

Do taxes on owned capital matter for employment?

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1. Introduction

Sweden, like many other countries in Europe, is troubled with high unemployment rates. This is burdensome for several reasons. Apart from the private costs of being unemployed, high unemployment rates increase the dependency ratio and, hence, the burden faced by those working. This is especially problematic in the light of the demographic development many of the European countries face, with an increasing share of people leaving the working force for retirement. Moreover, globalization with increasing need for social protection at the same time as tax bases become more mobile further pressures the public budget. For these reasons economists often express the need for Swedes to work more in order to finance and sustain the welfare state. Specifically, if Sweden wants to keep one of the world's most generous welfare system it is crucial that the hours worked in the economy increases.

In the discussion, lowering labor taxes and cutting benefits are often mentioned as one possible route to take to increase work incentives in Sweden. Very little, if any, research and discussion have been devoted to the effect capital taxation may have on employment. A possible reason for this lack of research maybe due to the fact that taxation of capital and double taxation of dividends, in particular, historically has been viewed (the new view) as having no impact on the cost of capital and investment decisions and, hence, employment.

In Sweden, this view has had a dominant position both in academics and in public policy (Henrekson & Sanandaji, 2004). It has been the general opinion that lower dividend taxation has no effect on investment costs and, hence, no effect on jobs. Researchers, however, are increasingly starting to realize that double taxation may affect cost of capital for especially younger and smaller businesses and, thus, may impact employment as well.

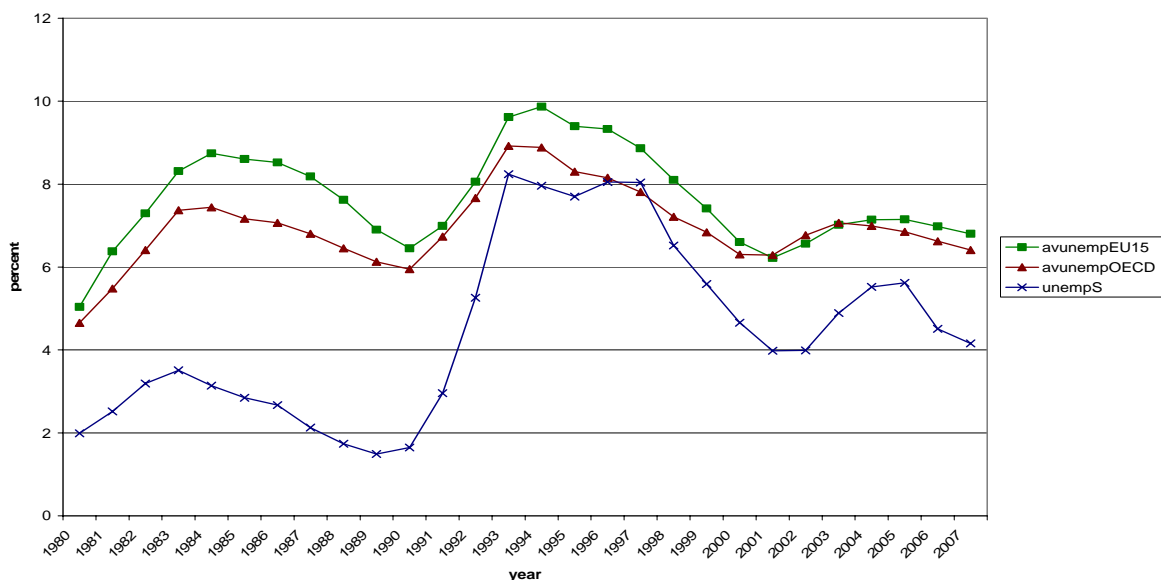
This paper discusses possible mechanisms through which lower capital taxes may positively impact employment. In particular, the effect of taxes on owned capital (i.e., capital gains and wealth taxes).

The next section discusses how employment has developed in Sweden over the past decades in comparison to EU and OECD. Section 3 provides information about individual capital taxation in Sweden. Section 4 asks how tax policy could stimulate employment with a focus on the mechanisms through which capital taxation affect employment. Section 5 discusses and looks at the empirical effects on employment of lowering the capital gains tax and removing the wealth tax. Finally, section 6 concludes.

2. The employment problem in Sweden

High unemployment rate is a relatively recent phenomenon in Sweden. Keeping unemployment under control was long a prioritized goal, and policies were especially designed to meet this goal. In the late 1980's and early 1990's Sweden's autonomy decreased as the world became more integrated, and it became increasingly costly for Sweden to fight unemployment at the cost of higher inflation. Priorities were then instead shifted to fight inflation and unemployment rates increased drastically (which of course wasn't solely caused by the refocus on inflation). Figure 1 shows unemployment rates between 1980 and 2007 based on OECD data for Sweden and average rates for EU15 and OECD, respectively.

Figure 1. Unemployment rates in Sweden, average for EU15 and OECD, 1980 to 2007.



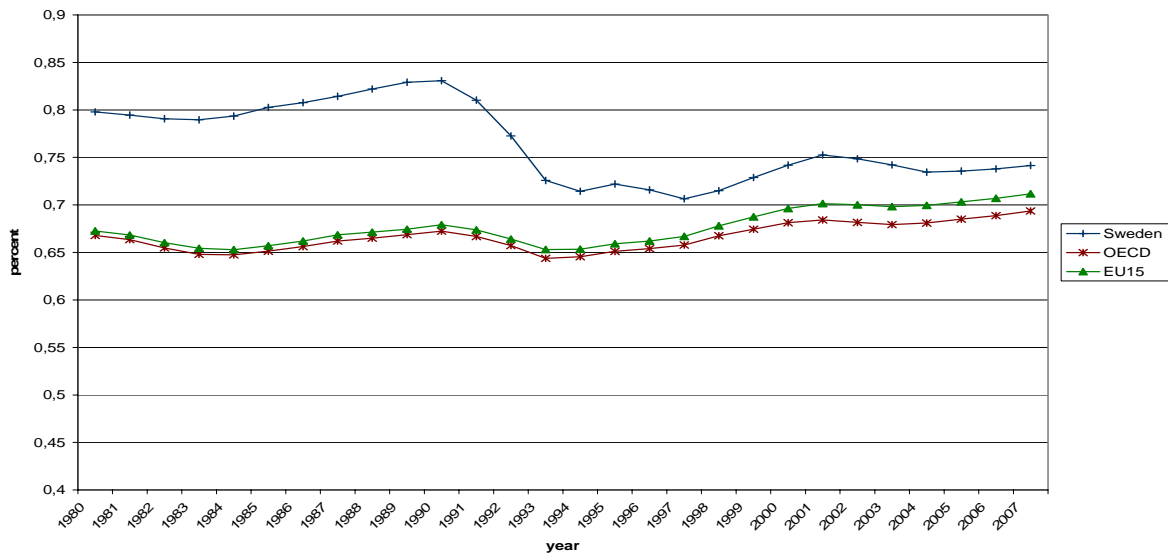
Source: OECD Economic Outlook

As is apparent from the figure unemployment rates in Sweden have been below both the EU15- and OECD-average during the entire period (with 1998 as an exception) – and well below the EU15- and OECD average in the 1980s. During the 1980’s Sweden’s unemployment rate was well below 4 percent, while the average unemployment rate for EU15 and OECD was several percentage points higher. In the early 1990’s Sweden’s unemployment rate spiked right up to eight percent, and while unemployment rose in the EU15 and OECD as well the increase was more modest making unemployment in Sweden more in line with unemployment in EU and OECD. Since the late 1990’s the unemployment rate in Sweden appears to have declined sharply, however. Recently unemployment rates are rising again – but compared to EU15 and OECD our unemployment rates seem modest.

It is, however, important to keep in mind that these numbers are based on official unemployment statistics and can for several reasons hide “true” unemployment. First, unemployed individuals participating in various labor market programs are by definition not included in the official unemployment statistics. Numbers presented in Forslund & Krueger (2006) show that including those in labor market programs can increase the “true” unemployment rate by as much as 5 percentage points (from 8 percent to 13 percent in 1993). Second, Edling (2005), for example, argues that pre-retirement and long-term sickness leave to a large extent are hidden unemployment. Including them, would, hence, further increase the “true” unemployment rate. Moreover, numbers from OECD (OECD (2005)) show that Swedes work the least numbers of hours, the equivalence of 35.4 working weeks yearly compared to an average of 40.7 working weeks for all countries in Europe.

When an alternative measure of employment is used a different picture of how serious the unemployment problem is in Sweden emerge. Figure 2 shows employment-to-population ratios since 1980 in Sweden, and averages for EU15 and OECD, respectively. The employment-to-population ratio is defined as the share of a country’s working age population that is employed. A low ratio means that a large share of the population is not employed either because they are unemployed or because they are out of the labor force altogether, perhaps because of pre-retirement or sickness leave.

Figure 2. Employment-to-population rates in Sweden EU15 and OECD, 1980 to 2007

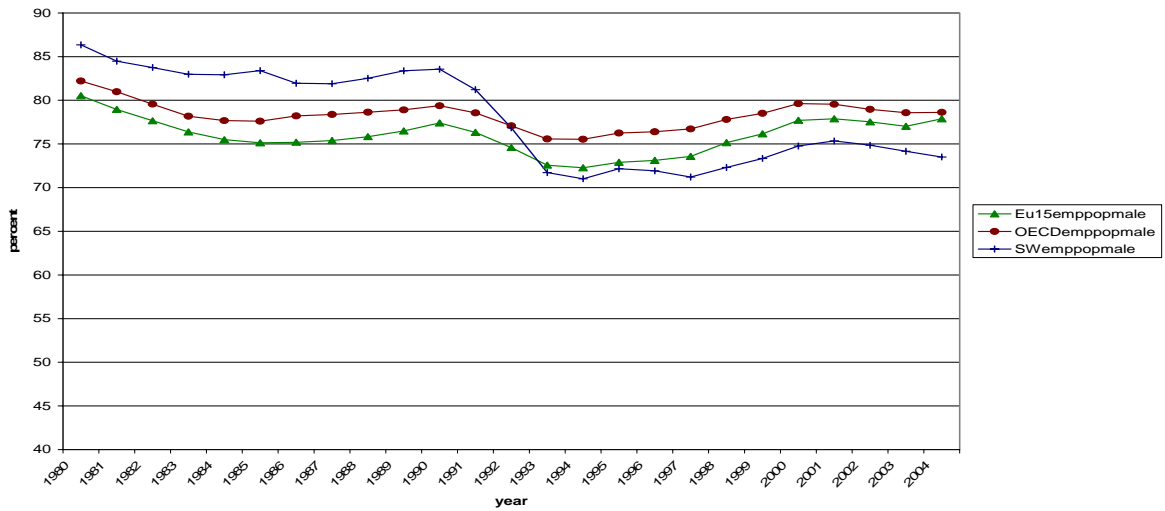


Source: OECD Economic Outlook

As is apparent from the figure, Sweden's employment-to-population ratio lies above both the EU15 and OECD averages during the entire period. The main reason for this is that women in Sweden are employed to a larger extent than women in many other countries. What is noteworthy, however, is the sharp decline in the employment-to-population ratio in the early 1990's. This corresponded to the increase in the unemployment rate seen in Figure 1. While the unemployment rate seemed to have declined since the early 1990's (as seen in Figure 1) Figure 2 shows that the share of employed to the working age population never increased after the recession in the early 1990's – it rather continued to increase. When only male employment is compared, as is done in Figure 3, it is evident that Sweden's employment-to-population rates have consistently been below those for EU15 and OECD since 1993, even though they have declined there too in the early 1990's. Female employment-to-population ratios are still well above the EU15 and OECD averages, even though they declined sharply as well in the early 1990's, and have been fairly constant since, while the rates for EU15 and OECD have increased throughout the whole period.

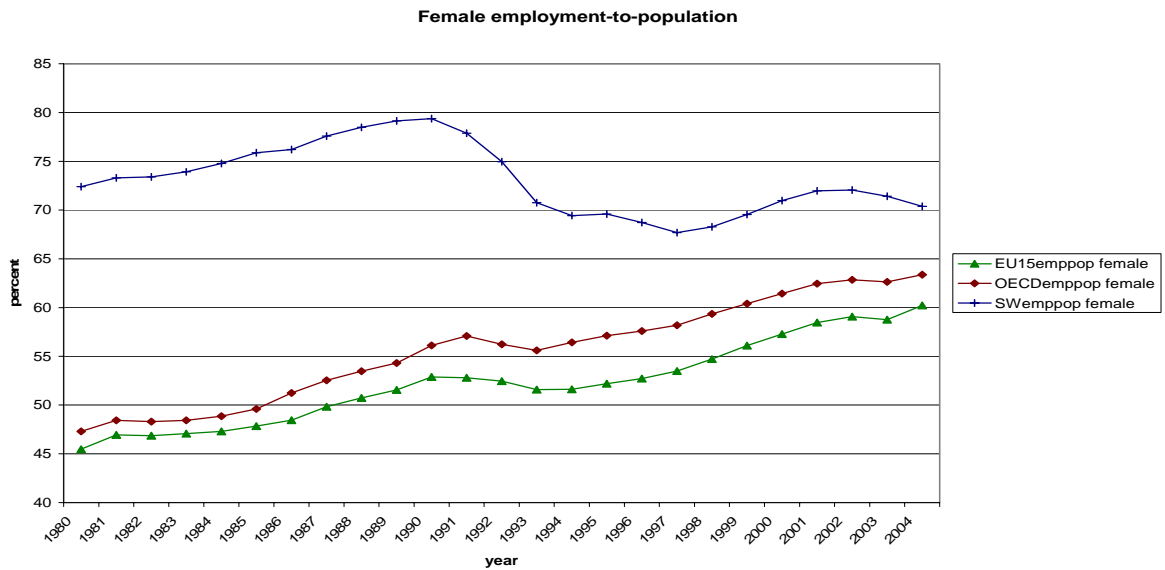
Obviously, many factors influence the employment-to-population ratio. Among other things, a larger share of the working age population continuing or staying in school could

Figure 3. Male employment-to-population ratios since 1980 in Sweden and averages for EU15 and OECD, respectively.



Source: OECD Economic Outlook

Figure 4. Female employment-to-population ratios since 1980 in Sweden and averages for EU15 and OECD, respectively.



Source: OECD Economic Outlook

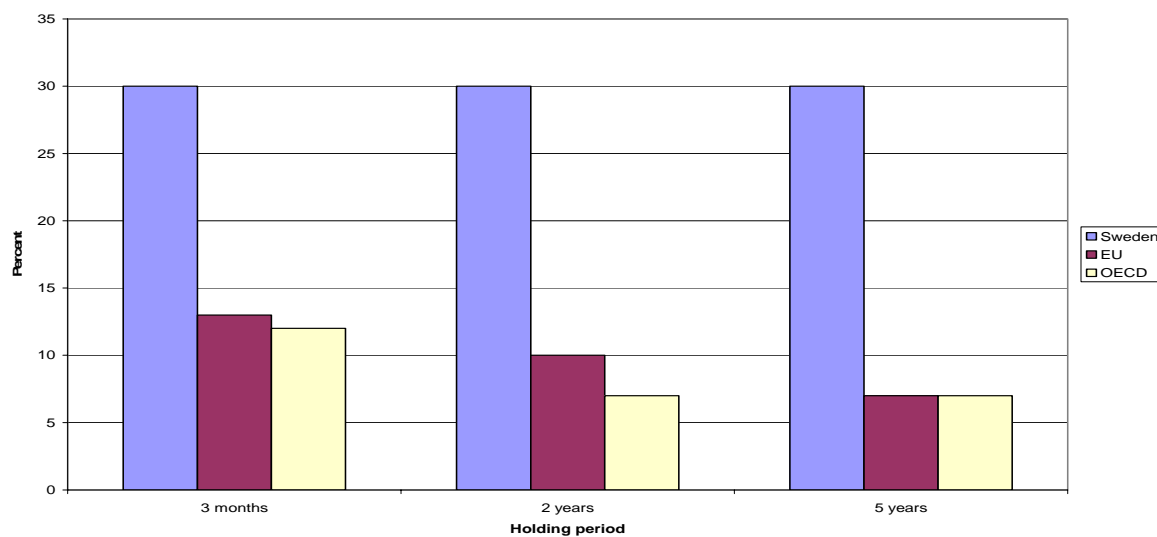
explain a drop in the curve. Indeed, the number of students registered at colleges and universities increased after the recession. Even though the share of students registered at colleges and universities to the working population increased, specifically from 3.2 in 1990 to 4.9 percent in 1994 (SCB), this increase can not explain the entire drop in employment-to-

population. Some of the drop may instead be explained by the fact that many individuals have questionably been labelled retired or sick when they instead may be long-termed unemployed. This conjecture would be consistent with the picture an increasing number of researchers are starting to paint (e.g., Edling (2005), Forslund & Kueger (2006), Ljungquist & Sargent (2006), and OECD (2005)).

3 Capital taxation in Sweden

Sweden tax capital gains harder than most other countries in the world, especially at relatively small levels. Diagram 5 shows the capital gains tax rate on possessions held for 3 months, and 2 and 5 years, respectively for Sweden and the average for EU and OECD. Sweden is remarkable in several aspects. First, capital gains are taxed at 30 percent rate from the first SEK while many other countries exempt a certain amount of capital gains from taxation. In addition, many countries differentiate depending on the length of possession. For example, in Austria, Germany, and Portugal capital gains held for more than one years are exempt all together (the same holds for shares held for more than 6 months and three years in Luxembourg and Denmark, respectively). Moreover, in many countries (e.g., Australia, Spain, the UK, and the US) the tax rates decline as the possession period increases. Furthermore, the rate at which the gains are taxed (30 percent) is only higher in Denmark (52 percent on gains held for less than 3 years) and Slovenia (maximum 50 percent if held less than 3 years).

Diagram 1. The tax rate on capital gains in Sweden and the average tax rate for EU and OECD (excluding Sweden) on a capital gain of 50 000 SEK depending on holding period.



Source: Aktieägarna (2005).

In addition to the relatively high capital gains tax, Sweden is one of eight countries in OECD that still tax wealth. Table 1 shows the wealth tax in those OECD countries that taxed wealth in 2005.

Table 1. The wealth tax in OECD countries, 2005.

	Tax rate in (%)	Allowance in (EUROs)	Wealth tax revenues as share of total tax revenues in 2002	Wealth tax revenues as percent of GDP in 2002
Finland	0.8	250 000	0.17	0.08
France	0.55-1.8	732 000	0.37	0.16
Iceland	0.6	57 112	1.20	0.50
Luxembourg	0.5	75 000	1.70	0.70
Norway	0.9-1.1	18 120	1.10	0.49
Switzerland	0.05-0.3	42 840	3.48	1.00
Spain	0.2-2.5	167 129	0.48	0.17
Sweden	1.5	165 000	0.32	0.16

Source: Skatteverket (2005)

In recent years several countries have abolished the wealth tax (e.g., Austria, Denmark, Germany, and the Netherlands) and several others have discussed removing the tax (e.g., Finland, Iceland, and Norway), and Luxembourg removed their wealth tax Jan 1 2006. In Sweden, for example, there has been a heated debate over the future of the wealth tax. In 1991, the government decided to gradually phase out the tax until 1994 when the tax was to be removed entirely. The year for the removal was later postponed and in 1994 the government decided to keep the tax for distributional purposes. More recently, several commissions have recommended abolishing the tax but the government has chosen to keep it for distributional purposes.

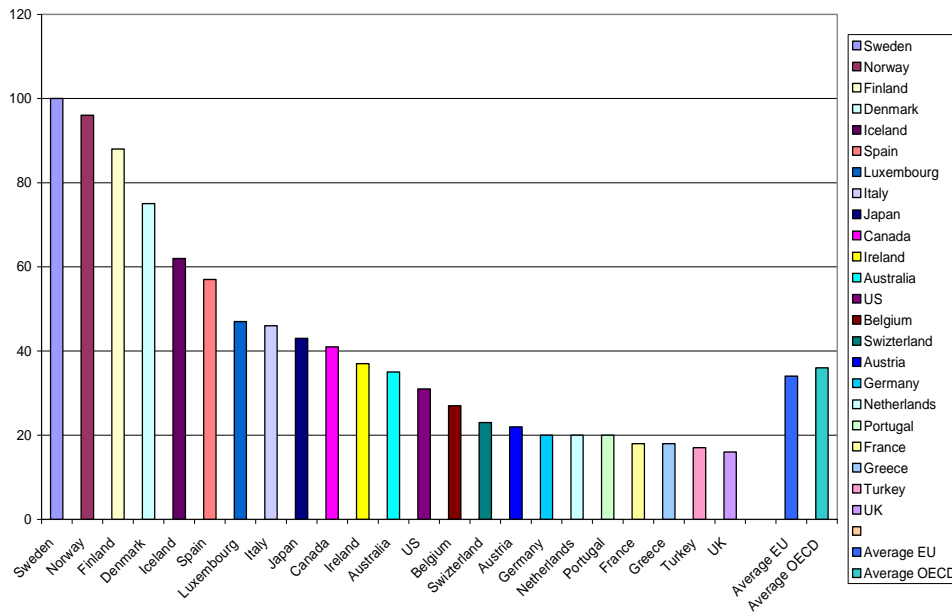
Even compared to the other wealth taxing countries Sweden sticks out as an outlier. One reason for this is that Sweden tax relatively low amounts of wealth at a high rate (1.5 percent tax rate on taxable wealth exceeding 165 000 Euros). Only France and Spain tax wealth at higher rates (1.8 and 2.5, respectively), but these rates apply to a taxable wealth of 15 and 10.7 million Euros, respectively. Despite the high rate and low allowance the wealth tax generates a very modest amount of tax revenues, 0.16 percent of GDP (the lowest among the wealth taxing countries). The reason for this is partly because Swedes, in general, have modest wealth but is probably also due to the fact that the wealth tax in Sweden is largely “voluntary”, and the very wealthy, in particular, can easily avoid the tax.

A third reason, making Sweden a high capital tax country, is that dividends are taxed twice; first at 28 percent at the corporate level and then at 30 percent at shareholder level. This implies a dividend tax rate of 49.6 percent in Sweden. Sweden is not the only country that double-tax dividends, but together with Denmark the country with the highest total tax rate on dividends. The recent trend has been to lower the extent of double taxation. In the US, for example, the Act of 2003, sharply reduced the total tax rate on dividends, and the average total tax on distributed profits in OECD fell from 0.42 to 0.37 between 2000 and 2004 (Aktiespararna (2005)).

Taken together, Sweden, thus tax capital harder than any other OECD country. The Swedish Shareholders Association calculates a total tax index for shareholders in OECD countries adding up taxes paid on distributed profits, capital gains, and wealth. The resulting index for 2004 is presented in Diagram 2. Sweden has the highest total tax burden followed by

Norway, Finland, and Denmark. On average EU- and OECD-shareholders only pay 34 and 36 percent, respectively of the tax Swedish shareholders pay.

Diagram 2. Total tax burden on shareholders in OECD countries, 2004.



Source: Aktieägarna (2005).

4. How can tax policy stimulate employment?

Most economists and policy makers agree that it is crucial to increase employment and hours worked in the economy in order to sustain our generous welfare system. Many have argued for decreased labor taxes in order to increase incentives for individuals to find work and work more. Several studies comparing hours of work between high and low tax countries have found that countries with high labor taxes have lower total working hours (Davis & Henrekson (2004), Olovsson (2004), and Prescott (2004)). In addition, there is a substantial literature measuring how sensitive labor supply is to tax rate changes. Even though it is generally low, it is positive indication that individuals would work more if taxes were lowered. However, the magnitude of the labor supply increase depends on how much of the tax rate decrease that results in higher wages for those working. The empirical evidence tends to suggest that lower labor taxes may have limited effects on employment.

Another “cure” to the unemployment problem that is often mentioned is to reduce various benefits and leave schemes in order to increase work incentives (e.g., OECD (2005), Lundgren et al (2005)). In Sweden, benefit recipients have very low financial incentives to switch from benefits to work (Flood et al (2003) and SOU 2004:19). In order to increase the work incentives for low-income people introducing an earned income tax credit has been suggested (Lundgren et al (2005)) as well as reduced benefit levels (OECD (2005)).

Interestingly, however, there has been little discussion or research about the role of capital taxes. There are a number of reasons to expect, especially in an increasingly global world that reducing capital taxes may indeed stimulate job growth. As opposed to many of the other “cures” that are aimed at increasing labor supply, lowering capital taxes would mainly increase the demand for labor. If capital taxes adversely affect employment, lowering the high capital taxes in Sweden could then help reduce unemployment.

The role of individual capital taxes

The impact capital taxes may have on employment is almost non-existing both in the academic and public policy discussion, however. This may seem surprising, but may partly be contributed to the general assumption that capital taxation, and dividend taxation in particular has no impact on the cost of capital for firms and, hence, does not affect their investment decisions and consequently has no impact on employment. This view, often referred to as the new view has been the operating assumption in Sweden, both in research and public policy. Capital taxation, and the double-taxation of dividends, in particular, has hence been thought to be neutral to investment decisions and to have no effect on employment (Henrekson & Sanandaji (2004)). While this may be true under certain assumptions it is not a general truth. In what follows, I will point out why that may not be the case and also bring up other possible mechanisms through which capital taxation can affect employment. In particular, individual capital taxation can impact employment by increasing demand for labor in the existing firms, by affecting the demand for labor in newly established firms, and by preventing job-loss due to outsourcing.

Capital taxation and firm investment

Practically all economists agree that investment is important for economic growth and a country’s welfare. Whether capital taxation, and double taxation of dividends in particular,

affects the cost of capital and, hence, firms' investment decision economists disagree about, however. There are generally two views of how dividend taxation can affect the cost of capital with quite different implications. According to the "new view" (e.g., Auerbach (1979), King (1977), and Bradford (1981)), and the view that has dominated Swedish tax policy and academic research, taxation of dividends has no effect on capital costs and, hence, no distortionary effect on firm's investment decisions. While the tax affects individual investors, by reducing their net return, it has no effect on firm's capital costs. The reason for this is that firms use retained earnings as the marginal source of investment instead of equity. As the effective tax rate on dividends is higher than the capital gains tax (as the latter is not paid until realization), the firm only distribute dividends when no profitable investment alternatives exist. The view that dividend taxation is neutral to investment decisions is further strengthened by a global capital market, where the rate of return is set globally and, hence, exogenous. This means that investments can always be made at the exogenous rate of return and taxation will only affect who owns capital not the level of investment.

Contrary to the new and open-economy view, the "old view" (e.g., Feldstein (1970)), however, claims that dividend taxation has distortionary effects by reducing the net return on investment and therefore reducing the supply of investment. A cut in dividend taxation, according to this view, would increase individuals' incentives to save and invest and spur business investment.

Which of these views that prevails in reality have been subject to extensive research, unfortunately with mixed results. Some studies (e.g., Poterba & Summers (1985) and Poterba (2004)) find support for the old view while others (e.g., Auerbach & Hassett (2002)) find support for the new view. Recently, though, results may becoming slightly more favorable for the old view, with mounting evidence of negative welfare implications of dividend taxation. Dietz & Keuschnigg (2003), for instance, find that lower dividend taxation can generate large welfare gains, by not discriminate against equity and small and growing firms. The US Treasury (1992), also evaluated the effects of lowering dividend taxation and similarly found considerable welfare gains from doing so.

Whether you find support for the old or the new view may depend on what kind of firms that are studied. It is generally believed that the two views are applicable to different kinds of firms. The new view fits better to old established firms that easily can finance its

business with retained earnings, while the old view may be more applicable to new and smaller firms. Dietz (2003) points out that double taxation maybe neutral for already established firms but affects the number of start-ups if future tax payments are predicted by the potential entrepreneur deciding whether to start a business or not.

The existence of double-taxation in Sweden could then help explain why the Swedish industry is so dominated by a limited number of relatively old large firms (Henrekson (2003)). For instance, none of the 50 largest firms in Sweden in 2000 were established after 1970; actually the bulk of them (62 percent) were established before 1914 (Nutek & Almi (2001)).

Another implication of double taxation of dividends is that firms in economies with double taxation can use capital less efficient than economies where there is no double taxation, as there is a wedge between retaining the earnings or redistributing them. As a consequence the capital used in the economy may be inefficiently used by firms when shareholders could use the capital more efficiently.

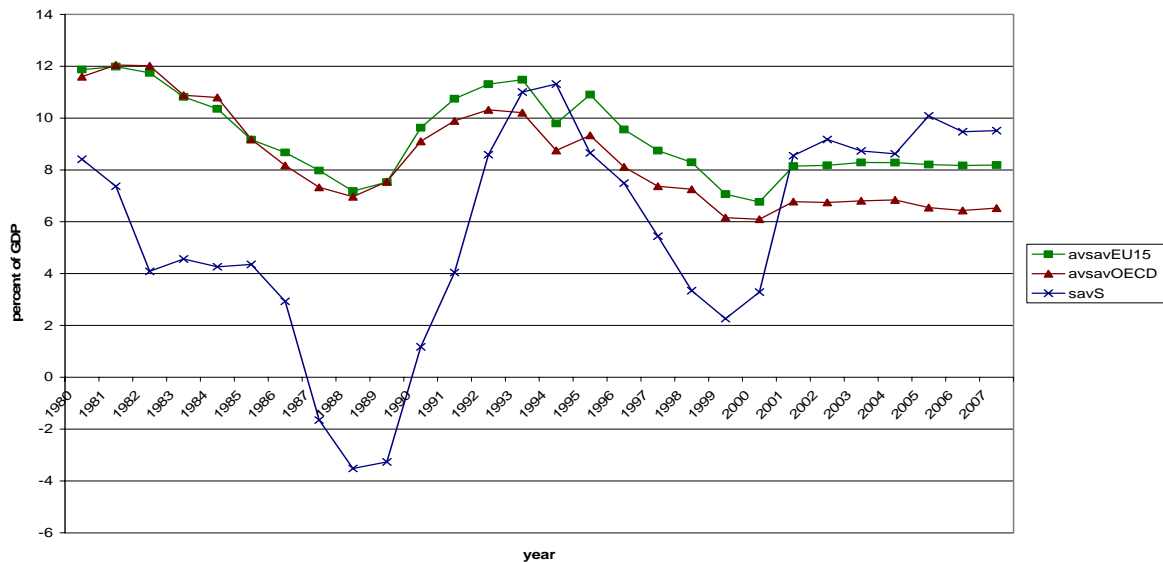
Capital taxation and private savings, investment, and wealth accumulation

Even if the cost of capital in certain circumstances is unaffected by double-taxation, individuals are affected by capital taxation. Specifically, capital taxation reduces the net return to individuals' investments. Whether a lower net return decreases individuals' propensity to save depends on the interest elasticity of savings. Theoretically this elasticity can be either positive or negative. The reason for this is that when the return increases (due to the tax rate decrease) it becomes more profitable to save and individuals save more (the substitution effect) but at the same time the increased return makes individuals richer and, hence, reduce the need to save (the income effect). The sign of the interest elasticity depends on whether the substitution or the income effect dominates. Empirical studies tend to find that this elasticity is positive – that is an increase in the net return increases savings (e.g., Leibfrizt et al (1997), Tanzi (1995)).

Looking at savings rates for Sweden and averages for EU15 and OECD (Figure 5) is consistent with the picture that high capital tax countries in general have lower savings rates. Swedish savings rates were considerably below EU- and OECD-averages prior to the Swedish 1990/91 tax reform that lowered the taxes on capital considerably. Specifically, after the tax reform unearned income was taxed at a flat rate of 30 percent while it before the tax

reform was taxed as earned income (typically at a higher rate), and the wealth tax was reduced from 2.5 to 1.5 percent. Savings rates peaked at about 12-13 percent in 1993/94 after the tax reform, but declined after that. More recently savings ratios have increased again, perhaps due to increased pension savings. Obviously, savings depend on a numerous factors, where capital taxes may be one. Another important factor explaining Sweden's savings pattern may be the extensive social insurance programs that lower the need for private savings. This would be consistent with increasing savings rates after the recent change in pension system.

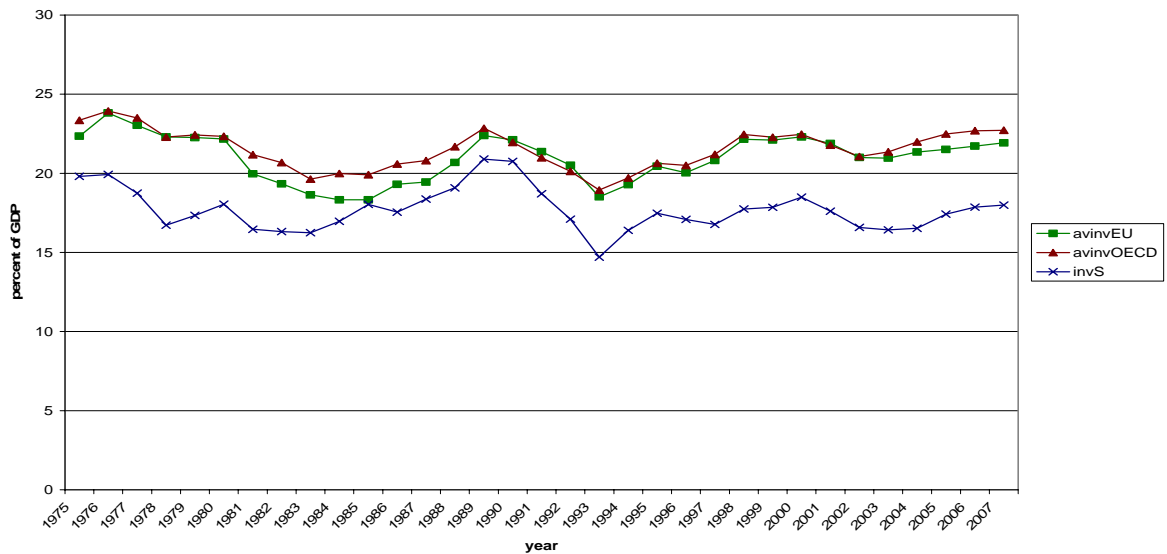
Figure 5. Savings rates in Sweden and average rates for EU15 and OECD, 1980 - 2007



Source: OECD Economic Outlook

Savings in turn affect investment, one important determinant of economic growth, and employment. In a global market with perfect capital markets domestic savings may not impact domestic investment as foreign savings work as a substitute. In reality, however, due to home bias and imperfect capital markets domestic savings is likely to be important for domestic investment. Indeed, Figure 6 shows that Sweden consistently has had a few percentage points lower total investment shares than the averages for EU and OECD.

Figure 6. Investment as share of GDP in Sweden, average for EU15 and OECD, 1975-2007.



Source: OECD Economic Outlook

Closely linked to savings is wealth. The wealth in Sweden is lower than in most comparable countries, and between 1980 and 1997 Swedish net worth increased by only 1.5 percent annually (Klevmarcken, 2006). Table 2 lists households' net worth for the population above 50 years of age, the part of the population that generally possesses the largest fraction of total wealth. Among the countries listed in Table 2 Sweden has the lowest median wealth for the population above 50, and most of the other countries in the table have considerably higher wealth. On average the other countries have 63 percent higher median net wealth than Swedes.

That Swedes possess little wealth is also evident from other studies. For instance, Pålsson (1998) shows in her study that Sweden, compared to other OECD countries, has low financial wealth as well as real assets. In addition, Pålsson (2002) finds that the median *financial* wealth actually decreased by 8 percent between 1988 and 1998 despite the economy growing by nearly 20 percent during the same period (note that Pålsson measures financial wealth as opposed to Klevmarcken who measures the wider measure net worth, suggesting that other assets perhaps real estate grew substantially).

It is hard to identify to what extent high capital taxes explain Sweden's low wealth rates. As with savings, generous welfare systems do not require individuals to build up their own safety nets, and probably play an important role explaining the low wealth ratios, but that the capital taxes are high, and in particular the wealth tax, do not stimulate wealth building.

Table 2. Median household net worth (PPP adjusted)
for the population 50+ in 2003 (in 1000 Euros)

Country	Net worth
Sweden	86.7
Denmark	110.6
Germany	99.1
Netherlands	135.3
France	136.3
Switzerland	201.3
Austria	103.9
Italy	159.3
Spain	149.5
Greece	109.5
Australia	172.5

Source: Klevmarken (2006)

Capital taxation and growth of new firms

The understanding of the crucial role entrepreneurs and small businesses play for economic performance has increased dramatically. From not having been thought of as very important, entrepreneurs and small businesses are today generally thought of as proving knowledge spillovers (e.g., Romer (1986), Lucas (1988 & 1992), and Grossman & Helpman (1991)), enhancing competition (e.g., Jacobs (1969), Porter (1990), and Feldman & Audretsch (1999)), and increasing diversity (Hannan & Freeman (1989)) – all important mechanisms for economic growth.

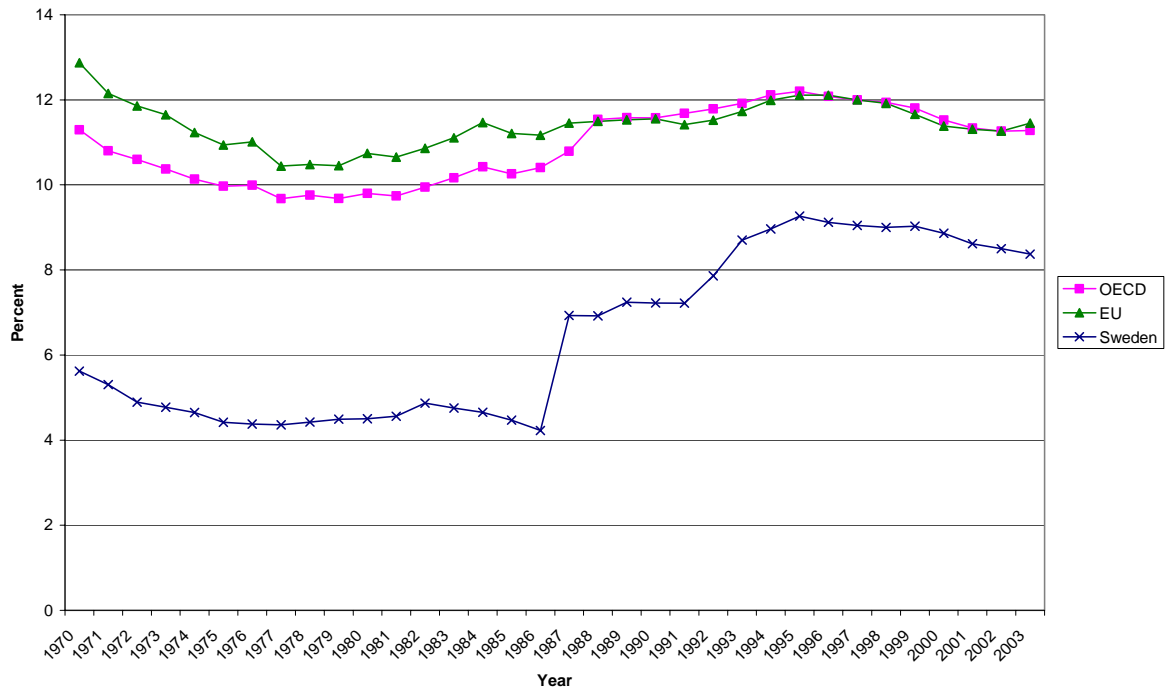
In addition, amounting evidence suggest that new jobs tend to be created in small businesses rather than large enterprises (e.g., Birch (1981), Gallagher & Stewart (1986), Storey & Johnson (1987), Konings (1995), Hohti (2000), and Heshmati (2001)). Birch (1981), for instance, finds that the new jobs created in the US to a large degree came from small enterprises. Indeed, he concludes that “Whatever they are doing, large enterprises are no longer the major providers of new jobs for Americans” (Birch (1981) p. 8). Heshmati (2001) similarly finds that the same seems to hold for Sweden. Specifically, by looking at Swedish

firm level data between 1993 and 1998 he estimates a negative correlation between the size and age of the firm and the level of employment creation. Interestingly, though sales were positively correlated to firm size.

That Sweden industry is dominated by old and large firms could, thus, help explain why Sweden is the only country (in addition to Finland) that has experienced not only jobless but job-reducing growth. Davis & Henrekson (2006) estimate an elasticity of job creation due to increased economic growth (GDP) based on data from 1980 to 2004. They find that Sweden has the lowest elasticity, and together with Finland, the only country with a negative estimate. Specifically, their estimate of the elasticity for Sweden is -0.05, that is, a one percent increase in the growth rate reduced employment with 0.05 percent. The average estimate for the other OECD countries (excluding Sweden) is considerably higher, 0.37 percent. Even though these estimates should be interpreted with care they indicate that Sweden indeed has experienced an era of jobless growth. Davis & Henrekson (2006) further investigate why so few jobs have been created in Sweden despite healthy growth rates and hypothesize that the lack of a developed private service sector, that primarily employs low educated individuals, explains the jobless growth in Sweden. They find support for this hypothesis; the countries with high job-creation elasticities also have high fraction of employment in the service sector.

Since jobs tend to be created in small businesses it is troubling that Sweden has the lowest fraction of entrepreneurs (or self-employed) in Europe (e.g., OECD (1992), European Observatory for SMEs (1995), Reynolds (2002), Företagarna (2006)). Figure 7 shows the fraction of self-employed in Sweden and average ratios for EU15 and OECD from 1970 to 2003. Even if self-employment ratios have increased in Sweden they are still well below EU- and OECD averages. In a newly published study, Företagarna (2006) found that Sweden had the sharpest decline in the number of self-employed between 1995 and 2004, a 9 percent decline compared to increasing numbers in most other EU countries.

Figure 7. Self-employment ratios in Sweden and averages for EU and OECD, 1970-2003.



There is an extensive literature trying to establish what factors determine individuals to become entrepreneurs and staying successful as entrepreneurs. One important factor that is well documented in the literature is access to own capital (e.g., Evans & Leighton (1989), Evans & Jovanovic (1989), Holtz-Eakin et al (1994), Lindh & Ohlsson (1996), Blanchflower & Oswald (1998), and Davidsson & Henrekson (2002), Gentry & Hubbard (2004)). It is, thus, not enough to have entrepreneurial ability, access to own capital is also a requirement as it due to high risk and asymmetric information is hard to find external financing. Numbers from a survey conducted by ITPS (ITPS (2005b)) confirm this, as much as 80 percent of those that recently started a new business claim they used own capital entirely or partly to finance their business.

That Sweden, in an international comparison, has low wealth accumulation may, thus, constrain individuals with entrepreneurial ability from becoming entrepreneurs. Moreover, high capital taxes may also reduce the incentives to take risks as the returns from successful entrepreneurship are lower, at the same time as starting your own business is a very risky undertaking compared to employment. Specifically, that the social safety-nets for employees are generous in Sweden makes the risk difference between employment and self-employment large.

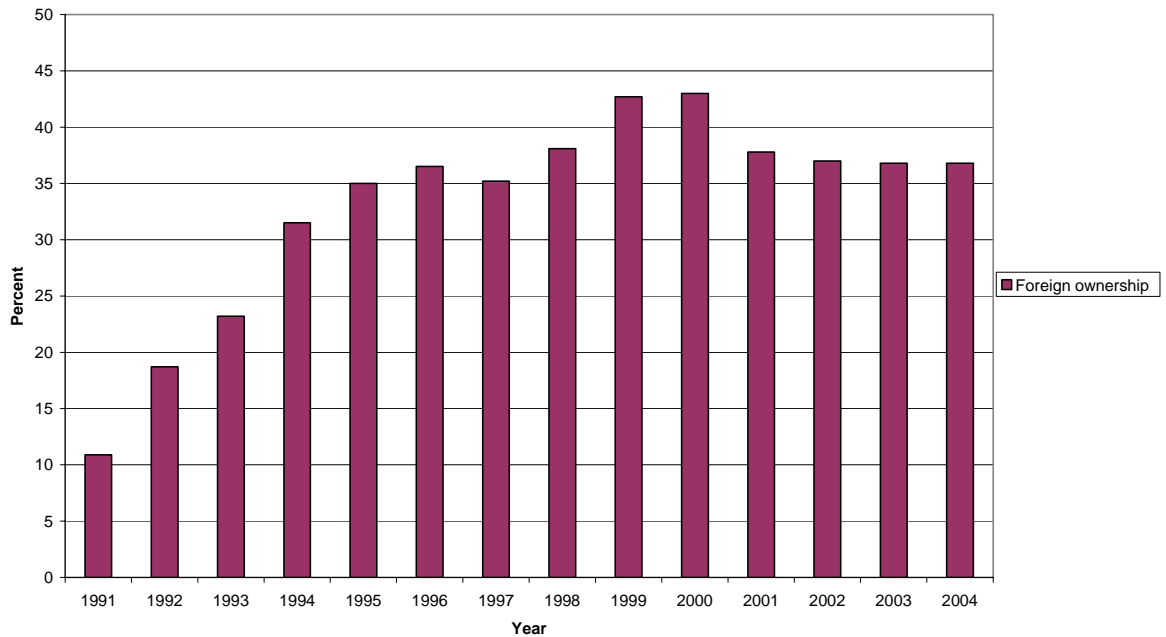
As it is generally hard for entrepreneurs to find external financing, access to venture capital is becoming increasingly important. Venture capital plays an important role as it not only supply capital but also provide commercial and managerial knowledge that increase the likelihood for the entrepreneur to turn his business idea into a successful commercial product. Keuschnigg & Nielsen (2002) and (2004) show that capital gains taxation reduces the number of entrepreneurs by reducing their effort and, hence, survival ratios. With venture capital both the venture capitalist and the entrepreneur jointly contribute to the success of the business, though their effort is not verifiable by the other part, providing them with incentives to use too little effort. The capital gains tax increases this distortion even further and leads to even less effort and, hence, lower survival rates. Keuschnigg & Nielsen (2004) find that even a small capital gains tax give rise to large losses. High capital gains taxes could, thus, be a major obstruction to the development of functional venture capital.

Another aspect of capital gains taxation is that it can lock-in entrepreneurs in their business, creating efficiency losses. Rather than selling the business to a more efficient owner the entrepreneur holds on to their business to avoid capital gains taxes. Chari et al (2004) have shown that the welfare loss due to this “lock-in” effect for the US capital gains tax is large, 0.14 percent of consumption.

Capital taxation, foreign ownership and capital flight

A consequence of high taxes on ownership compared to other countries is that Swedish assets become “cheaper” for foreigners than Swedes. As foreigners’ net-return is higher they are willing to pay more for an asset than a Swedish investor. Given this, it is not surprising that Swedish assets – both stocks and firms - owned by foreigners have increased. Diagrams 3 and 5 illustrate how the share of foreign ownership on Stockholm Stock Exchange and the number and share of employees working in foreign owned firms have increased over time, respectively.

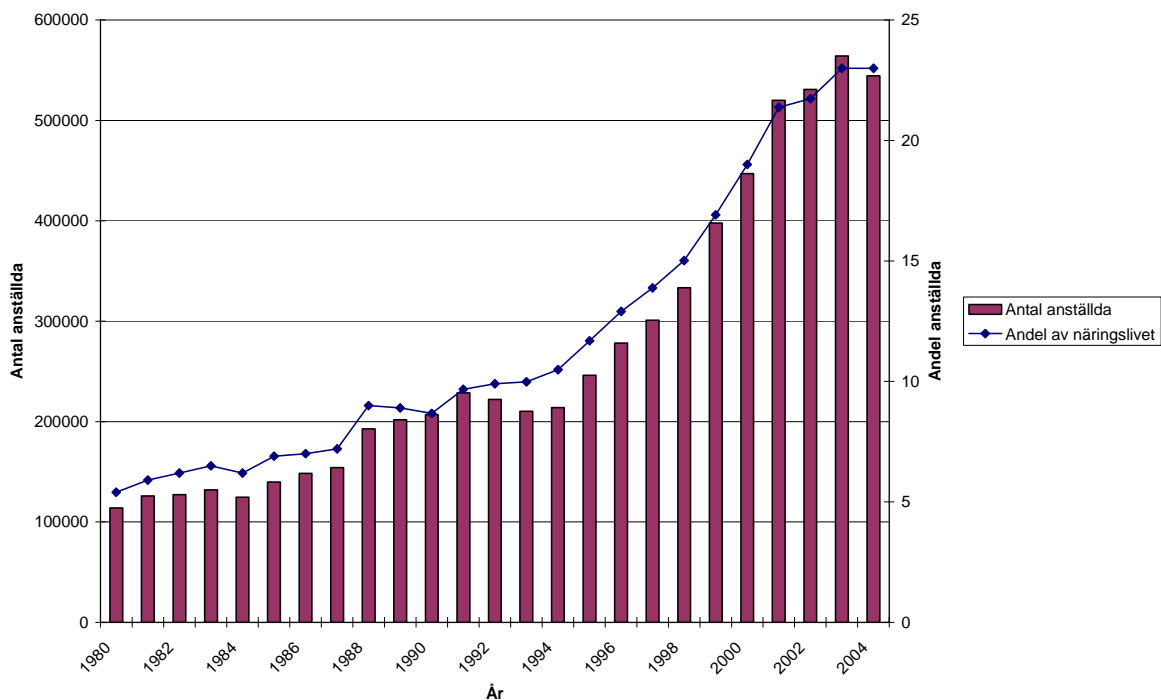
Diagram 3. Foreign ownership on Stockholm Stock Exchange, 1991-2004, in percent



Source: Fristedt (2005)

That foreigner ownership has increased is not necessarily bad as it contributes to knowledge spillover, increase competition, and risk diversification, and is a natural consequence of globalization. What is more troubling is that Swedish owners are discriminated due to high taxes on ownership and that ineffective foreign owners can buy out more efficient Swedish owners (Norbäck et al (2005)). In addition, Swedes lose the potential gains and Sweden loses tax revenues, there is also fear of employment loss when headquarters move out (Braunerhjelm (2002)).

Diagram 4. Antal och andel anställda i utlandsägda företag i Sverige 1980-2004



Källa ITPS (2005a)

High ownership taxes do not only affect the share of foreign ownership but also provide financial incentives for Swedes to move out their capital in order to avoid taxation. Estimates from Riksskatteverket suggest that the number of Swedes that place their capital abroad has increased. One way to measure how much capital that leaves Sweden is to compare the financial savings we should have according to national account estimations (i.e., disposable income minus the sum of consumption and real investments) with estimates of actual savings from various financial institutions. The difference between these two, have increased dramatically since the beginning of the 1980's, and interestingly coincide with the deregulation of the capital markets (Skatteverket (2005)). The accumulated quantity "missing" adjusting for inflation and real returns was estimated to amount to about 500 billion SEK in 2000, resulting in an estimated annual tax revenue loss of 15 billions (Persson (2002)).

5. Potential employment effects of lowering the capital gains tax and removing the wealth tax

As is evident from the previous section there are several mechanisms through which capital taxes can affect employment. These mechanisms can roughly be summoned in three channels through which capital taxes affect employment, namely by:

- increasing demand for labor in existing firms,
- increasing demand for labor by stimulating the growth of new firms, and
- preventing loss of jobs due to outsourcing.

Increasing demand for labor in existing firms

A likely effect of lower capital taxes (in form of lower capital gains and wealth taxes) is that savings rates goes up and that the outflow of domestic capital is reduced, this will increase the capital stock available and likely lower the interest rate (often the interest rate in a small open economy is assumed to be given exogenously, in reality, however, due to imperfect capital markets and home bias interest rates are affected by domestic factors). A lower interest rate will boost investment in firms and hopefully result in increased demand for labor.

Perhaps more importantly, however, lowering capital gains taxes will reduce the total tax rate on dividends and, hence, reduce the distortions created by the different tax treatment for different forms of financing. As the current tax treatment creates incentives to retain earnings instead of distributing profits and to use debt instead of new equity, distortions are created that raise the cost of capital for corporate investment. If these distortions are reduced the cost of capital is also reduced which increase investment which, in turn, may affect employment.

Increasing demand for labor by stimulating the growth of new firms

By increasing capital accumulation, reductions in capital gains taxation and the removal of the wealth tax will likely make it easier for individuals with entrepreneurial ambitions to become entrepreneurs. In addition, the returns of becoming an entrepreneur would increase. The effect lower capital taxation will have on self-employment is hard to predict and not very well studies but would likely increase the number of entrepreneurs.

One study by Hansson (2005), however, estimates the effect on self-employment of abolishing the wealth tax. She finds that average self-employment is an astonishing 2.3

percentage points higher in countries without a wealth tax than in countries that taxing wealth, over the time period 1980 to 2003. Differences-in-differences estimation using the elimination of wealth taxes in Austria, Denmark, Germany, and the Netherlands as a “natural experiment”, however, indicates that the boost in self-employment due to the removal of the tax is likely much smaller, some 0.2 to 0.5 percentage points, suggesting that the systematically higher self-employment in countries without taxes on wealth is likely an artifact of other factors correlated mutually with the wealth tax - perhaps overall business-friendliness, attitudes toward risks, or social norms. The results from Hansson, thus, imply that removing the wealth tax would lead to higher self-employment rates.

The results in Davis & Henrekson (2006) suggest that it matters in what sector new firms are started as employment elasticities differ by sector. If lower capital taxes could stimulate new firm creation in the service sector that could potentially have a large impact on employment. For that to happen, however, the tax factor (the ratio of how much an individual needs to earn in order to hire another individual to perform a service) has to decrease.

Preventing loss of jobs due to outsourcing

For Sweden, with an industry dominated by relatively few large international companies outsourcing can have important implications for employment. Dunning (1977) documents the main reasons for outsourcing to be: access to resources and competence, markets size, and differences in costs. For Sweden, the latter may be of especially high concern as outsourcing can reduce the production costs for Swedish firms drastically.

ITPS (2006) recently presented a study estimating that Sweden lost approximately 2 000 jobs (or 5 percent of total lay-offs) last year due to outsourcing. The number is likely to increase and spread to more qualified jobs. Indeed, Sweden is after Rumania, Hungary, and Finland the country that is likely to lose the most jobs due to relocations (ITPS (2006)).

It is unlikely that lower capital taxation can prevent outsourcing. What can be done, however, is to stimulate job growth in sectors that are less likely to outsource. For instance, it is important to expand the service sector by encouraging individuals to start businesses in the service sector and by making it possible for more individuals to buy services. Reducing capital taxes can stimulate entrepreneurship in general, and lower capital gains taxes may make it

possible for an increasing number of individuals to buy services, but the tax factor has to be lowered as well.

Some existing empirical studies

As already mentioned, existing studies estimating the relationship between capital taxes and employment are scarce. A few studies have been conducted in the US, in particular as motivation to the 2003 dividend tax cut in the US (The Jobs and Growth Tax Relief Reconciliation Act of 2003), which was primarily promoted as benefiting employment. As these studies can be classified as “political propaganda” to various degrees, they should be interpreted with great care. To my knowledge, strict academic studies investigating the relationship between employment and individual capital taxes seem to be non-existing.

The U.S. Treasury (1992), for example, estimates the effect of removing the double taxation of dividends in the US and find that it would produce an annual gain of between \$2.5 and \$25 billion. Robbins & Robbins (1994) predict from simulation that this would increase the number of jobs by approximately 720 000.

Two other studies attempt to measure the macroeconomic effects of a capital gains tax reduction. One is carried out by DRI/McGraw-Hill (1995) and the other by Sinai (1997). Both studies estimate the impact of a 50 percent capital gains exclusion for individuals and a 25 percent tax rate for corporations and both studies conclude that a capital gains tax reduction of that magnitude would have sizeable benefits on the economy. Sinai estimates that the reduction in capital gains taxation would lower the cost of capital, boost investment, and stimulate growth. This would in turn create approximately 500 000 new jobs. The DRI/McGraw-Hill study does not measure the number of jobs created by the tax reduction but estimate that productivity would increase by roughly 0.4 percent.

Crude estimates of the employment/unemployment elasticity of capital taxes

I estimate the elasticities of employment and unemployment with respect to the capital gains and wealth tax, by using annual data for 23 OECD countries during the time period 1980 to 2004. Specifically, the logarithm of employment and unemployment, respectively, is regressed against the logarithm of the two tax rates in addition to country- and time- specific effects. The capital gains tax rate is defined as the tax rate a hypothetical investor would pay on a long term

investment (2 years and yielding a return of 5 percent) and the wealth tax is the wealth tax rate the same investor faces (see Hansson (2002) for details). I estimate the elasticity for both employment (number of employed as a share of the working age population) and unemployment (number unemployed as a share of the labor force) as both measures suffer from shortcomings, perhaps unemployment more so than employment.

Table 3 presents the estimated elasticities. In the upper part of the table the elasticities for employment are presented while the unemployment elasticities are presented in the lower part. Including the whole sample (545 observations) implies estimated employment elasticities of -0.0025 and -0.0019, for the capital gains and wealth tax, respectively. Similarly, the unemployment elasticities are 0.01 and 0.01, respectively for the two taxes. All estimates are statistically significant but their magnitude fairly low. For instance, a one percent decrease in the capital gains tax implies 0.0025 percent high employment.

Table 3. Employment and unemployment elasticities estimates with respect to the capital gains and wealth tax

	Capital gains taxation	Wealth taxation
<u>Employment elasticity:</u>		
Whole sample	-0.0025 (-4.44)	-0.0019 (-2.73)
Countries with wealth tax	-0.0039 (-3.43)	-0.0031 (-2.62)
Countries with high capital gains taxes	-0.0043 (-3.18)	-0.0023 (-1.92)
<u>Unemployment elasticity:</u>		
Whole sample	0.01 (2.47)	0.01 (2.38)
Countries with wealth tax	-0.007 (-0.76)	0.0075 (0.82)
Countries with high capital gains taxes	0.023 (2.81)	0.023 (3.42)

Note: t-statistics in parenthesis

Controlling for other confounding factors, like marginal tax rate on labor, growth of GDP, and investment, does not alter the estimated elasticities by much. Specifically, including the marginal tax rate on labor decreases the employment elasticity to -0.003 and -0.0020 with respect to the capital gains and the wealth tax, respectively. Interestingly, including investment increases the employment elasticity with respect to capital gains taxation to -0.001, but leaves the elasticity with respect to the wealth tax unchanged, suggesting that the capital gains tax affects employment partly by reducing investment (regressing investment on capital gains taxation confirms that this, indeed, is the case).

There may be considerable heterogeneity between different countries, for instance between high and low tax countries. To investigate this, I re-estimate the elasticities on two sub-samples; one including the eight countries that taxed wealth the entire period studied (Finland, France, Iceland, Luxembourg, Norway, Spain, Sweden, and Switzerland) and the 6 countries with the highest capital gains tax in 2004 (Denmark, Sweden, Finland, Ireland, Italy, and Spain). The resulting estimates are higher in absolute value than the previously estimated, but still fairly low. A decrease in the capital gains tax with 50 percent, that is from 30 to 15 percent, increases employment with 0.215 percent, or from 73.46 to 73.62 percent (or create about 9 400 new jobs). Similarly, abolishing the wealth tax would increase employment with 0.31 percent, or from 73.46 to 73.69 (or create about 13 300 new jobs). The effect on unemployment is smaller; a 50 percent reduction in the capital gains tax reduces unemployment with 1.15 percent, from 5.52 to 5.46 (or create 2 800 new jobs), and removing the wealth tax creates 5 500 new jobs according to these estimates.

The above estimates are crude and should be interpreted with care for several reasons. First, several of the including countries had a zero capital gains and wealth tax rate for all or part of the years. As the logarithm of zero is undefined, I replaced the zeros with a very small number which could bias the estimates. Second, the estimates are based on OECD averages and are applicable to the OECD average, but may not translate well to Swedish conditions with extremely high capital taxes. They may, hence, underestimate the effect for Sweden. Third, they are based on data from 1980 to 2004 and it is assumed that the elasticities are constant over the entire time period. As integration and factor mobility increased during this time period, and with that the elasticity, the estimates may again underestimate the true effect.

An alternative way to measure the effect of removing the wealth tax is to conduct a differences-in-differences estimation using the four countries (Austria, Denmark, Germany, and the Netherlands) that abolished the wealth tax as a “natural” experiment. Specifically, by comparing changes in employment in these countries (the treatment group) with changes in employment in the other countries that did not experience a wealth tax abolishment (the control group) a differences-in-differences estimate can be obtained. I find that employment increases by an average of 0.30 percent when employment one year before the abolishment was compared with employment two years after the abolishment, and all other countries are used as control. The estimate increases to 0.60 percent when countries with similar economic conditions are used as control. For Sweden this would translate into between 13 000 and 26 000 new jobs if the wealth tax was removed.

This alternative method suffers from caveats as well, but gives estimates comparable to those in Table 3. A more appropriate way to estimate employment elasticities would be to use individual panel data for individual countries. For instance, by looking at a tax rate change that affects one group in society but not another – for example, a wealth tax reduction that reduces the wealth tax payments for those with taxable wealth but not those without taxable wealth – and study how the hours worked changed for these two different groups would yield a maybe more reliable estimate for a specific country.

6. Conclusions

Sweden is troubled with high unemployment. Much discussion has been focused on programs aimed at reducing unemployment. In the discussion, the need to lower labor taxes and cutting benefits is often mentioned as a mean to increase work incentives. The impact capital taxes may have on employment has received considerably less attention, if any, however.

This paper tries to fill this void by discussing possible mechanisms through which individual capital taxes can effect employment. For instance, capital taxes increase the cost of capital and, hence, the cost of firm investments, reduce savings and the amount of domestic capital available for investment. In addition, capital taxes may retard employment and make venture capital less effective by reducing entrepreneurs’ effort and, thus, their businesses’ survival rates. All these effects can impact employment negatively.

To get a feeling for how large the impact may be I provide some crude estimates on the employment and unemployment elasticities with respect to the capital gains and wealth tax. The estimated elasticities based on panel from OECD are highly significant but fairly small in magnitude. For instance, a 50 percent reduction in the capital gains tax is estimated to create an additional 9 000 jobs. Removing the wealth tax increases the number of jobs with between 13 000 and 26 000. These estimates suffer from a number of caveats and may underestimate the true effect. Future research using individual panel data over a time period of several tax changes would provide valuable insights.

Nevertheless, to boost employment in Sweden cutting individual capital taxes may not be the measure generating most jobs. Deviating in capital taxes from the rest of the world will, however, become increasingly costly as the world becomes more integrated.

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