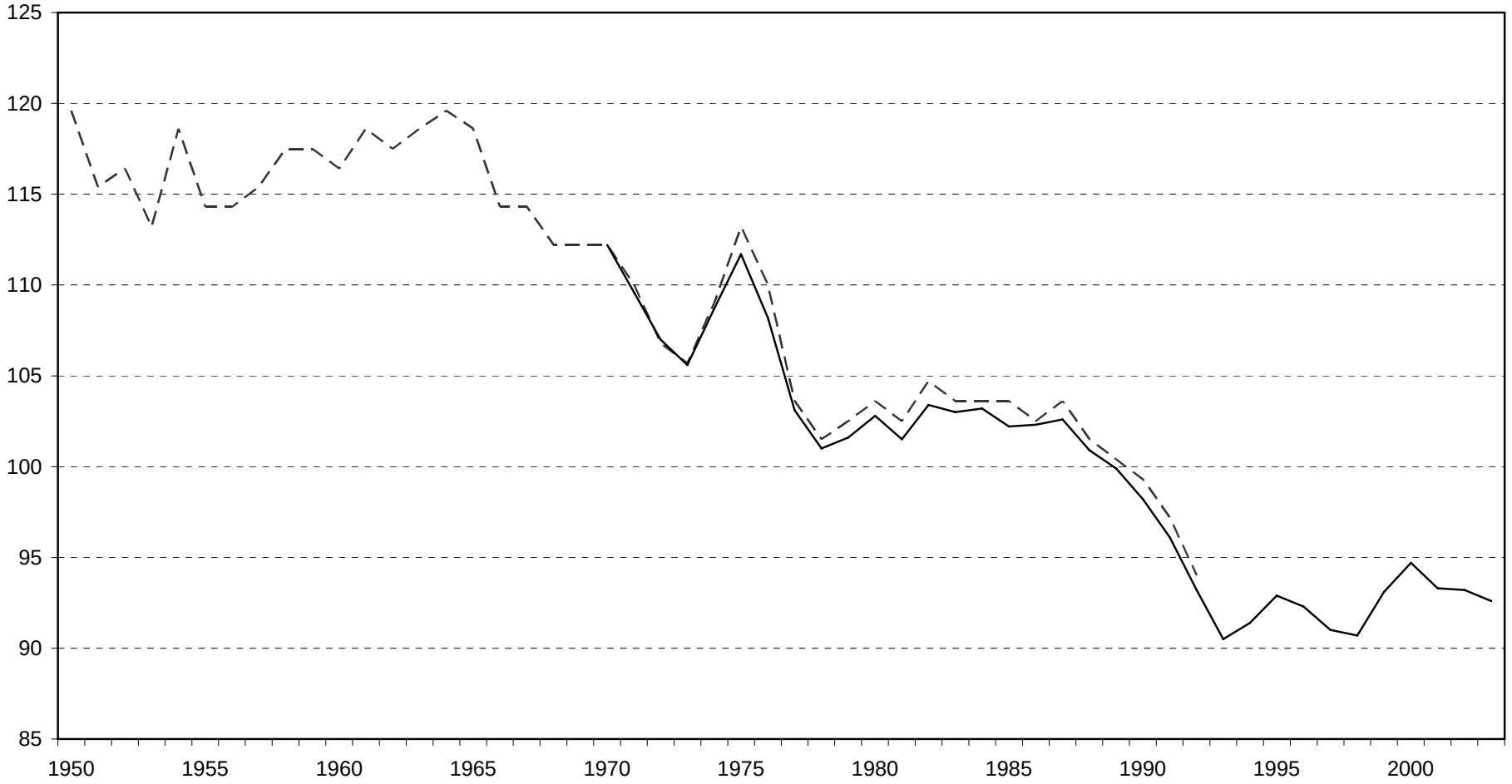
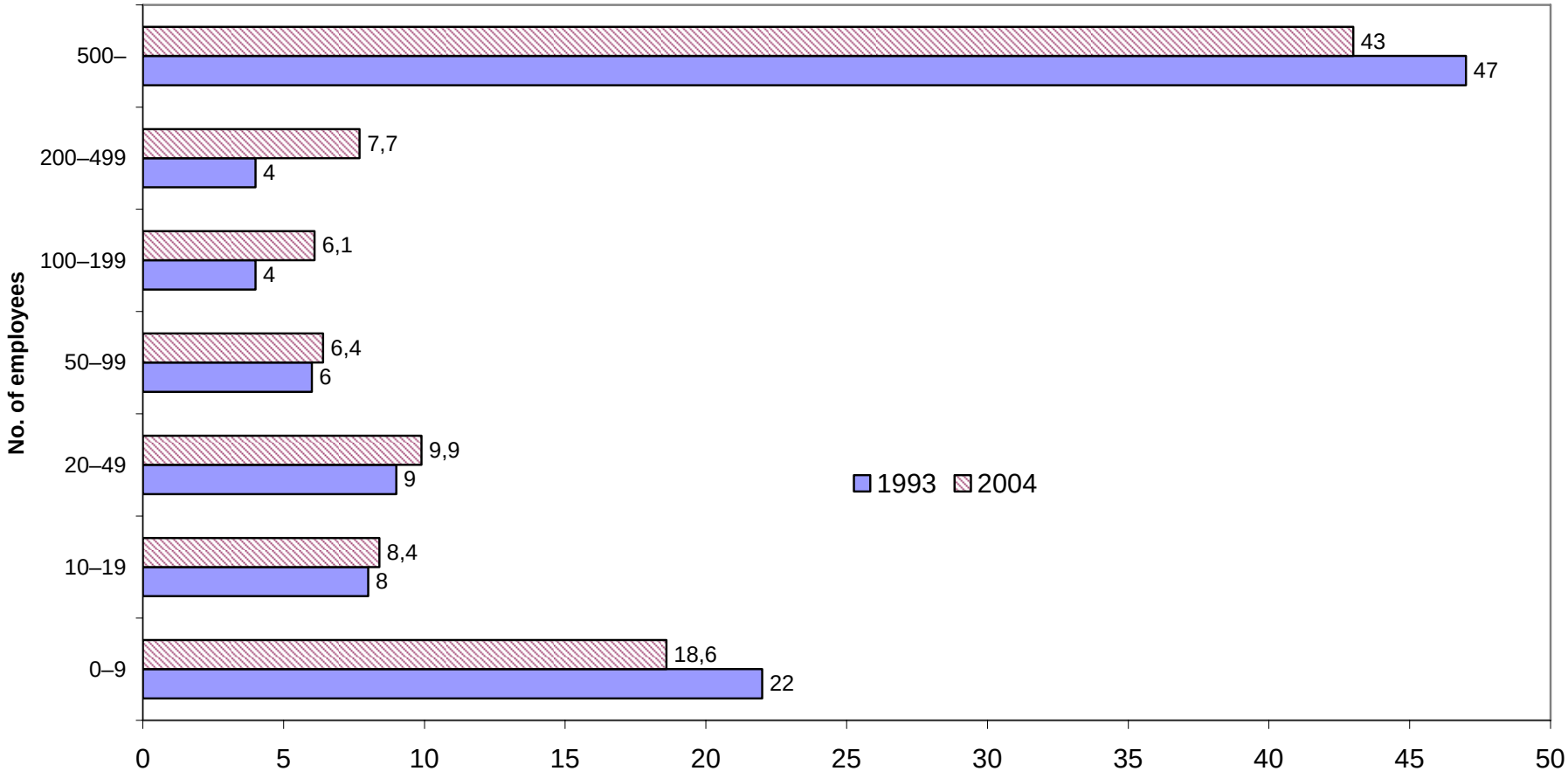
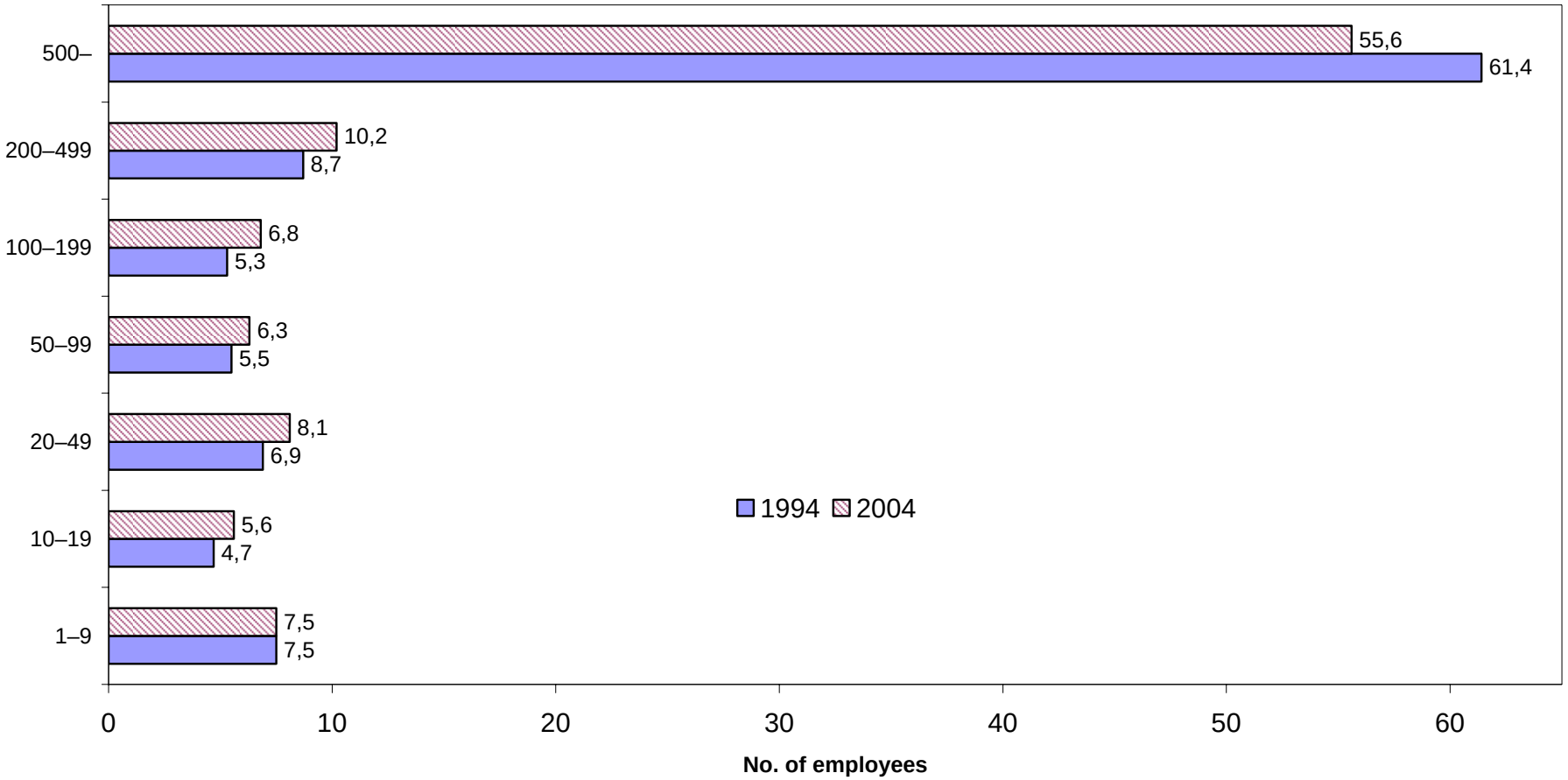


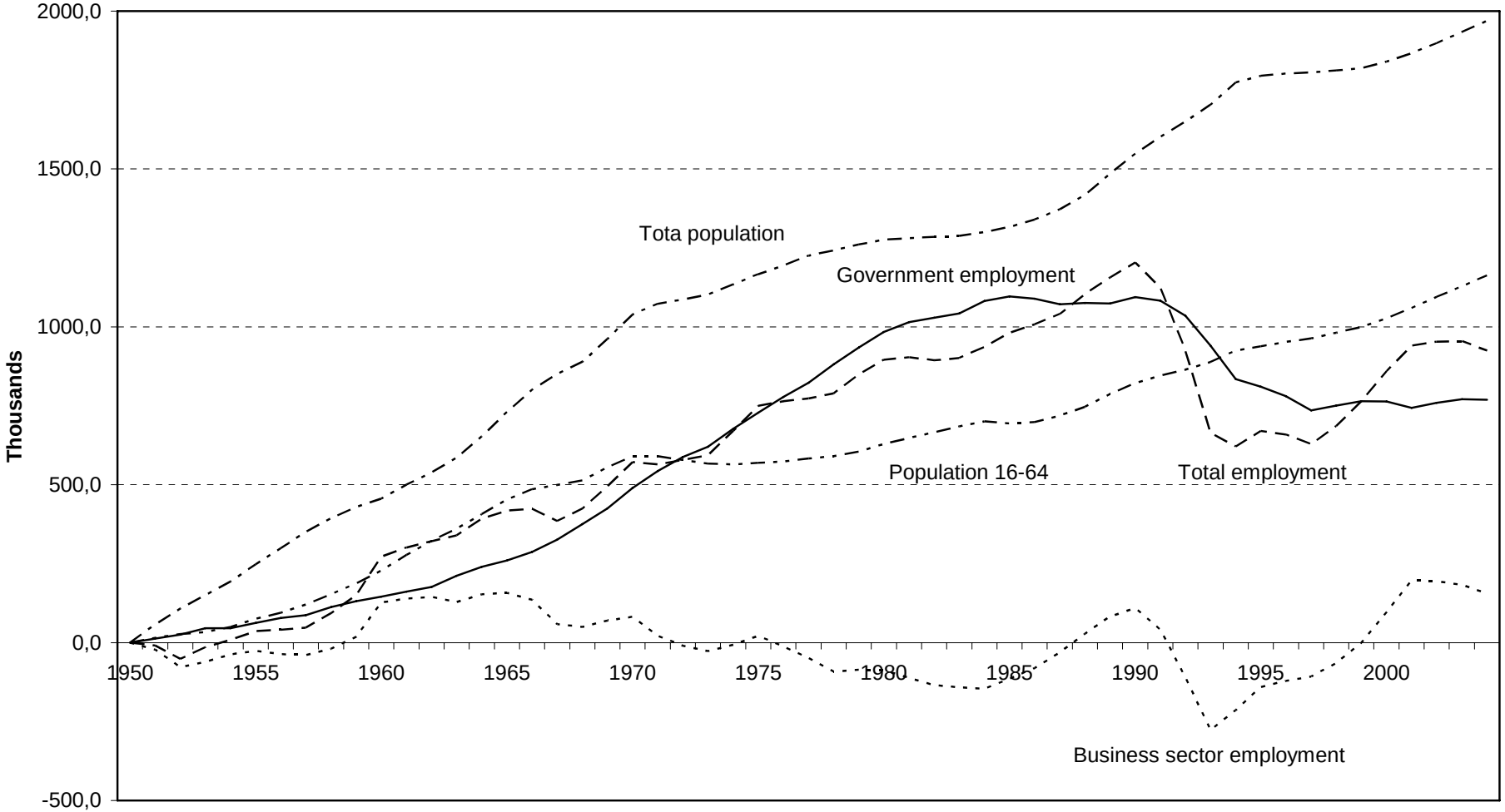
**Figure Z1 The Size Distribution of Employment in the Swedish Business Sector Adjusted for Company Group, 1993 and 2004 (%)**



**The Size Distribution of Employment in Swedish Manufacturing Adjusted for Company Group, 1994 and 2004 (%)**



**Cumulative Change of Employment and Population, Sweden 1950-2004**



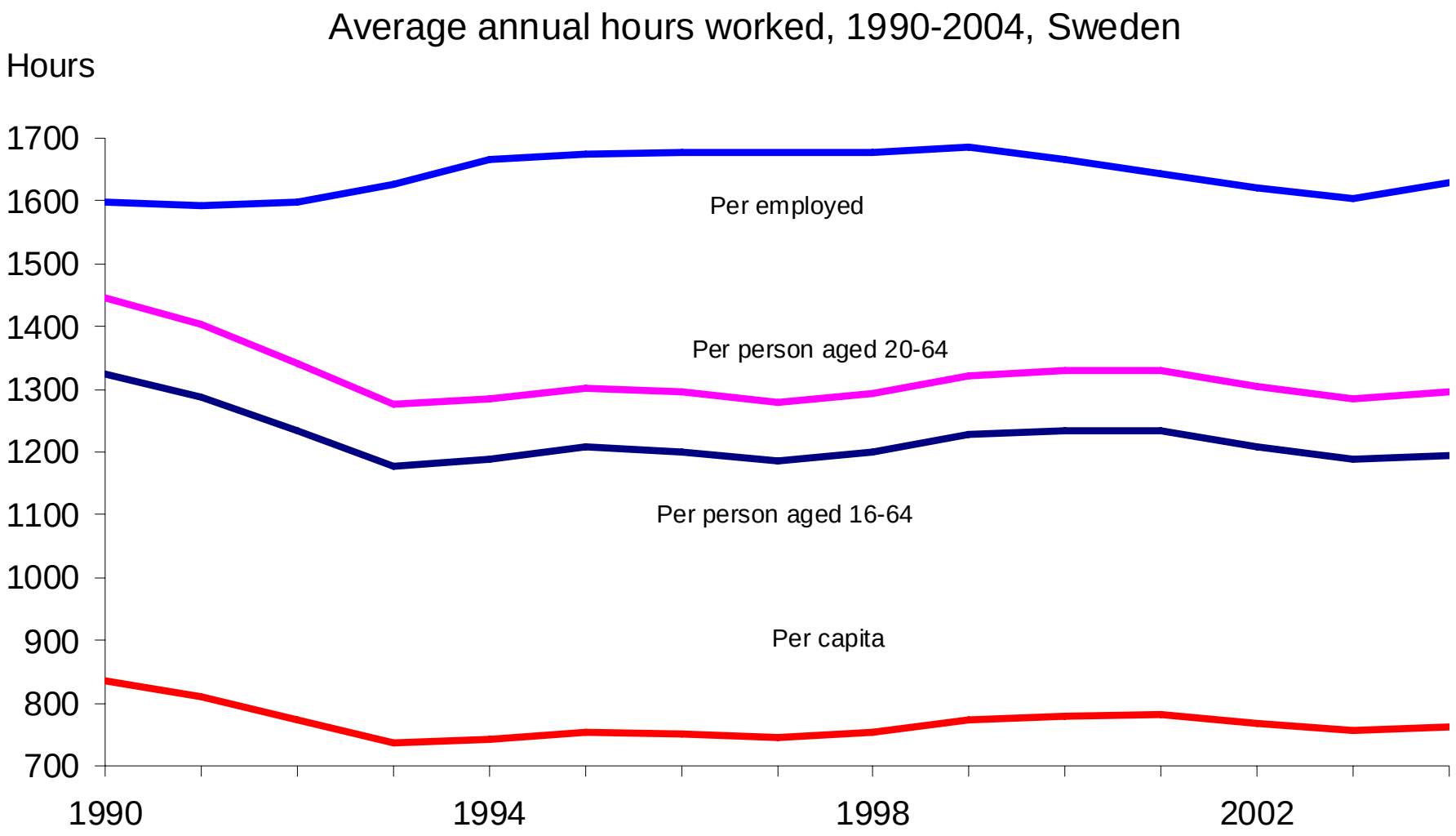
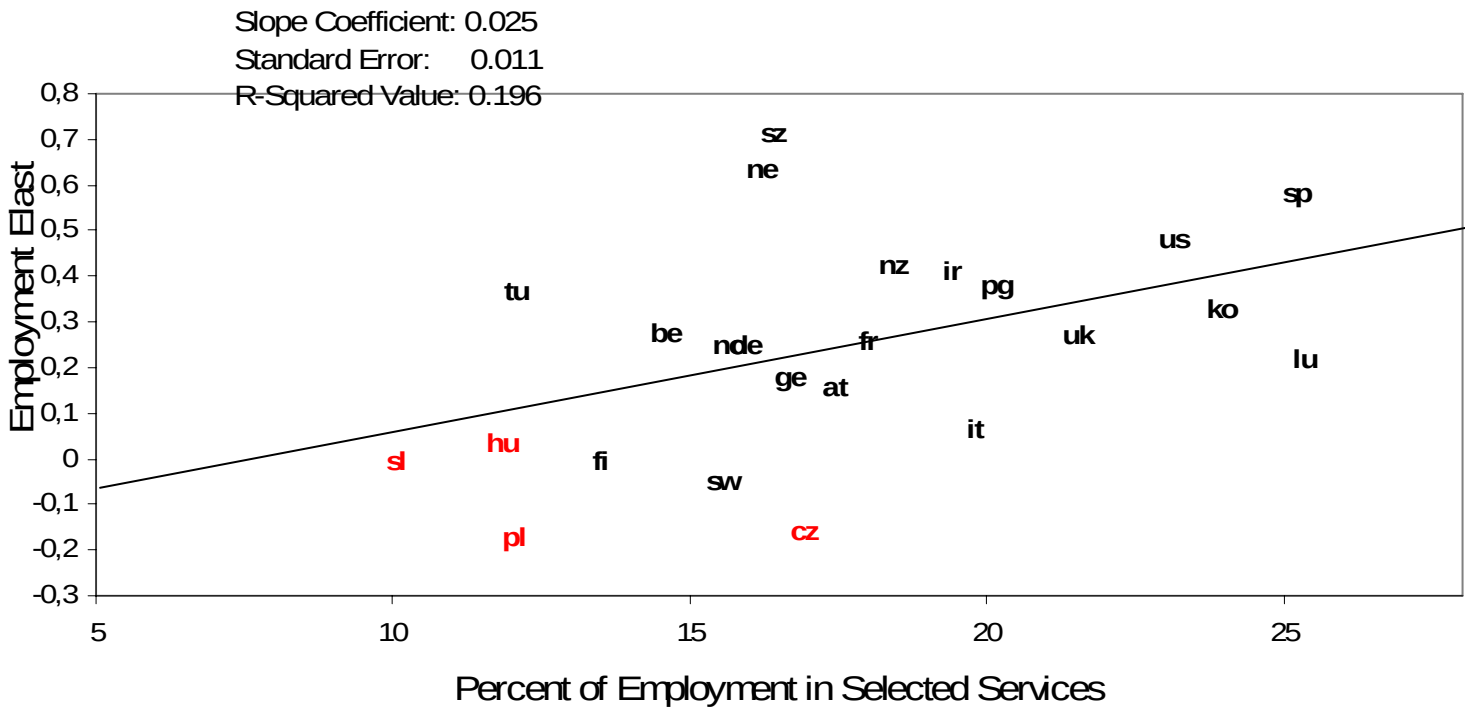

Average annual hours worked, 1990-2004, Sweden
Hours
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
1990
1994
1998
2002
Per employed
Per person aged 20-64
Per person aged 16-64
Per capita

*Figure E/S* Employment Elasticity to Output from 1980 to 2004 Plotted Against the Share of Employment in Selected Services




*Notes*: This figure plots the elasticity of total employment with respect to output (from Table ELAS) against the share circa 2000 of aggregate employment in the following industries:

- Retail trade, including repair of personal and household goods but excluding the sale, maintenance and repair of motor vehicles (ISIC 52)
- Hotels and restaurants, including other lodging, bars and canteens (ISIC 55)
- Maintenance and repair of motor vehicles (ISIC 502)
- Other community, social and personal services: sewage and refuge disposal, sanitation and similar activities (ISIC 90); activities of membership organizations, n.e.c. (ISIC 91); recreational, cultural and sporting activities (ISIC 92); other services such as washing and cleaning of clothing products, hairdressing, funeral services and other personal services (ISIC 93)
- Private households with employed persons (ISIC 95)

The industry codes and industrial classifications are based on the ISIC Rev. 3, described at http://unstats.un.org/unsd/cr/registry/.

**Figure 4a Distribution of ownership of Swedish listed shares across ownership categories, 1988–2004 (per cent).**

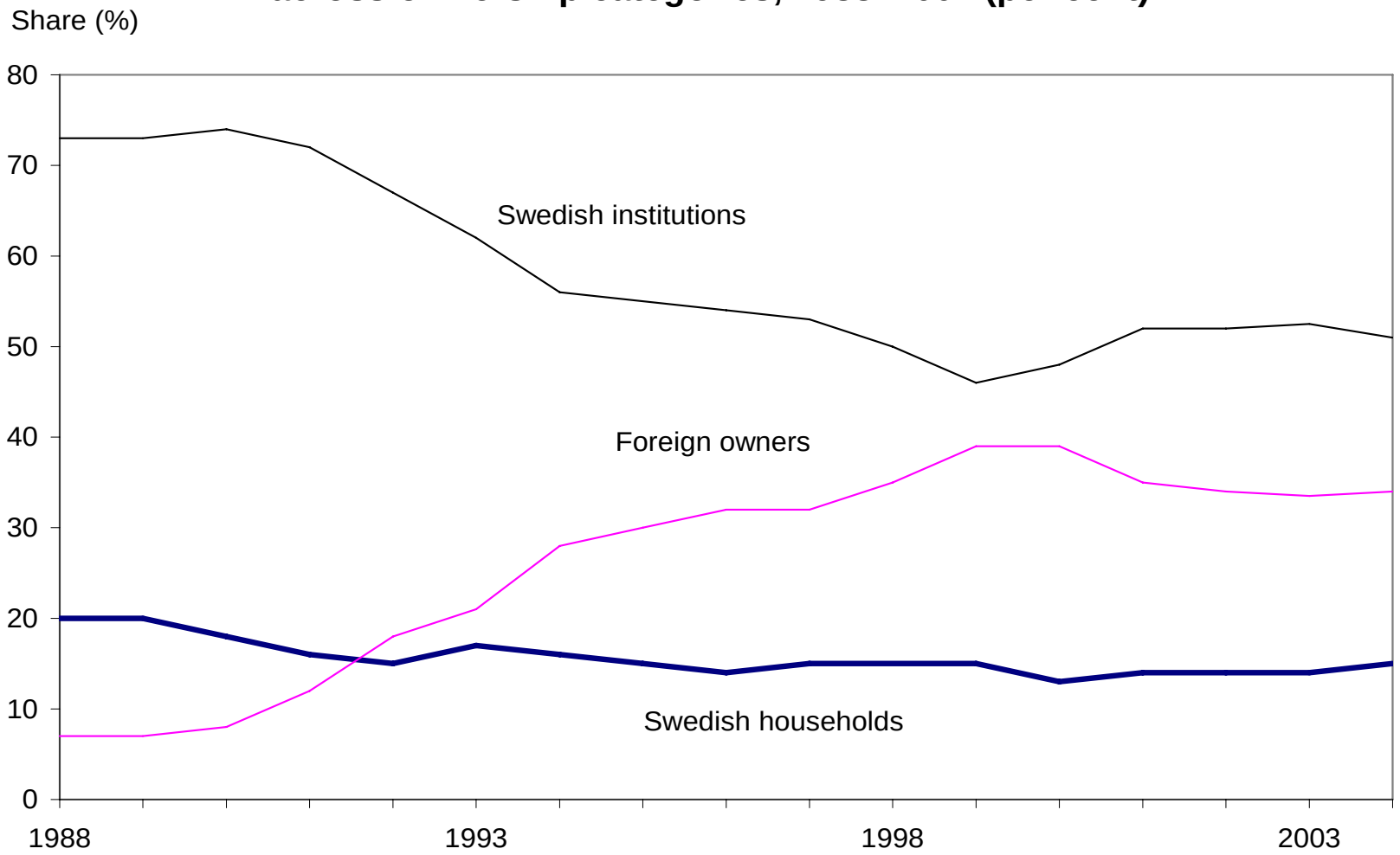


Figure X Employees in Foreign-Owned Firms in Sweden and Their Share of All Employees in the Swedish Private Sector, 1980–2004

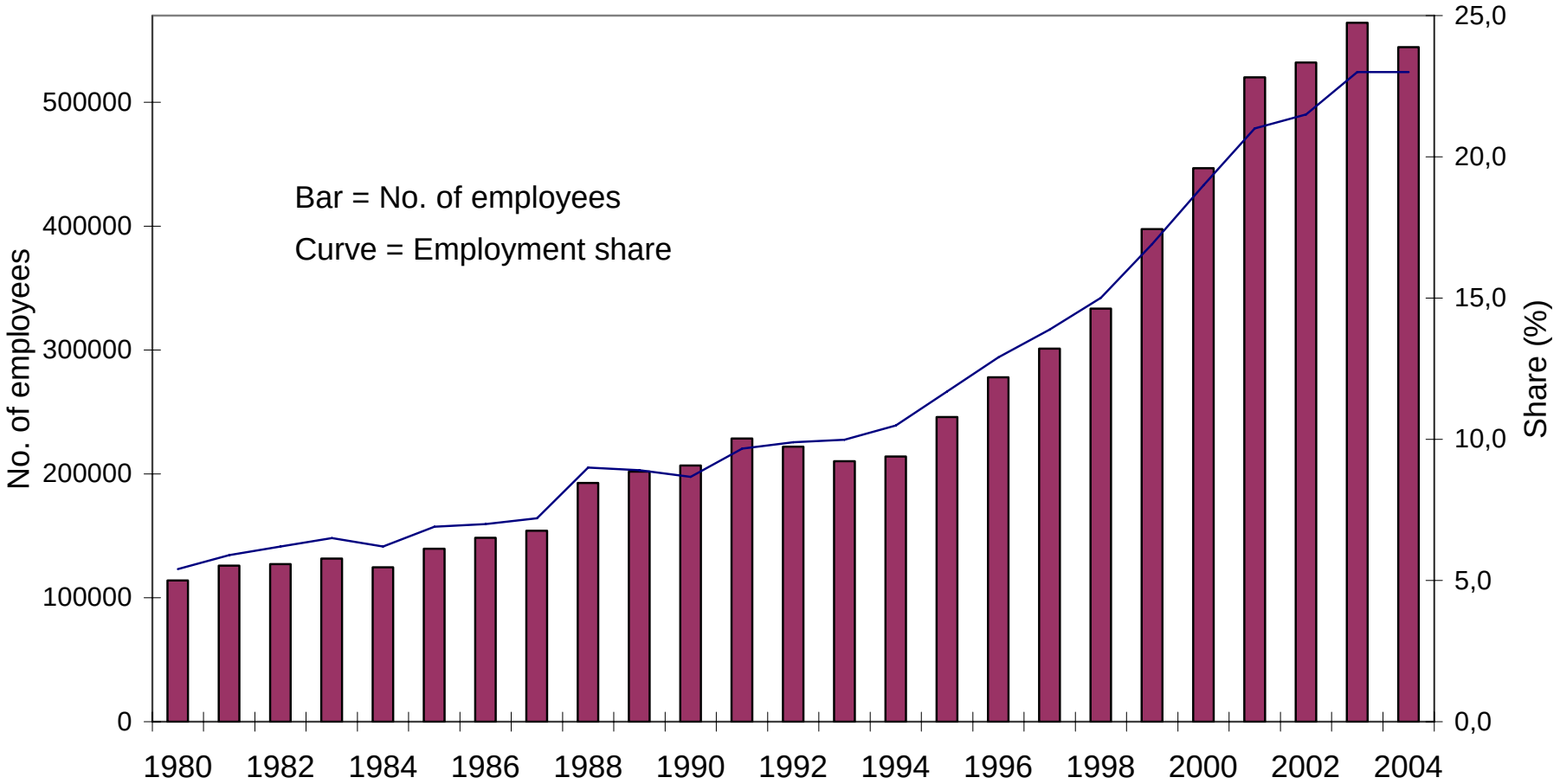
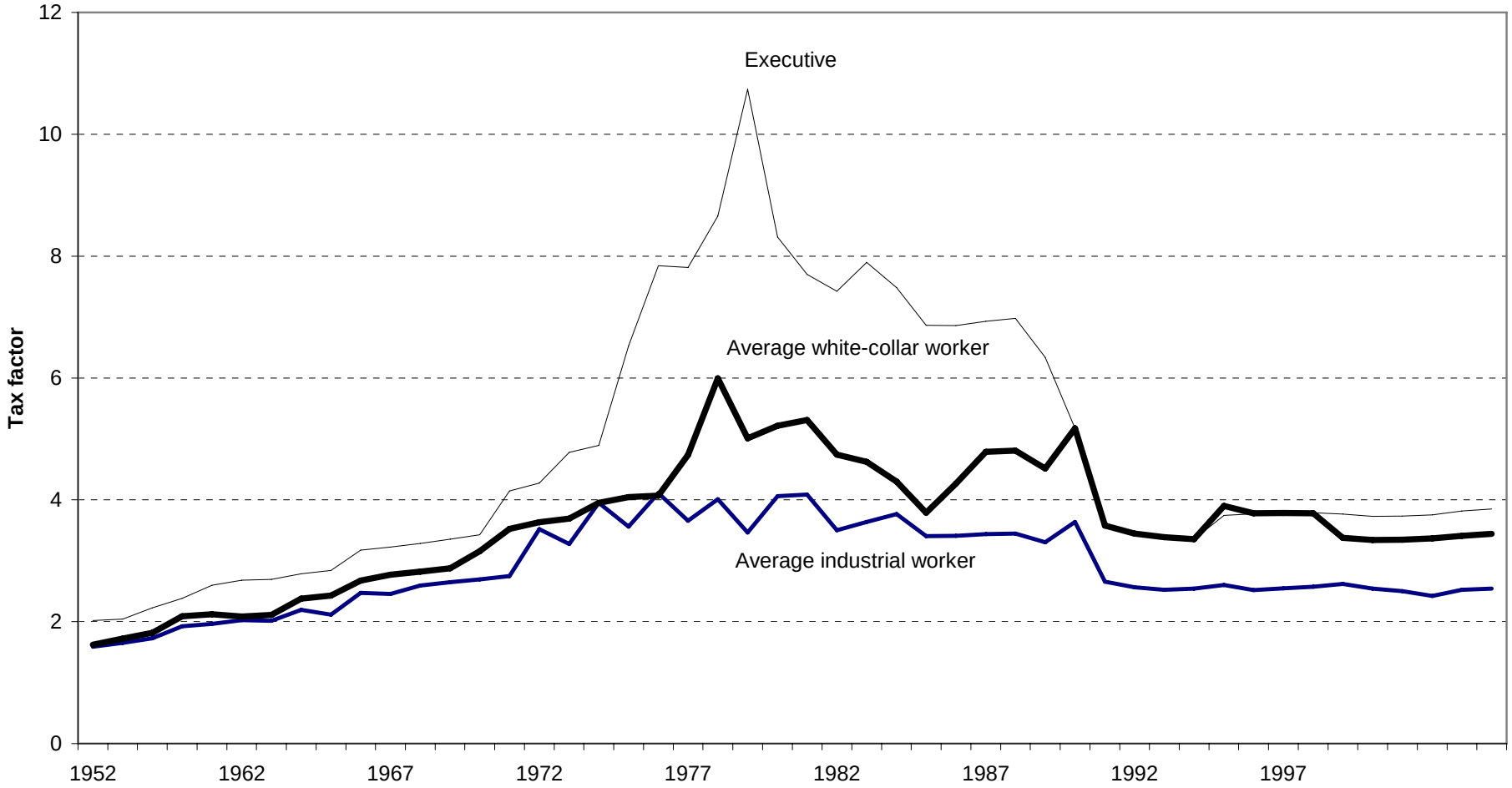
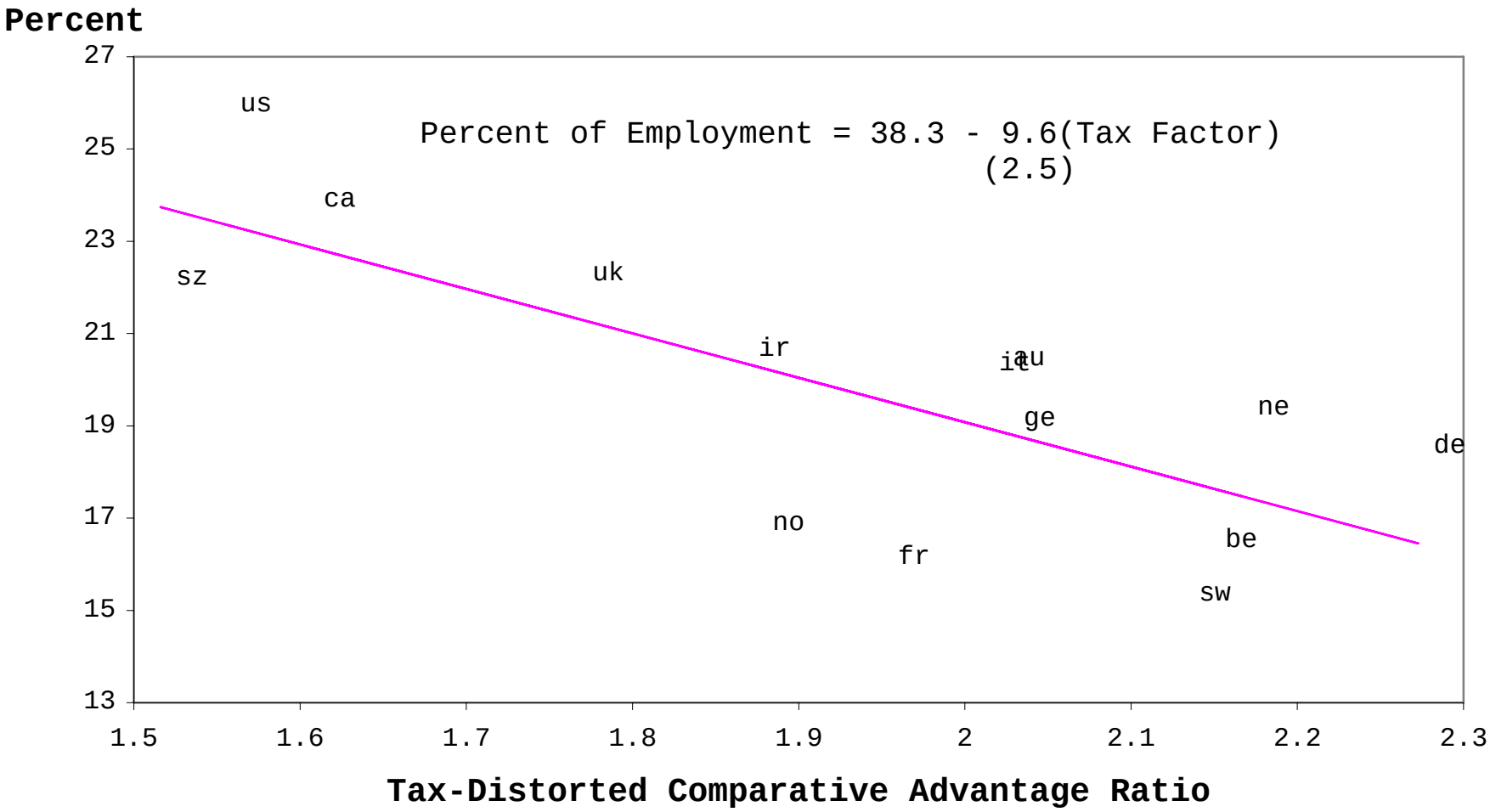


**Figure YW Tax-Distorted Comparative Advantage Ratios for Industrial Workers, White-Collar Workers and Executives in Sweden, 1952–2004 (percent)**



# Figure TF.A. Employment Share



# Figure TF.B Value Added Share