

Capital income taxation of Swedish households, 1862–2010

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This study describes the evolution of capital income taxation, including corporate, dividend, interest, capital gains and wealth taxation, in Sweden between 1862 and 2010. To illustrate the evolution, we present annual time-series data on the marginal effective tax rates on capital income (METR) for a marginal investment financed with new share issues, retained earnings or debt. These data are unique in their consistency, thoroughness and time span. We identify four tax regimes separated by shifts in economic policy. The first regime stretches from 1862 until the Second World War. The METR is low, stable and does not exceed 5% until the First World War, when the METR begins to drift upwards and varies depending on the source of finance. The outbreak of the Second World War establishes the second regime, when the magnitude and variation of the METR sharply increase. The METR peaks during the third regime in the 1970s and 1980s and often exceeds 100%. The 1990–1991 tax reform represents the beginning of the fourth regime, which is characterised by lower and smaller variations in the METR. The METR varies between 15% and 40% at the end of this period.

Keywords: cost of capital; marginal effective tax rates; marginal tax wedges; tax reforms

JEL codes: H21; H31; N44

1. Introduction

Taxation affects many economic decisions, such as labour supply, household savings, corporate investments and entrepreneurial activity. In this paper, we examine capital income taxation, which affects the incentives to invest through its effect on the cost of capital, i.e., the minimum real rate of return that an investment must yield before taxes to provide the saver with the same net of tax real return that (s)he would receive from lending at the market interest rate.¹ Investments projects worth pursuing require that profitability is higher than capital cost.

The purpose of this paper is threefold. First, we intend to describe the general evolution of Swedish capital income taxation, including corporate, capital gains, dividend, interest and wealth taxation. The analysis begins in 1862 when Sweden introduced a new tax system. Second, we seek to illustrate the evolution of capital

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¹Our study is part of a comprehensive effort to characterise the Swedish tax system from 1862 to 2013, see Henrekson/Stenkula, *Swedish (forthcoming)*. The taxation of other incomes is addressed in separate studies.

income taxation by calculating the long-term evolution of the marginal effective tax rate on capital income (METR) based on the method presented in King and Fullerton.² Third, we will examine whether distinct tax regimes with certain features separated by shifts in economic policy are detectable.

The METR focuses on the flow of private savings into real corporate investment and the flow of profits back to households. It is an established tax measure used to compare tax rates between investment projects and countries. The METR includes the effect from both the corporate and personal level and focuses on the marginal effect that measures the incentives for additional investments.³ Long-term analyses are rare, however.

The evolution of the capital income taxation could also be illustrated by calculating the average effective tax rate, i.e. total taxes paid on existing investments. This measure captures the average tax burden and the total cash flows associated with the tax system. A related concept is, what the European Commission calls, the implicit tax rate on capital income which calculates the actual aggregate tax revenues from capital income taxation as a share of the taxable capital income (the tax base). However, METR is preferable when the purpose is to show the incentive to invest.

From 1991, the tax code treats the yield from shares in closely held companies differently than that of other limited companies. The tax rules for closely held companies are recognised as complex and thus we will address the METR of closely held companies in a separate paper.

Historical studies of the Swedish capital tax system include Genberg, Jakobsson and Normann, Rodriguez, Gårestad and Mutén.⁴ Although these studies incorporate extensive information about the Swedish tax system, they do not include any formal calculation of the METR. Parts of the results in our paper are derived from these sources. Calculation of the METR in a Swedish context can be found in previous studies including Södersten and Lindberg, Södersten, Norrman and McLure, Lindhe, Öberg, and Sørensen.⁵ However, none of these studies has analysed METRs spanning a longer time period. The majority of these studies analyse the tax system during the 1980s or 1990s. Södersten has analysed the years 1980, 1970 and 1960; notably, no study goes further back in time.⁶ Previous country or cross-country studies analysing, e.g., the USA and the UK, can be seen in Devereux et al.,⁷ which primarily covers the 1980s and 1990s. Hence, this article supplements previous studies by computing METR as far back as 1862 and as recently as 2010. No study has previously generated this type of data-set for Sweden. In addition, we are not aware of any international studies covering such an extensive period.

²King/Fullerton, *Taxation* (1984).

³King/Fullerton, *Taxation* (1984), 7–8; Sørensen, *Tax Burden* (2004).

⁴Genberg, *Skatteutvecklingen* (1942); Jakobsson/Normann, *Inkomstbeskattningen* (1972); Rodriguez, 'Inkomstexpansion' (1980); Rodriguez, *Skattheistorien* (1981); Gårestad, 'Industrialisering' (1987); Mutén, 'Development' (2003).

⁵Södersten/Lindberg, *Skatt* (1983); Södersten, 'Sweden' (1984) and 'Sweden' (1993); Norrman/McLure, 'Tax policy' (1997); Lindhe, 'Corporate tax' (2002); Öberg, 'Essays' (2004); Sørensen, *Taxation* (2008).

⁶Södersten, 'Sweden' (1984).

⁷Devereux et al., 'Corporate income tax' (2002).

The paper is organised as follows. In the next section, the evolution of different parts of capital taxation is described. In Section 3, the METR is defined, its development is presented and the prevalence of tax regimes is discussed. Section 4 provides concluding remarks.

2. The evolution of capital income taxation

2.1. Corporate taxation

Figure 1 depicts the total statutory marginal corporate tax rate between 1862 and 2010. It also shows the corporate tax rate used in our calculations of the METR. Taxes were paid at the state level during the whole time period. Local taxes have been paid until 1985. Local taxes were deductible from state taxable income from 1920. Before 1911, corporations were taxed at the corporate level in the same way and at the same rates as earned income for individual tax payers.⁸

Between 1903 and 1938, the corporate tax system at the state level was progressive.⁹ A progressive income tax system, as the one introduced in 1903, was seen as more fair by many politicians and economists as it was argued that it matched the ability to pay taxes in a better way than a proportional tax system. Many countries similar to Sweden had already implemented a progressive tax system at the beginning of the twentieth century.¹⁰ However, the reason was mainly financial as the increased revenues was supposed to be used to finance military expenses.¹¹ The political tensions in Europe contributed to the introduction of the new tax system. Both individuals and corporation had to pay this new progressive income tax.¹² The ordinary local tax system was proportional during the whole studied period but there existed a temporary local progressive tax between the World Wars.

Initially, the state income tax was based on profits (in SEK) but from 1911, the tax was based on profitability (in per cent of equity). It was seen as misleading to base the corporate tax on the absolute level of profit without any relation to the capital invested. Large companies had to pay a higher tax rate even if the profitability was the same as in smaller companies. The progression was sharply increased due to temporary defence taxes during the First World War and with a new state income tax implemented in 1920. From 1939, the progression was abolished and the corporate state tax system was proportional. The reason was mainly practical. The company could diminish the tax rate by manipulating the equity level in different ways. The tax rate was also not connected to the income level and the ability to pay by the *owners* of the companies. A proportional income tax

⁸For a more detailed description about different taxes and their tax rates, see Du Rietz et al., *Swedish* (forthcoming, b).

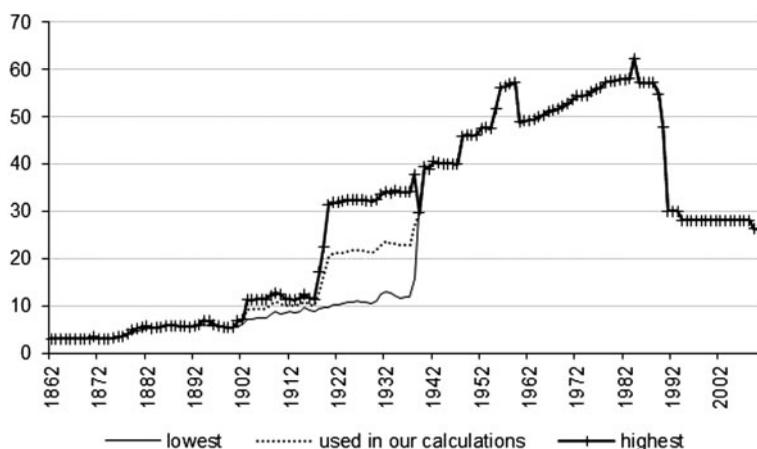
⁹Strictly speaking, the tax system is progressive, i.e., has an increasing average tax rate, if the tax system includes basic allowances or if part of the income is tax-exempt. The tax system was with this definition progressive already in 1862.

¹⁰Rodriguez, *Skattehistorien* (1981), 25–26.

¹¹Rodriguez, 'Inkomstexpansion' (1980), 64–72.

¹²The new progressive state tax system was supposed to replace the system of appropriation, which was gradually phased out and finally abolished in 1928. Hence, there were two parallel state tax systems at the beginning of the twentieth century.

Figure 1. Highest and lowest total statutory marginal corporate tax rate and the total statutory marginal corporate tax rate used in our calculations of the METR, 1862–2010 (in %).



Source: Genberg, *Skatteutvecklingen* (1942); Rodriguez, *Skattehistorien* (1981); Gårestad, 'Industrialisering' (1987); Nordling, *Skattetryck* (1989), 61–67; Agell et al., *Skattepolitik* (1995); Norrman/Virin, *Bolagsskatt* (2007); the Ministry of Finance, *Beräkningskonventioner*, (2008), Stenkula et al., 'Taxation' (2014) and our own calculations.

system was more business cycle neutral. Finally, the introduction of a proportional tax system was seen as a way to increase profitability in the business sector and encourage consolidation. Hence, corporations were taxed according to a proportional tax system, whereas individuals continuously were taxed according to a progressive tax system.

From 1903, dividends to individuals were taxed. To compensate for this, corporations were initially allowed to deduct dividends paid, but only up to 6% of the booked value of equity; in other words, there was no double taxation of profits as long as dividends were below 6%. In 1911, the 6% general deduction was discontinued; hence, full double taxation was introduced. Double taxation was introduced as limited companies implied some benefits for the owners. First, organising economic activities in a company implied a more powerful (and more profitable) way to conduct business. Second, the owner only had a limited financial responsibility and could at most lose what (s)he had invested in the company. In addition, if only income at the corporate level was taxed, the ability to pay by the owners would be completely neglected. Furthermore, double taxation was also used in most other countries.¹³

Temporary taxes have been used extensively during the whole period, in particular during crises to increase tax revenues. After the crises, a new income tax system was often implemented that was meant to replace the ordinary tax system and the temporary defence taxes. The temporary taxes were in this way made permanent. This is particularly true for the temporary taxes during the First and Second World Wars and the depression in the 1930s. During the 1950s, temporary taxes or investment fees were introduced and the ordinary statutory corporate tax

¹³SOU 1931:40.

was temporarily increased. These tax increases and additional taxes were established to contract the overheated economy primarily following the Korea boom. Between 1984 and 1990, a specific ‘profit-sharing tax’ (PST) on corporations was levied to finance the collective wage-earner funds (*löntagarfonder*). The introduced funds were a considerably watered-down version of the original proposal, which can be regarded as an instrument to fulfil the vision of leading Social Democrats to convert the large corporations to ‘social enterprises without owners’.¹⁴ The complicated tax base of this tax cannot be easily expressed in a single statutory tax rate but it has been estimated that this tax increased the statutory corporate tax rate by five percentage points.¹⁵ We use this estimate in our calculations of the METR.

As can be seen from Figure 1, the total statutory tax rate was below 10% during the 1800s. As the corporate tax was progressive between 1903 and 1938, the figure shows the highest and lowest tax rate during this time period. The top statutory corporate tax rate increased sharply during the First World War and the lowest in 1939, when the proportional tax system was introduced. During the Second World War, the total statutory tax rate was about 40%. After the Second World War, it increased slowly until the tax reform in 1990–1991 due to mainly increasing local tax rates. The tax rate increased temporarily above 50% during the 1950s due to a provisional increase in the state tax rate. As a result of the tax reform in 1990–1991, the statutory tax rate was reduced to 40% in 1990 and to 30% in 1991. The rate was further reduced to 28% in 1994 and to 26.3% in 2009.

There also existed a so-called war business cycle tax between 1915 and 1920; however, this tax is excluded from Figure 1 and the calculation of the METR because it was firm-, industry- and region-specific and not a generally implemented tax. For example, the tax was used to heavily tax supernormal profits in the steel, shipping and military industries because of the war. Part of the tax was later remitted.¹⁶ Between 1919 and 1926, there also existed a so-called B-tax. This tax was based on profits retained in the company and not distributed as dividends. This tax can be seen as a temporary tax payment in advance because it was refunded once the profit was distributed as dividends.¹⁷

In practice, the corporate tax rate was lower due to different forms of allowances. Initially, the possibilities to reduce corporate taxes through different forms of allowances were limited and the rules unclear. The period 1862–1902 has been called the period of unrestricted assessment (*den fria uppskattningens tid*).¹⁸ The increase in the statutory tax rate between the Wars and during the Second World War was matched by more options to reduce the effective corporate tax rate.¹⁹ For instance, free inventory write-down was introduced in 1928 and free write-downs of machinery and equipment and deductible allocations for pension and investment funds (the IF system) was introduced in 1939. During the Korea boom in the early 1950s, there were limitations in the possibilities to use immediate write-offs. In 1955, the IF system became more generous, and between 1961 and 1993, a certain mitigation of

¹⁴Henrekson/Jakobsson, ‘Schumpeter’ (2001), 352–354; Lindbeck, *Ekonomi* (2012).

¹⁵Agell et al., *Skattepolitik* (1995).

¹⁶Rodriguez, ‘Inkomstexpansion’ (1980), 46.

¹⁷SOU 1931:40, 77f. At most it will increase the METR by less than two percentage points, given that profits never will be distributed.

¹⁸Malmer, ‘Granskningen’ (2003).

¹⁹Rodriguez, ‘Inkomstexpansion’ (1980); SOU 1927:23 and SOU 1937:42.

the double taxation of dividends was offered at the firm level through the so-called Annell deduction. In 1960, the possibility to carry forward losses and deduct them against profits in later years was also implemented. The goals with the tax policy during the post-war were to stimulate consolidation and to control the timing of investments in order to dampen business fluctuations.²⁰ The purpose with the IF system was, e.g., to change the timing of investments from booms to busts through the tax system. The Annell deduction was implemented to encourage new corporations that could not use retained earnings.²¹ After the far-reaching tax reform in 1990–1991, options to reduce the corporate tax rate were weakened.²²

The tax reform in 1990–1991 was designed to make tax rates uniform and to be revenue-neutral. It involved substantial cuts in statutory tax rates and a broadening of many tax bases, in the case of the corporate tax through the removal of many tax deferrals, e.g., the earlier IF system, the allowance to undervalue inventories and the profits equalisation fund. The tax base of the value-added tax and of the capital gains were also broadened. The reasons for this reform were plentiful. A high statutory tax rate and a variety of tax allowances implied an obstacle for efficient capital allocation. It encouraged tax planning and locked in capital in old and large companies. The old principals of corporate taxation were abandoned. The earlier focus on stabilisation was changed and efficiency became more important.²³ After the 1990–1991 tax reform, hundreds of tax rule changes have been made and many of these are departures from the uniformity principle that was the ‘mantra’ of the tax reform.

2.2. Interest and dividend taxation

Figures 2 and 3 depict the marginal tax rate on interest and dividend income for a top income earner paying the highest marginal tax rate, an average production worker and a tax payer earning 0.67 or 1.67 times the income of an average production worker. These income levels correspond to OECD²⁴ and are used in other studies analysing the evolution of the Swedish tax system. The tax rate for the average production worker will be used to calculate the METR in Section 3.

In the new state appropriation tax law in 1862 and in the new local tax implemented in 1863, interest income was taxed in the same way as other personal income, e.g., labour income. As described above, dividends were tax-exempt before 1903. However, shareholders only paid state income tax on dividends until 1919. From 1920, local taxes were also levied on dividends. Interest and dividends were now taxed in the same way and jointly with other personal income.

The personal income tax reform implemented in 1948 was highly progressive, and inflation implied that the marginal tax rate increased steadily until the new tax reform implemented in 1971.²⁵ The progressivity of the income tax system was further sharpened by this reform and during the remainder of the 1970s. For high-income earners, the marginal tax rate could be as high as 85% in 1980. A minor tax reform in 1983–1985 decreased the marginal tax rates.

²⁰Agell et al., *Incentives* (1998).

²¹Rodriguez, *Skattehistorien* (1981), 44–45.

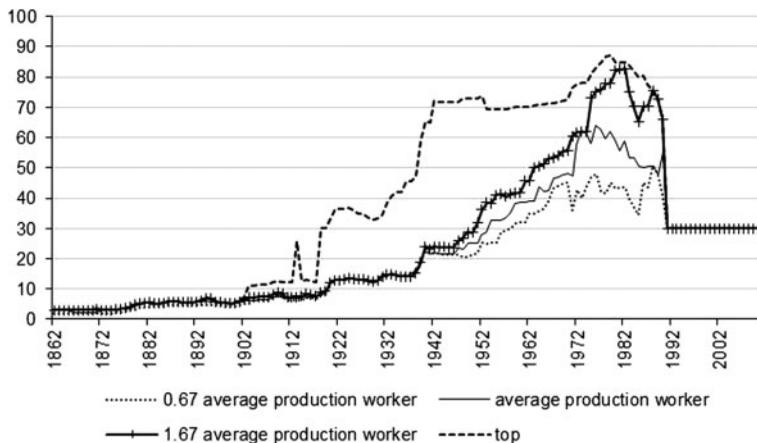
²²Heshmati et al., ‘Corporate tax rates’ (2010); Lodin, *Tax Law* (2011, ch. 7).

²³Agell et al., *Incentives* (1998).

²⁴OECD, *Taxing* (2011).

²⁵Du Rietz et al., *Swedish* (forthcoming, a).

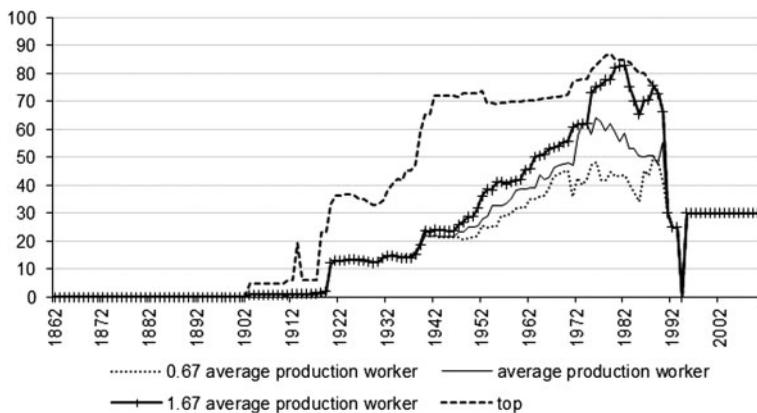
Figure 2. Marginal tax rate on interest income, 1862–2010 (in %).



Source: Stenkula et al., 'Taxation' (2014) and our own calculations.

In 1991, a separate personal capital income tax was introduced and the dividends and interest tax rate decreased to 30% for private households. There were many reasons for the tax reform and the introduction of a dual income tax system. Part of taxable nominal capital income was in fact a compensation for inflation, which implied a higher tax rate of the real return. The value of interest deductions was, further, reduced. Also, it was easier to broaden the tax base when the tax rate was lower. A lower tax rate on capital income helped to prevent capital flight and reduced incentives for tax-avoidance or tax-evasion behaviour. The increased globalisation and the deregulation of capital markets during the 1980s made it harder to tax capital income at tax rates that differed from abroad. The tax reform was also influenced by tax reforms in other countries, such as the 1986 tax reform in the USA. One important reason for the reform was the focus on efficiency and

Figure 3. Marginal tax rate on dividends, 1862–2010 (in %).



Source: Stenkula et al., 'Taxation' (2014) and our own calculations.

Note: Before 1903, dividends were tax-exempt. From 1903 to 1919, the taxpayer only paid state tax on dividends.

supply side consideration at the cost of distributional concerns, although this latter issue was not completely neglected. The idea was that the tax reform was likely to stimulate labour supply and enhance capital formation.²⁶

When a centre-right government won the election in 1991, the dividend tax, but not the tax on interest, was temporarily reduced to 25% in 1992–1993, and in 1994 the tax on dividends was completely abolished to alleviate the double taxation of dividends and to compensate for the abolished Annell deduction. However, the tax was reintroduced the following year at a rate of 30% when the Social Democrats regained power and has remained at that level since then for public companies. Beginning in 2006, the tax on dividends from non-public companies decreased to 25%.²⁷

2.3. Capital gains taxation

Before 1911, only so-called ‘speculative’ capital gains were taxable. However, there was no formal tax rule defining when capital gains were speculative. Taxation was based on discretionary decisions made by the tax authority, who decided which capital gains must be taxed according to their praxis. Formal capital gains taxation, introduced in 1911, was launched after a long boom period in the stock market. The intention was still to tax only ‘speculative’ capital gains but in a more transparent way. Because of the difficulty of defining ‘speculative’ gains, a more precise, though in itself arbitrary, rule was introduced. This change resulted in a rule in which the tax on capital gains depended on the holding period. The longer the holding period was, the smaller the taxable part of the gain was (and implicitly, the lower the estimated ‘speculative’ share was). In 1911, capital gains on stocks held more than five years were tax-exempt, whereas short-term capital gains were fully taxed. Similar to dividends, the taxable part of the capital gains was taxed jointly with other personal income until the 1990–1991 tax reform.²⁸

The rules concerning the tax-exempt share have changed several times (see Table 1). The sharp time limit of five years was often debated among politicians and experts. The rules were not changed until 1951, however, when the system was made less sharp through a phasing out of tax liability. In 1966, long-term capital gains were taxed for the first time. The change was motivated by the fact that tax-exempted long-term possessions implied an inefficient lock-in effect where owners seldom sold shares during the first five years. It was further argued that the previous rules could be used in tax planning to decrease the capital gains tax.²⁹ In 1966 and in 1976, the tax rates increased sharply (see Figure 4).

The tax reform in 1990–1991 made all capital gains fully liable to tax independent of holding period to make the tax system more uniform. However, capital gains were no longer taxed jointly with labour income; instead, they were taxed by a separate

²⁶Agell et al., *Incentives* (1998); Sørensen, *Tax Policy* (2010).

²⁷Part of the dividends in non-public firms was also tax-exempt between 1997 and 2005. For an owner of a closely held limited company, the marginal tax on dividends depends on several parameters after the tax reform 1990–1991. We will not focus on the taxation of closely held limited companies in this paper.

²⁸Between 1984 and the end of 1991, there also existed a turnover tax on shares that required both buyers and sellers to pay a tax of initially 0.5% of the value of the share. We have not included this tax in the METR calculation below.

²⁹SOU 1965:72.

Table 1. Taxable share of capital gains.

Time period	Speculative gains			Non-speculative gains	
	Holding period				
	<2 years	2–3 years	3–4 years	4–5 years	≥5 years
1862–1910	100			0	
1911–1950	100	100	100	100	0
1951–1965	100	75	50	25	0
1966–1975	100	75	50	25	25 ^a
1976–1990	100	40	40	40	40
1991–	100	100	100	100	100

^aFormally, 10% of the proceeds of the sale of the shares on long-term gains was included in the personal income tax base of the seller. 25% is an estimate of the taxable share based on assumptions made by Södersten, 'Sweden' (1984), including a holding period of 10 years and a nominal growth rate of 5% per year (5% corresponds to the average increase in the stock market index during this time). This tax had to be paid only if the capital gains were 5% or more of the proceeds of the sale of the shares. If the gains were less than 5% there was no tax (Bratt/Fernström, *Deklaration*, 1975; Rundfelt, 'Capital gains', 1982).

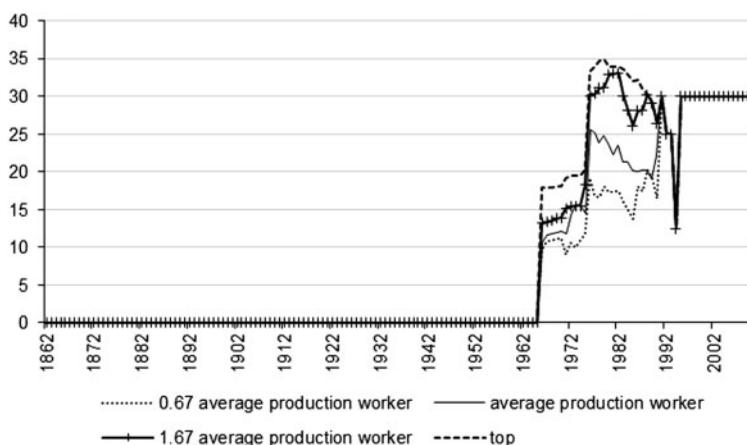
Source: Eberstein, *Skatt* (1929), 154–155; Bratt/Fernström, *Deklaration* (1975); SOU 1977:91, 242–243; Rundfelt, 'Capital Gains' (1982); Södersten, 'Sweden' (1984), 106–107.

capital income tax at a flat rate of 30%. In 1992–1993, this rate was temporarily reduced to 25% and was again lowered to 12.5% in 1994. As of 1995, the tax rate was again 30%. Since 2006, capital gains on non-public companies have been taxed at 25%.

2.4. Wealth taxes

The Swedish wealth tax, which applied only to individuals, was in force from 1911 to 2006. Between 1911 and 1947, the personal income tax was a combined income and

Figure 4. Marginal tax rate on long-term capital gains, 1862–2010 (in %).



Source: Stenkula et al., 'Taxation' (2014) and our own calculations.

Note: The figure also includes the tax rate associated with the average production worker used to calculate the METR in section 3.

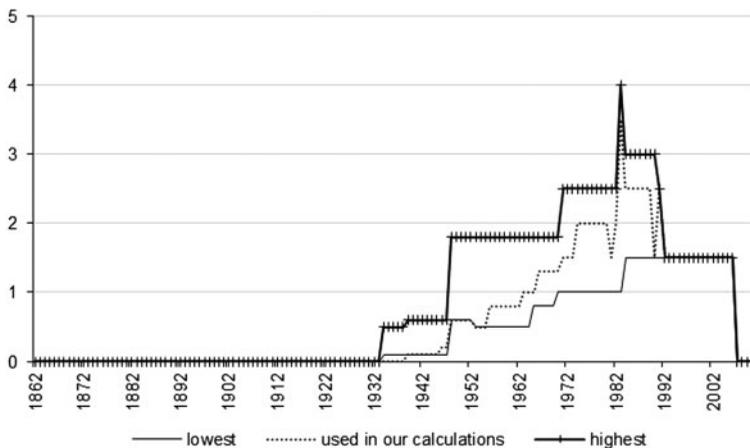
wealth tax wherein part of taxpayers' net wealth was included in the tax base. The share of wealth added to the tax base varied over time. The share was one-sixtieth between 1911 and 1938 and 1% between 1939 and 1947. There also existed temporary taxes during and between the world wars, which included part of taxpayers' net wealth in the tax base.³⁰

Between 1934 and 2006, there also existed a separate wealth tax that levied specific tax rates on assessed net wealth (see Figure 5). The tax rates were initially low and allowances high.³¹ In 1948, the tax rates were substantially increased and already in 1939, the exempted amount was more than halved. The change in 1939 and 1948 was combined with a reduction in 1939 and an abolishment in 1948 of the part of the wealth that was included in the ordinary income tax.

This system was only slightly revised until 1970 when the formal tax rates were increased again. The tax rates were also increased in 1983 and the 1983 schedule marked the most progressive wealth schedule of the entire period. The wealth tax rates diminished in 1984 and continued to diminish during the 1990s and 2000s. To decrease the effect of the wealth tax, average tax caps limiting the total tax of income and wealth taxes have also occasionally been applied.³²

As of 1991, the tax was discontinued on unlisted firms. As of 2007, the wealth tax was eliminated altogether. There were a number of disadvantages with the tax, which motivated the abolishment by the centre-right government that took power in the 2006 election. It was difficult to enforce because it required valuation reliefs for small family firms and reduction rules for wealthy individuals. The tax also gave

Figure 5. Highest and lowest marginal wealth tax rate and the marginal wealth tax rate used in our calculations, 1862–2010 (in %).



Source: Du Rietz/Henrekson, 'Rise' (2014) and our own calculations.

Note: The figure refers to the specific wealth tax in place 1934–2006.

³⁰Söderberg, *Inkomstskattens* (1996), 11; SOU 1969:54, 77–79.

³¹The tax-exempt allowance amounted to SEK 50,000, corresponding to slightly more than 20 times the wage of an average production worker in 1934.

³²Du Rietz/Henrekson, 'Rise' (2014).

plenty of opportunities for avoidance at the same time as it distorted the economy. It was, further, from a fiscal point of view, not a very important tax.

2.5. Inflation

The price level was roughly stable until the First World War, when inflation increased and peaked at nearly 50% in 1918. The war was followed by deflation in 1921–1923. Although deflation also occurred at the end of the 1920s and the beginning of the 1930s, Sweden has not experienced deflation since that time. On average, inflation was nearly zero between 1862 and 1939, and the price level barely increased for approximately 80 years despite peaks during and after the First World War. Inflation peaked again during the Second World War, but this time at a lower rate of 13.5%. Ignoring the Korea boom in the 1950s, inflation was moderate during the 1950s and 1960s and seldom above 5%. The rate averaged 4.2% from 1939 to 1970. Inflation was on average 8.5% between 1970 and 1990 and occasionally exceeded 10%. In the 1990s, Sweden introduced an explicit inflation target to keep inflation around 2% and the central bank was granted independence. Inflation decreased accordingly.³³ Inflation was 2.5% on average between 1991 and 2010.³⁴

3. The METR

The purpose of King and Fullerton is to investigate the METR on investment projects in the nonfinancial corporate sector.³⁵ The method aims to be sufficiently generalisable to allow for the analysis and comparison of investment projects and the tax systems of countries using a framework that takes into account all corporate taxes, personal capital income taxes and wealth taxes that concern the investment decision of the saver. King and Fullerton included Sweden, the USA, the UK and West Germany in their analysis.³⁶ The METR studies in Sweden are based on the work of Södersten,³⁷ who conducted the Swedish analysis.

As a starting point for the analysis, a saver can either lend her/his capital at the capital market at the market interest rate or invest in a business project. For the saver to invest, the project must generate a real rate of return *after* taxes that at least equals the real interest rate *after* taxes. The minimum real rate of return that a project must yield *before* taxes to provide the saver with the same net of tax real return that (s)he would receive from lending at the market interest rate is called the cost of capital. The METR is calculated using an equilibrium model, and the model does not consider that the saver probably requires a risk premium to invest in a business project. Furthermore, the calculated values are the theoretical values in equilibrium. Risk and uncertainty are not considered in the model, and the results are based on the assumptions that the business project has an infinite lifetime and that no further tax changes will occur.

³³Jonung, 'Experience' (1984) and 'Guldmyntfot' (2000).

³⁴See, e.g., http://www.scb.se/Statistik/PR/PR0101/2011M12/PR0101_2011M12_DL_06-07_SV.xls for the historical evolution of the inflation in Sweden.

³⁵King/Fullerton, *Taxation* (1984).

³⁶King/Fullerton, *Taxation* (1984).

³⁷Södersten, 'Sweden' (1984).

3.1. Definition

Taxes drive a wedge between the pre-tax rate of return on investments by firms and the net return received by savers. Because taxation is normally based on nominal income, both the real rate of return and the inflation compensation are taxed. The inflation rate hence influences the amount of tax paid, and to capture this effect, the tax wedge is normally calculated in real terms in which the real tax wedge increases with inflation. King and Fullerton define the marginal tax wedge, w , as follows:³⁸

$$w = p - s \quad (1)$$

where p is the pre-tax real rate of return on a marginal investment, i.e., the cost of capital, and s is the post-tax real rate of return to the saver. The METR, t , is defined as the ratio of the marginal tax wedge, w , and the pre-tax real rate of return, p :

$$t = \frac{w}{p} \quad (2)$$

The marginal tax wedge and the effective marginal tax rate can be used as two measures of the distortion caused by the tax system.

The calculations require estimates of the statutory corporate tax rate, the personal tax rate on interest income, capital gains and on dividend income, and the rate of personal wealth tax. The calculations also depend upon the present discounted value of tax savings from depreciation allowances and other grants as well as the estimated depreciation rate. As the calculation examines the real taxation, the rate of inflation is also of importance.³⁹

3.2. General framework

King and Fullerton estimates METRs for three types of assets (buildings, machinery and inventory), three types of financial sources (new share issues, retained earnings and debt), three ownership categories (households, tax-exempt institutions⁴⁰ and insurance companies) and three industries (manufacturing, commerce and other industry), for a total of 81 different tax wedges.⁴¹ This approach is beyond the scope of this paper, and we will compute the METR for a marginal investment in machinery that is financed by new share issues, retained earnings and debt, respectively, based on an increase of household savings.⁴² Because the general tax system in Sweden is independent of industry and seldom had industry-specific tax

³⁸King/Fullerton, *Taxation* (1984).

³⁹See King/Fullerton, *Taxation* (1984) or the Appendix in Du Rietz et al., *Swedish* (forthcoming, b) for a more formal treatment of the framework.

⁴⁰This category includes charities, scientific and cultural foundations, foundations for employee recreation set up by companies, pension funds for supplementary occupational pension schemes, and the National Pension Fund.

⁴¹King/Fullerton, *Taxation* (1984).

⁴²In align with Devereux et al. 'Corporate income tax' (2002); OECD, *Reform* (2007), for example. Öberg, 'Essays' (2004), also focuses on machinery and notes that investments in machinery accounts for the vast majority of all investments in manufacturing.

subsidies, we disregard industry. Our calculations are made for each year for the period 1862–2010.

Generally, the tax wedge is computed assuming a fixed p of 10%, and we conform to this practice. In line with Södersten, we also estimate the depreciation rate to 7%. Actual values are used for the inflation rate.⁴³

The statutory corporate tax rate was progressive between 1903 and 1938; therefore, a choice must be made regarding what tax rate to use in the analysis. We will use the average marginal statutory tax rate. Using the highest or lowest tax rate implied by the tax system during the period 1903–1938 will not significantly affect our general conclusions. Between 1939 and 1990, the IF system was in place. Normally, between 15% and 28% of the investment in buildings was financed with IF. The share among machinery and equipment was lower.⁴⁴ Our calculations do not include any effect from the IF system. Agell et al. suggest that the IF system can be characterised as a general profit subsidy, implying a reduction in the total statutory corporate tax rate of approximately 15 percentage points.⁴⁵ This factor may reduce the METR approximately 10 percentage points and will not affect our general conclusions.⁴⁶

The marginal personal tax rate on capital income was also progressive between 1903 and 1990. Södersten bases his calculations on the average marginal capital income tax rate of all households using HINK data, which report extensive information on individual households but do not exist before 1975.⁴⁷ We will instead draw on Stenkula et al. and base our analysis on the marginal income tax rate faced by an average production worker. This marginal tax rate aligns closely with the average marginal tax rate for all households reported by Södersten.⁴⁸ In addition, the personal tax rate on capital gains depends on the length of the holding period between 1911 and 1990. Similar to King and Fullerton, Södersten and Öberg, we will base our analysis on corporate shares with a mean holding period of 10 years.⁴⁹ We consider capital gains to be non-speculative in our calculations before 1911. This approach means that the capital gains tax is zero in our calculations until 1965 because non-speculative capital gains/long-term possessions were tax-exempt during this period.

The assumed household income is less important for investment financed by new share issues and debt before the Second World War because of the low tax rates. For capital gains, this figure will not affect results at all until 1965 because we have assumed long-term possession (and non-speculative gains before 1911), which was tax-exempt during this time period. It is of no importance after the 1990–1991 tax reform because capital income is taxed separately from labour income at a flat

⁴³The METR are also occasionally calculated given some fixed inflation rate, e.g., 0%, 5% or 10%. In our estimation we use the actual inflation rate to see how this affected the effective tax rate.

⁴⁴Agell et al., *Skattepolitik* (1995), 115.

⁴⁵Agell et al., *Skattepolitik* (1995), 116.

⁴⁶Du Rietz et al., *Swedish* (forthcoming, b).

⁴⁷Södersten, 'Sweden' (1984). HINK is an abbreviation for *Hushållens inkomster*, a Swedish income distribution survey conducted by Statistics Sweden in 1975, 1978 and yearly since 1980.

⁴⁸Stenkula et al., 'Taxation' (2014).

⁴⁹King/Fullerton, *Taxation* (1984), 23–24; Södersten, 'Sweden' (1984); Öberg, 'Essays' (2004).

tax rate. For the period beginning with the Second World War and ending with the 1990–1991 tax reform, the marginal personal tax rate on capital income may have a significant impact on the magnitude and variation of METR. The impact is more pronounced during the 1970s and 1980s, for instance, the METR for a high-income earner often exceeded 150% and peaked above 200% in these years when the investment was financed by new share issues. This result strengthens our general conclusion regarding the periodisation of the evolution of the Swedish tax system.

Södersten bases his analysis on the average marginal wealth tax rate of all households using Spånt, who presents a detailed description of the distribution of household wealth in Sweden in 1975.⁵⁰ We draw on Du Rietz and Henrekson and base our estimate of the rate of personal wealth tax on a wealth equal to 10 times the wage of an average production worker.⁵¹ Using the highest wealth tax rate or no tax will alter the METR by up to 35 percentage points, particularly during the 1980s, thus strengthening our general conclusion that the tax system was characterised by large distortions during this period.

Finally, the calculation also incorporates the present discounted value of tax savings from depreciation allowances and other grants associated with a unit investment. The methodology of King and Fullerton assumes that the company makes full use of the allowances that tax legislation offers to reduce the METR.⁵² We follow this approach and use the calculations of Du Rietz et al., which are based on Södersten.⁵³

3.3. Results

Figure 6 shows the evolution of the METR between 1862 and 2010 for an investment financed with retained earnings, new share issues or debt. The results are based on the marginal tax rate on personal capital income for an average production worker.

In the case of retained earnings, the METR was approximately 1% at the beginning of the period and hovered nearly 3% until the First World War. The rate peaked at approximately 10% during the war and hovered around this level in the interwar years. Between 1939 and 1951, immediate write-offs (free depreciation) were used, and the METR was reduced to approximately zero despite a sharp increase in statutory corporate tax rates. During the 1950s, the METR increased sharply and occasionally exceeded 50% because of the abolishment of immediate write-offs and because of temporary investment taxes. The METR was somewhat lower during the early 1960s, when the temporary increase in the corporate tax ended and the investment tax was abolished. Between 1960 and the 1980s, the METR increased because of higher corporate, personal and wealth taxes. Long-term capital gains were taxable since 1966. At the beginning of the 1980s, the METR was nearly 100%. The METR began to decrease during the second half of the 1980s. The 1990–1991

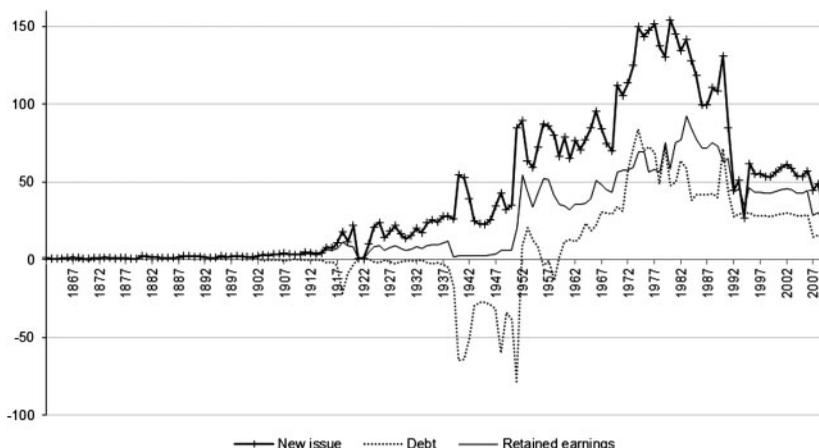
⁵⁰Södersten, 'Sweden' (1984); Spånt, 'Förmögenhetsfördelningens' (1979).

⁵¹Du Rietz/Henrekson, 'Rise' (2014). This level roughly corresponds to the average taxable wealth among households with wealth in 1968.

⁵²Öberg, 'Essays' (2004); Södersten, 'Sweden' (1984) 147–148. For a further discussion see Bergström/Södersten, 'Tax allowances' (1984); Forsling, 'Utilization' (1996); Kanninen/Södersten, 'Costs' (1994).

⁵³Du Rietz et al., *Swedish* (forthcoming, b); Södersten, 'Sweden' (1984).

Figure 6. METR for an investment financed with new share issues, retained earnings and debt, average production worker, 1862–2010 (in %).



Source: Our own calculations.

Note: Based on assumptions given in the text.

tax reform decreased the METR substantially because of a combination of decreased tax rates on capital income, wealth and profits and lower inflation rates linked to the policy of price stability that was advocated since the 1990s. As of 2007, the wealth tax was abolished, which further accentuated the decrease. At the end of the examined period, the METR was approximately 30%.

In the case of new share issues, the METR did not exceed 5% before the First World War. During the war the rate peaked at nearly 20% and continued to hover around this level in the interwar years. Until the early 1950s, the tax rate increased, with temporary spikes in 1940–1941 and in 1948 because of extra defence taxes during the Second World War and peaking inflation. The effect of free depreciation was counteracted by increased income taxes and higher inflation rates. The METR increased sharply to nearly 90% in the early 1950s because of the abolishment of free depreciation, temporary investment taxes and high inflation. During the 1950s and 1960s, the METR then fluctuated between 65% and nearly 100%. The progressivity was sharpened with the 1970 tax reform. In combination with higher inflation, this scenario implied that the METR increased above 100% in 1970 and did not decrease below this level until the tax reform in 1990–1991. The highest level was reached in 1980 at approximately 150%. At the end of the period, the METR was approximately 40%. It is clear from the calculations that the case of new share issues is the most heavily taxed form of finance, despite the Annell deduction.

In the case of debt, the METR was close to zero until 1939, when immediate write-offs were introduced. Between 1939 and 1951, the METR was markedly negative, with the largest negative numbers appearing when inflation peaked. Debt-financed investment under a system of immediate write-offs implied a subsidy, a well-known possible result within literature that will always be true if the statutory corporate tax rate is higher than the ordinary income tax, which was the case in our

example.⁵⁴ When immediate write-offs were abolished, the METR increased and became positive, continuing to increase during the 1960s and 1970s to at most approximately 80%. The rate began to decrease during the 1980s and in particular after tax reform in 1990–1991. At the end of the period, the METR was approximately 15%.

Changing tax rules had a small effect on the METR until the First World War as tax rates were low and the tax system stable. The increase of the METR between the wars was caused by both increasing personal and corporate taxes. The rules about immediate write-offs have had a large impact on the METR between 1939 and 1951 and decreased or even eliminated the effect from increasing statutory corporate tax rates. The effect of the tax reform in 1948, which made ‘temporary’ personal tax increases due to the Second World War permanent, did not initially have any large effect on the METR. However, the increasing marginal tax rate on personal income during the post-war period due to bracket creep had a large effect and pushed-up the METR to higher levels. The influence from corporate taxes was most pronounced in the 1950s, when the statutory corporate tax rate was temporarily increased and due to the temporary investment taxes. The effect from corporate taxes was normally much lower than the effect from personal taxes due to lower statutory tax rates or increased possibilities to reduce the corporate tax rate through different forms of deductions and allowances. Investment grants also occasionally alleviated the effect on the METR during the 1970s and 1980s.

The changing inflation rate has also influenced the METR substantially over time. Ignoring the world wars, the effect from inflation before the Second World War was normally small. Deflation occasionally alleviated the effective tax rate. During the post-war period, the short-run fluctuation and spikes in the METR (such as during the 1950s) are often explained by changing inflation levels. If inflation had been zero during the 1970s – when inflation level was permanently high and occasionally above 10% – the METR would be roughly halved in the case of new share issues. From the 1990s, when inflation level decreased, the influence from inflation diminished profoundly.

Our results show close similarities with Södersten’s calculations for occasional years from 1960 and beyond, as reported in Henrekson and Henrekson and Johansson.⁵⁵ However, differences can be seen if one compares our results with Södersten and Lindberg’s results.⁵⁶ These differences can be explained by the fact that the latter source presents results based on average figures that include the ownership categories of insurance companies and tax-exempt institutions in addition to households.⁵⁷

Considering the high tax rates estimated, in particular during the 1970s and 1980s, it is important to recall that our results concern the *marginal* effective tax rate. Other tax measures – such as the average effective tax rate – could also be calculated. The average tax rate is usually lower than the marginal tax rate. Hence, even if the METR occasionally was above 100%, the average effective tax rate could be well

⁵⁴Södersten/Lindberg, *Skatt* (1983), 19.

⁵⁵Henrekson, *Företagandets* (1996); Henrekson/Johansson, ‘Competencies’ (2009).

⁵⁶Södersten/Lindberg, *Skatt* (1983).

⁵⁷Öberg, ‘Essays’ (2004) uses fixed inflation rates while we use actual inflation rates. Her results are in line with ours, if one considers that inflation rates differ.

below 100%. This can help to explain why tax rates above 100% on marginal investments did not have a ‘catastrophic’ impact on the Swedish economy.

3.4. Tax regimes

Capital income taxation and inflation policy are policy variables decided by politicians. Policy shifts may have a notable effect on the magnitude and the variation of the METR because of the asymmetric treatment of different sources of funding in the tax code. We are interested in whether such shifts are detectable and whether they result in distinct tax regimes. Our analysis suggests that the evolution of the Swedish capital income taxation can be divided into four tax regimes according to the magnitude and variation of the METR caused by policy shifts.

The first regime stretches from the beginning of our examined period and ends with the outbreak of the Second World War. The METR was low and stable, and the variations of the METR based on the sources of finance were small and often negligible until the First World War. During this time, the METR never exceeded 5% for the average production worker. The difference between the sources of finance was at most at the same magnitude. Taxation increased because of the rearmament of the military and temporary war inflation. The METR began to differ depending on the source of finance, although the differences cannot be considered to be large. The increased taxes were made permanent after the war. During this regime, depreciation allowances and other investment grants had little impact on the magnitude and variation of the METR, and the inflation was on average zero. The METR for the average production worker ranged between 0% and 30% depending on the source of finance at the end of this regime.

During the 1860s, important reforms were implemented both economically (freedom of entrepreneurship) and politically (abolishment of the diet of four estates) together with the tax reform described earlier. This period until the Second World War was characterised by industrialization, urbanisation and high growth-rates. The number of people entitled to vote was constantly increasing due to political reforms and in 1921 the first election with universal suffrage for men as well as women was held. Together with industrialization and a growing working class, this partly explains the increased political influence of the Social Democrats and the succeeding tax policy. The government supported the infrastructure, a modest safety net and basic human services in combination with otherwise fairly stable rules of the economy.⁵⁸

Between the outbreak of the Second World War and 1970, there is a second regime wherein the METR increases continuously and wherein the differences based on the source of finance increase profoundly. The regime begins with the implementation of the 1939 tax reform, when personal income taxes increased sharply to rearm the military, the statutory corporate tax increased but was partially compensated by the possibility of immediate write-offs and inflation increased. Immediate write-offs were allowed between 1939 and 1951, which had a significant impact on the distortions in the METR based on the source of finance. In 1948, a new income tax reform was also implemented, which has been identified as central in Swedish tax history. For the first time, it was established that the tax system should

⁵⁸Schön, *Historia* (2000).

be used to promote equality and an egalitarian society.⁵⁹ The tax reform made the 'temporary' tax increases during the war permanent and also increased the separate wealth tax. Because of so-called bracket creep, this reform continued to 'push up' personal income taxes.⁶⁰ When immediate write-offs were abolished, the METR increased irrespective of the source of finance. The differences among the sources of finance decreased but were still large. The METR increased further because of increased corporate, personal and wealth taxes. As of 1966, the taxation of long-term capital gains further increased the METR for retained earnings.

The development of the tax system during this period reflects that the welfare state and public expenditures started to expand rapidly due to more ambitious social arrangements. Many of the regulations introduced during the Second World War (such as regulation of international capital movements and rent control) were not abolished after the war. Politically, the Social Democrats dominated and were in government between 1932 and 1976, either alone or together with the Peasant party (later the Center party). An active labour market policy, a desire to stabilise the economy through fiscal and monetary policy and the idea to use a more interventionist policy favouring established and large companies became more pronounced. Taxes – in combination with other political tools – should be used to influence the allocation of resources in the economy and aggregate demand.⁶¹

A sharper increase in the magnitude and variation of the METR can be seen in the 1970s and the 1980s, constituting the third regime. This shift can be explained by the tax changes during the 1970s, including the tax reform implemented in 1971, which implied higher progression in the tax system combined with higher inflation. The average inflation rate, which had been approximately 4% between 1939 and 1969, more than doubled between 1970 and 1989. Corporate, interest, dividends and wealth taxes were further increased and peaked during this period. As a result, the METR and the variation of the METR peaked during the 1970s and the 1980s. The 1970s and the 1980s were also characterised by the debate and introduction of wage-earner funds.⁶²

This time period is distinguished by extensive welfare ambitions. The development in Sweden diverged from many other Western countries with a higher public-sector spending and higher tax-to-GDP ratio. The public ownership in real and financial capital increased. The production and provision of human services was often restricted to public monopolies. The proposals about wage earners' funds created uncertainty among the private owners and probably diminished private initiatives. New labour market regulation was introduced during the 1970s and active labour market policies were pursued on a large scale. Trade unions increased their ambitions to squeeze wage differentials and even out the distribution of labour income. The tax reform in 1971 with an increased progressivity had the same ambition to even out income differentials.⁶³

The reasons for these changes are plentiful. The ideological leftist winds blowing stronger during the end of the 1960s and the 1970s may explain the increased

⁵⁹Elvander, *Skattepolitik* (1972); Rodriguez, 'Inkomstexpansion' (1980).

⁶⁰Bracket creep is the process in which inflation in combination with a progressive tax schedule pushes taxpayers into tax brackets with higher marginal tax rates.

⁶¹Rodriguez, 'Inkomstexpansion' (1980) and *Skattehistorien* (1981).

⁶²Henrekson/Jakobsson, 'Schumpeter' (2001); Lindbeck, *Ekonomi* (2012).

⁶³Lindbeck, 'Experiment' (1997) and 'Lessons' (2001).

progressive agenda. Nationally well-organised and politically strong pressure groups influencing the politicians directly or indirectly are other explanations. This includes the increasing number of retiree and increasing number of females participating in the labour market lobbying for more and better tax-financed old-age and childcare and a more generous pension system. Constitutionally, Sweden introduced a new electoral system with a single chamber and a shorter election period. This reform weakened the government but the interest organisations remained strong and it was harder for politicians to holdback demands for greater spending which had to be combined with higher taxes, at least in the long run to maintain sound and sustainable public finances.⁶⁴

In 1990–1991, a new tax reform established a distinct and continuous regime characterised by lower METR and smaller differences among different sources of finance. The marginal tax on capital income became independent of labour income because of the introduction of a dual tax system with a separate proportional capital income tax. The METR decreased due to decreased tax rates on income and wealth and lower inflation. Taxation on long-term possessions became less favourable after this tax reform. However, the METR decreased even in the case of retained earnings. The possibilities to use depreciation allowances and other investment grants were reduced but did not offset the decreased tax rates and lower inflation. As of 1991, wage-earner funds were abolished.

Starting around the beginning of the 1990s, economic policy is characterised by an increased trust on markets and private ownership, competition and increased freedom of choice among tax payers. Income taxes were decreased to increase economic incentives. The period is also characterised by an increased reliance on more rule-based economic policy, e.g., the implementation of an independent central bank with a low-inflation target. The government has also implemented a stricter budget process with limits for public spending and targets for the budget balance. There has been a gradual reduction in public spending and the tax-to-GDP ratio.⁶⁵

Taxes are determined not only by values and beliefs of decision makers, but also by economic performance.⁶⁶ The first tax regime can be seen as an outcome of the liberal ideas that characterised many institutional changes during the nineteenth century. The income tax was distinguished by many features, which, according to economic theory, represent an efficient tax system, e.g., low tax levels and marginal effects, and minor distortions according to source of finance. The METR was, further, stable and predictable which reduced transaction costs. Hence, a growth promoting tax system can probably be put forward as one explanation to ‘the Swedish growth miracle’.⁶⁷

The second regime was initiated by changed political objectives following international influences. The welfare ambitions were pronounced and there was a desire to stabilise the business cycle. The policy introduced distortions that increased during the period. Swedish growth was still fast, but not faster than comparable countries.

⁶⁴Steinmo, *Taxation* (1993).

⁶⁵Lindbeck, ‘Experiment’ (1997) and ‘Lessons’ (2001).

⁶⁶North/Wallis, ‘Integrating Institutional Change’ (1994). Analyses explaining historical changes in the Swedish tax system have earlier been done by Elvander, *Skattepolitik* (1972); Rodriguez, ‘Inkomstexpansion’ (1980) and *Skattehistorien* (1981); Lodin, *Tax Law* (2011).

⁶⁷Jörberg, ‘Nordic countries’ (1973).

Increased welfare and egalitarian ambitions established the third regime. The tax system became more fragmented and distortions increased further. Economic stagnation followed and the tax system was recognised as one cause to the decline. It became more clear that a tax reform was needed.⁶⁸

The last tax regime following the major tax reform in 1990–1991 represents a change of view with lower marginal tax rates and less fragmentation. An independent central bank and a low inflation-target reinforced this development as taxation was based on nominal income. During the fourth tax regime, Sweden regained growth, which has been attributed to the new tax system together with complementary market-oriented reforms, such as opening up previously closed sectors for private entrepreneurship and deregulation of the financial markets.⁶⁹

4. Concluding remarks

This study describes the evolution of taxation on income from capital in Sweden, including corporate taxes, personal capital income taxes (dividend taxes, interest taxes and capital gains taxes) and wealth taxes for the period 1862–2010. We illustrate the evolution by calculating the METR for an investment, financed by new share issues, retained earnings or debt. The METR is defined as the ratio between the marginal tax wedge and the pre-tax real rate of return on a marginal investment. The marginal tax wedge is defined as the difference between the pre-tax real rate of return on a marginal investment and the post-tax real rate of return to the saver.

Capital income taxes on companies and individuals were low or non-existing (dividends) until 1903, when a progressive income tax system was implemented. Long-term capital gains were tax-exempt until 1966. The majority of savers did not face markedly increased marginal tax rates before the Second World War. Increased deduction possibilities could offset increased corporate tax rates. The statutory corporate tax rate remained high until 1991, when the rate was halved at the same time as the tax base was broadened and deduction possibilities were reduced. The personal tax rate on capital income was substantially decreased the same year when a separate capital income tax was introduced. Wealth taxes have been in place since 1911, although initially at low rates, and were most severe during the 1970s and 1980s. The wealth tax was abolished on unlisted firms in 1991 and completely abolished in 2007.

We suggest that shifts in economic policy result in four tax regimes. Our study began with 50 years of low METR, below 5%, and negligible variations in the METR because of the source of finance. The outbreak of the First World War required higher taxes to re-arm the military; the METR began to fluctuate upwards and varied between sources of finance, but at low levels. The Second World War initiated the second period; rearmament of the military once again induced heavier taxation. The METR increased sharply and diverged profoundly depending on the source of finance during this period, which stretched throughout the 1960s. During the 1970s and the 1980s, which constitute the third regime wherein the magnitude and the variation of the METR peaked, it was not unusual for the METR to exceed 100%. The expansion of the public sector and the quest for an egalitarian society involving far-reaching distributional ambitions are prime explanations for this

⁶⁸Feldt, 'Dagar' (1991).

⁶⁹Bergh, 'Sweden' (2014).

change. The effective tax rates were influenced significantly by the fact that taxation was nominal and that during this regime average inflation was also at its height. Wage-earner funds were discussed and introduced. After the tax reform in 1990–1991, which established the beginning of the fourth and still continuing tax regime, the METR and the variation of the METR have decreased sharply based on a combination of decreased tax rates, abolished wealth tax and lower inflation levels. At the end of the examined period, the METR varied between 15% and 40% depending on the source of finance. As of 1991, wage-earner funds were abolished.

Interestingly, our calculations reveal that the METR and the distortions according to sources of finance were low during the first tax regime which, hence, could be considered to be one factor behind ‘the Swedish growth miracle’ taking place at that time. While the first regime was characterised by low distributional ambitions, the second and third tax regime included an increased desire to control the economy and the economic outcome. The resulting fragmented tax system and high METRs resulted in a backlash and a fourth tax regime following the tax reform in 1990–1991, with lower marginal tax rates and decreased distortions. The tax reform has been highlighted as one important cause for the recovery of the Swedish economy since then.

Our four tax regimes overlap with the four periods identified by Stenkula et al., when studying the evolution of the Swedish marginal taxation of labour 1862–2010.⁷⁰ As noted by Stenkula et al., their periods, and hence our regimes, largely coincide with the categorisation of the Swedish economic system into the following four ‘models’ made by Lindbeck: the market-oriented period (*den marknadsdominerade perioden*) of 1870–1939; the welfare capitalist period (*välfärdsskapitalismen*) of 1945–1970; the interventionist period (*den interventionistiska perioden*) of 1970–1990; and the present period of partial liberalisation (*den partiella liberaliseringsperioden*).⁷¹

Taxation attracts interest because it is considered to have a major influence on the use of the factors of production and consequently on employment and economic growth. A further step for research is therefore to analyse the impact of the evolution of capital and labour income taxation on long-run economic performance such as employment rates and economic growth.

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⁷⁰Stenkula et al., ‘Taxation’ (2014).

⁷¹Stenkula et al., ‘Taxation’ (2014); Lindbeck, *Ekonomi* (2012).

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