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Swedish Labor Income Taxation (1862–2013)

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Abstract: This paper presents annual Swedish time-series data on the top marginal tax wedge and marginal tax wedges on labor income for a low-, average- and high-income earners for the period 1862 to 2013. The tax wedges were initially low and the tax system proportional. The tax wedges began to increase during World War I. The increase accelerated during World War II and through the post-war period. In the 1970s, the top marginal tax wedge was occasionally as high as 90 percent. The main explanations for this development were temporary crises that led to permanent tax increases, the expansion of the public sector and distributional ambitions, bracket creep and the introduction of employer-paid social security contributions. The 1990–1991 tax reform represents the beginning of a new and continuing period of decreasing marginal tax wedges.

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1. Introduction

The tax system is one of society's most fundamental institutions, as taxation has profound effects on many economic decisions, such as labor supply, savings and investments. Taxation of the factors of production—particularly labor and capital income—has attracted particular interest, because taxation is a major determinant of their quantity, quality and usage over time. This paper studies income taxes on labor. The purpose is to analyze how the taxation of labor income has developed over time.

Much research on labor taxation addresses the effects of marginal taxation because it influences (among other things) labor supply in hours, effort at work, efficiency at work, educational investment, and the timing of consumption.¹ Therefore, we would also expect changes in marginal tax rates to influence the growth rates of taxable income, real gross domestic product (GDP) and other macroeconomic aggregates.

Although the effects of the tax system have been studied extensively, the results of these studies are often complex and ambiguous. Empirically, problems repeatedly arise because the effects of taxation should be assessed over long time spans; however, data are generally available only for relatively short periods. Hence, there is a need for long homogenous time series on taxation, which can further our understanding of the tax system's structure and its role in industrialization, wealth and structural change.

Rather than examining the effect from one narrow form of taxation (e.g., the marginal income tax on labor), a wider measure—such as the marginal tax wedge on labor income—is often preferable.² The marginal tax wedge on labor income incorporates marginal income taxes, marginal social security contributions and marginal payroll taxes. In addition, consumption taxes are sometimes included, and social security contributions can also be adjusted to include only the fiscal component. This measure better captures how individual

¹A distinction is frequently made between intensive and extensive marginal decisions. The intensive marginal decision that affects the number of work hours and effort expended by those already employed is mainly influenced by the marginal tax rates. The extensive marginal decision that affects the incentive to participate in the labor market is mainly influenced by the average tax rates.

²This wider measure is preferable because several forms of taxation affect individual choices. The marginal income tax rate captures the effect from one form, i.e., the income tax on labor, whereas the marginal tax wedge incorporates the effects from other taxes as well. For instance, the incentive effect of employer-paid social security contributions can be substantial, and it has thus been argued that a tax measure that considers the combined effects from different taxes better captures the behavioral effects of taxation. See, e.g., Agell, Englund and Södersten (1998) or Sørensen (2004) for a thorough discussion.

decision making is affected and is also the main determinant of the excess burden resulting from taxation, that is, distortionary costs in the economy.³

We calculate the long-term evolution of marginal tax wedges on labor income for Sweden. To finance the rise of the welfare state, the Swedish tax-to-GDP ratio increased from one of the lowest among Western countries at the beginning of the twentieth century to the highest in the world by the mid-1960s (Rodriguez 1981). The Swedish tax-to-GDP ratio remained the highest in the world until 2002, when it was surpassed by Denmark.⁴

Considered as the “archetype” of the welfare state, Sweden has attracted the attention of researchers and policymakers and sparked an unsettled debate focused on the possibility of combining high taxes and economic growth (Esping-Andersen 1990; Henrekson 1996; Lindbeck 1997; Madrick 2009; Bergh 2014). As a neutral country during both World Wars, Sweden avoided massive destruction, making long-run analysis appropriate, as these events profoundly affected the long-term outcome patterns of many other European countries. Sweden also has excellent tax records, which greatly facilitates our analysis.

As marginal tax wedges often change with income, it is not possible to derive one measure of the marginal tax wedge that is valid for all incomes. We therefore compute the top marginal tax wedge and the marginal tax wedge for a high-, average- and low-income earner.

Our analysis begins in 1862 when Sweden implemented a major new state (central government) tax system. The decades around the 1850s are historically important, as the Swedish economy was extensively deregulated, industrialization began and economic growth took off.⁵ Hence, we will exploit official statistics and tax laws to describe more than 150 years of tax rates.

Marginal tax rates on labor income, particularly top marginal tax rates, for several countries (including Sweden) have been the subject of a number of studies.⁶ For

³ Furthermore, the excess burden is not a linear function of the marginal tax wedge but an increasing convex function, i.e., the burden increases disproportionately faster than the marginal tax wedge, which implies large distortion costs at high tax levels, see Hansson (2000) or Jaimovich and Rebelo (2012).

⁴ See, e.g., <http://stats.oecd.org/Index.aspx?DataSetCode=REV>.

⁵ The tax system is less well documented during the nineteenth century. For example, tax tables reporting income brackets and tax rates have not been compiled and are not readily available. Part of our study has been devoted to going through all the issues of SFS in *Riksdagsbiblioteket* (the Riksdag Library) to include all tax tables for the earlier period of our examination. SFS (*svensk författningssamling*) is the Swedish code of statutes and official publication of laws enacted by the Swedish Parliament (*Riksdag*).

⁶ See, e.g., Roine, Vlachos and Waldenström (2009) and Rydqvist, Spizman and Strebulaev (2014). Historical studies of the Swedish tax system include Eberstein (1929, 1937), Genberg (1942), Elvander (1972), Hedlund-Nyström (1972), Jakobsson and Normann (1974), Rodriguez (1980), Rodriguez (1981), Gårestad (1987), Dahlgren and Stadin (1990), Du Rietz (1994), Söderberg (1996) and Löwnertz (2003). These studies incorporate extensive information about the Swedish tax system, and some of the results in our paper are derived from these

example, country-specific analyses covering marginal tax rates have been performed for the U.S. (Barro and Sahasakul 1986; Poterba 2004; Saez 2004), the U.K. (Orhnia and Foldes 1975) and Germany (Corneo 2005). However, none of these studies extends as far back as 1862, and these studies have not calculated the marginal tax *wedge* on labor income. Neither has the income at which the top marginal tax wedge begins to be applied been calculated. Hence, no one has thus far generated this type of data for Sweden, and we are unaware of any international study covering an equally long time span. Together with tax data for other economies, our data can be used to conduct long-term comparative analyses among countries.

This paper is organized as follows. In the next section, the marginal tax wedge on labor income is defined. Section 3 describes the different parts of the marginal tax wedge. Section 4 presents the evolution of marginal tax wedges on labor income. Section 5 concludes. Appendix A presents the sources underlying the calculations. Alternative computations concerning marital and household status are presented in Appendix B. In Appendix C, our results concerning tax rates and tax wedges are reported. Appendices D to J present extensive data, including all tax tables for the period examined, which enables the reader to calculate the marginal tax wedges for any income over the entire 1862–2013 period.⁷

2. The marginal tax wedge on labor income

2.1 Definition

Taxes on labor income drive a wedge between the price of labor paid by firms, and the net return on labor received by employees. This difference is formally called the tax wedge on labor income (or tax wedge for short). The tax wedge may influence the incentive to supply and demand labor, the magnitude of taxable income and the wage formation process. To further cross-country and longitudinal comparisons, we follow the standard of OECD (2011) and calculate the *marginal* tax wedge, t_w , as follows:

sources. Only Du Rietz has previously compiled longer time series of the marginal tax wedge. The most recent update, which covers the period 1952–2003, is published in Johansson (2004, 93–94, Table A1).

⁷ Appendix C reports annual data on wages, marginal tax rates and marginal tax wedges for the three investigated income categories. It also shows the top marginal tax rates, the top marginal tax wedge, the wage when the top marginal tax wedge begins to be applied and the relative top tax income threshold defined as the wage at which the top marginal tax wedge begins to be applied divided by the average annual wage of a production worker. Appendix D reports annual data on local income tax rates, consumption tax rates, state income tax rates and extra taxes, such as the defense tax. Appendix E reports the basic local and state income tax allowances. Appendices F, G and H report employee-paid social security contributions. Appendix I reports the earned income tax credit, and Appendix J reports employer-paid social security contributions.

$$t_w = 1 - \frac{(1-t_1)(1-t_2)}{(1+t_3)} \quad (1)$$

where t_1 is the marginal income tax; t_2 is the marginal social security contributions (SSCs) paid by employees; and t_3 is the marginal SSCs, including payroll taxes, that are added to the wage and paid by employers. The marginal tax wedge measures the difference between the total labor costs paid by employers and the net wage received by employees *as a result of a marginal increase in labor income*. The wedge is expressed as a percentage of the change in labor compensation, including SSCs.

Alternative definitions of the tax wedge add consumption taxes or adjust for the estimated benefit component of SSCs. The reason for the OECD to exclude consumption taxes is mainly methodological; data are occasionally missing or not sufficiently detailed, and there is no agreed-upon method to make the estimations comparable across countries when including them.⁸ However, for a long-term single country study of Sweden, it is possible to include consumption taxes in a consistent manner for a comparison over time. Hence, in the main text, we have calculated the tax wedge by excluding (Section 4.1) and including (Section 4.4) consumption taxes. Including consumption taxes, the definition of the marginal tax wedge is:

$$t_w = 1 - \frac{(1-t_1)(1-t_2)(1-t_4)}{(1+t_3)} \quad (2)$$

where t_1 is the marginal income tax, t_2 is the marginal SSCs paid by employees, t_3 is the marginal SSCs that are added to the wage and paid by employers and t_4 is the marginal consumption tax rate.

The inclusion or exclusion of consumption taxes will not alter our general conclusions. Likewise, the long-term evolution of the tax wedges remains the same if we also adjust the SSC for the estimated benefit component; see Appendix B.

2.2 Taxpayer characteristics

In 1972, the OECD began to report wage data on the average production worker, which was defined as the average gross wage earnings of adult, full-time manual workers in industry

⁸ See OECD (2009) for a further discussion of consumption taxes. The treatment of consumption taxes is also theoretically disputed (de Haan, Sturm and Volkerink 2004). Some proponents, such as Heady (2004), argue that consumption and income taxes will broadly have the same effect on the labor market and that it is the sum of these taxes that matters (a uniform sales tax will have the same effect as a proportional income tax on a worker who does not save). However, others argue that consumption taxes should not be included in the wedge because these taxes affect workers and non-workers alike (see the discussion in Daveri and Tabellini 2000, Immervoll 2004, Heady 2004 and Bassanini and Romain 2006).

sector D in the International Standard Industrial Classification of all Economic Activities, Revision 3 (ISIC Rev. 3). In 1979, the series on wage data were complemented with calculations on average tax rates and average tax wedges for two family types (single person and one-earner married couple) that were earning 100 percent of the average annual wage of a production worker (henceforth denoted APW). In 1997, the analysis was expanded to incorporate 12 tax measures (including marginal tax measures) for eight different types of taxpayers, characterized by different *family status* (single/married, 0–2 children), *economic status* (one-/two-earner household), and *wage levels* (67 percent, 100 percent and 167 percent of the APW). The OECD excludes *non-wage incomes*, such as capital income or business income, and only considers standard *tax relief* (such as basic allowances, *grundavdrag*). Non-wage incomes are generally small for employees, and the OECD seeks to focus on the tax treatment of wages. Moreover, the taxpayer's *wealth* is not considered because wealth does not impact the taxation of labor income in any OECD country in the period covered by the OECD.⁹

In 2005, the OECD switched to using an average worker as a wage base, which is defined as the average gross wage earnings of adult, full-time manual and non-manual workers in industry sectors C–K in ISIC Rev. 3, or its equivalent.¹⁰

In accordance with the OECD, we base our analysis on wage levels reported by the OECD and define a high-, average- and low-income earner as a taxpayer earning 167, 100 and 67 percent of the APW, respectively. Because the OECD changed its definition in 2005, we will use wage data on the APW from the Confederation of Swedish Enterprise (*Svenskt Näringsliv*) from 2005 to 2013 (Confederation of Swedish Enterprise 2014). These data do conform to the APW wage data provided by the OECD. In addition, we calculated the tax wedge according to the OECD's revised definition (not presented in this paper), and our main results are unaffected. To estimate the income level for the average-income earner before 1972, we used the average wage of a worker within the manufacturing and handicrafts sector, as presented in the dataset on labor income compiled by Edvinsson (2005).¹¹ Edvinsson's

⁹ See, e.g., OECD (2011) for an extensive discussion about the OECD's *Taxing Wages* approach.

¹⁰ Industry sectors C–K include the following: mining and quarrying (C); manufacturing (D); electricity, gas and water supply (E); construction (F); wholesale and retail trade and repair of motor vehicles, motorcycles, and personal and household goods (G); hotels and restaurants (H); transport, storage and communications (I); financial intermediation (J); and real estate, renting and business activities (K). According to OECD (2006), this change only produced minor effects on the tax measures.

¹¹ Edvinsson (2005) has compiled a long-term homogenous wage data series based on previous sources that have covered shorter and different time periods, e.g., Jungenfelt (1966). Edvinsson's dataset includes SSCs, and we have adjusted this series to obtain the wage level. The OECD's dataset does not include SSCs. Prado (2010) calculates hourly earnings for manufacturing workers 1860–2007.

wage data do not deviate significantly from the OECD's wage data, and linking the two series does not affect our results.

As will be discussed below, taxpayer characteristics do not substantially affect the general evolution of tax wedges. Many characteristics only affect the taxation of labor income for limited periods of the time span covered by our analysis, and different deductions and allowances are too small to significantly affect the marginal tax wedge. Moreover, the tax system's general structure makes tax wedges rather insensitive to different characteristics. For expositional purposes, we will show the tax wedges for single persons with no children and no wealth. In line with the OECD, we exclude non-wage income and only consider standard tax relief, such as basic allowances.

2.3 Wage level

There are full-time employees that fall outside the interval for 67–167 percent of the APW (0.67–1.67 APW). Nevertheless, our computations cover practically all these employees. As the low-income earner (earning 0.67 APW) will almost always be in the lowest tax bracket until World War II, taxpayers earning less than 0.67 APW faced the same marginal tax wedge as the low-income earner. When it differs, the difference is negligible. Hence, the evolution of the tax wedge for taxpayers earning less than 0.67 APW is basically the same as the tax wage for the low-income earner during this period. After World War II, the Swedish wage structure became compressed, and few full-time workers earned less than 0.67 APW (Bentzel 1952; Prado 2010; Bergh 2014).

At the other end of the income distribution, we find wage earners that report wages above the interval's upper limit. Some researchers argue that these earners are of strategic importance for economic development.¹² How does the tax wedge evolve for individuals earning two, three, five or ten APWs? As described below, in practice, the income tax system was largely proportional until World War II, and unless an earner's income was substantially higher, the tax wedge was roughly the same as that of our examined income categories. For example, even if the wage was 15 APWs, the marginal tax wedge in 1938 would remain less than five percentage points greater.¹³

¹² For instance, it has been argued that high taxes on highly specialized individuals affect the growth of high-tech firms, the commercialization of research and the localization of knowledge-intensive production and headquarters (see the discussion in Henrekson and Rosenberg 2001, Braunerhjelm 2004 and Birkinshaw et al. 2006).

¹³ The income tax system became progressive after the 1903 tax reform. It subsequently became more progressive as a result of tax reforms in 1911 and 1920, and in particular by the temporary taxes introduced

The income tax became more progressive after World War II, and the tax wedge for most employees earning more than 1.67 APW began to lie between that of the high-income earner and the top marginal tax wedge. The gap between the top tax wedge and the tax wedge on the high-income earner gradually narrowed, and it vanished altogether toward the end of the 1980s. To illustrate this narrowing gap, consider that it required 400 APWs to pay the top marginal tax wedge in 1938, 36 APWs in 1950, 13 APWs in 1960, seven APWs in 1970 and 2.5 APWs in 1980. From the late 1980s to the late 1990s, an income of 1.67 APW was sufficient to attain the maximum marginal tax wedge. The top marginal tax wedge exceeded the high-income earner's tax wedge by no more than four percentage points during the 2000s, which means that all, or almost all, full-time wage earners had a marginal tax wedge lying within the interval represented by the low- and high-income earner throughout the period examined.

2.4 Family and economic status

In Sweden, joint taxation of families was used until 1971. Married couples benefited from more generous basic allowances than single persons between 1920 and 1970; they also benefitted from lower tax rates than single persons earning a given taxable income between 1953 and 1970. Our analysis reveals that the more favorable treatment of married couples did not have a discernible effect on tax wedges before World War II. The marginal tax wedge was somewhat lower for one-earner married couples than for single persons after World War II until 1971. In addition, the tax wedge for married one-earner couples and single persons shows the same basic evolution. If both spouses were working, the favorable treatment was reduced and could even be reversed, that is, the marginal tax wedge for a two-earner married couple could be higher than that for single persons. In Appendix B, we show the evolution for married one- and two-earner households.

A child allowance was introduced in 1920 and was applied until 1948 on the state tax and until 1952 on the local tax. The local tax allowance had no direct effect on the marginal tax because the local tax was proportional. The tax allowance's direct effect on the state tax is zero or negligible because it is too small to influence our results (at most, it is approximately one percentage point for the high-income earner with two children).

during World War I and II, and the Depression. However, the vast majority of taxpayers faced nearly the same marginal tax rate due to very limited progressivity in 1903–1919 and a very wide first tax bracket in 1920–1938.

2.5 Non-wage incomes and tax relief

Business income earned by sole proprietors and partnerships—apart from certain options to retain income within the firm—was jointly taxed with labor income throughout the entire period examined, whereas capital income was jointly taxed with labor income between 1903 and 1991. Full-time employees generally report low or no income from business operations, and capital incomes are highly skewed (Roine and Waldenström 2008). Capital incomes are typically negative for “ordinary” income earners because interest on mortgages is deductible from other capital income, and when net capital incomes are positive, they are typically small. Interest costs may be high, particularly for younger taxpayers who recently began their careers, started families and bought homes.

In addition to the possibility of deducting interest costs, there are other non-standard tax relief measures, such as deductions of costs that are deemed necessary to earn one’s income. This relief was generally low and frequently limited by law. Du Rietz (1994) calculated the tax wedge between 1952 and 1993 and accounted for estimated interest costs and other non-standard tax relief with updated figures that spanned through 2003 in Johansson (2004). Comparing the marginal tax wedge from that study with our results, the differences are fairly small. The most significant difference arises between 1977 and 1982 and amounts to about five percentage points for the average-income earner between 1977 and 1982.¹⁴

2.6 Wealth

Combined wealth and income taxation (meaning that a part of wealth was included in taxable income) was used in Sweden between 1911 and 1947 (in addition, a separate wealth tax was introduced in 1934). Until 1938, one-sixtieth of wealth was considered state taxable income, and one percent was considered state taxable income after 1938. However, extensive wealth was required to more than marginally increase the marginal tax wedge. For example, in 1930, an average-income earner would have to hold wealth amounting to more than 200 times her/his annual labor income to affect the tax wedge, and this effect would increase the wedge by only about one percentage point.¹⁵

¹⁴ The OECD has conducted robustness tests on average tax rates, including non-standard tax relief. For Sweden, the estimated difference is approximately five percentage points or less (see, e.g., OECD 2010, 490f).

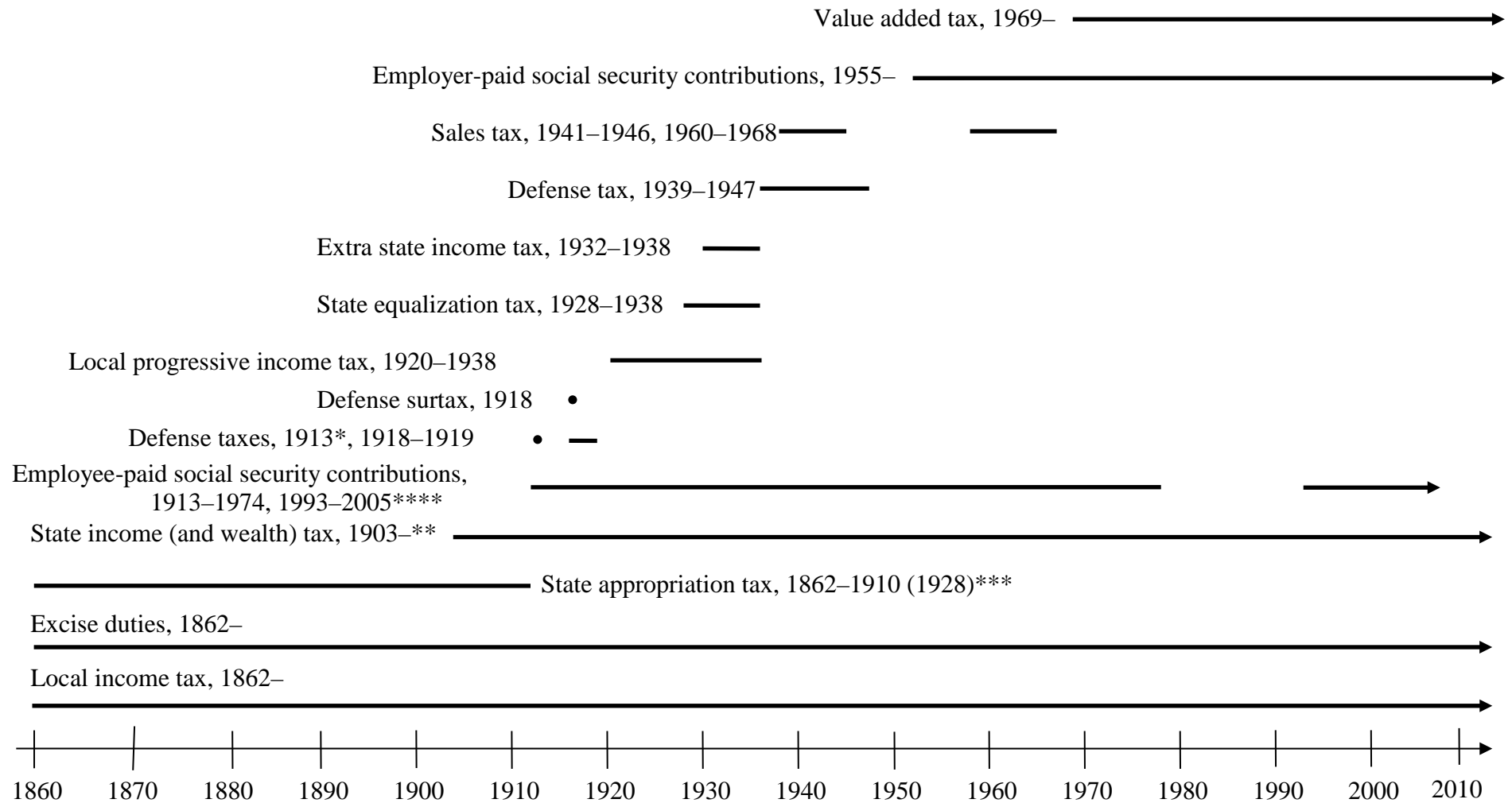
¹⁵ The defense taxes also included one-sixtieth or one percent of wealth in income, with the exception of the 1913 defense tax, which included one-tenth. Few people had wealth. In 1947, the last year when wealth was added to taxable income, about 320,000 persons had wealth above SEK 20,000, and most only marginally so. Fewer than 1,000 persons had wealth above SEK 1,000,000 (Statistics Sweden 1949, Table 260). For a more thorough description of wealth taxes, see Du Rietz and Henrekson (2015).

2.7 General tax structure

Generally speaking, the tax system's structure was such that considering other non-labor income, non-standard tax relief and wealth, would not materially alter the evolution of the tax wedges. The income tax was proportional until the 1903 tax reform, and changes in taxable income did not change the marginal tax wedge. Between 1903 and 1919, the income tax was slightly progressive; tax levels were low; and any small change in taxable income would only change the marginal tax wedge slightly without altering the general evolution. Between 1920 and 1938, progressivity was higher, but the tax brackets were wide; most taxpayers were situated in the lowest tax bracket. To alter the marginal tax wedge more than marginally, taxable income must change considerably. Hence, although deductions or increased income would imply that the income earner fell into a new tax bracket between 1903 and 1939, tax rate differences were small, and the effect on the marginal tax wedge was negligible.

After World War II, the income tax became more progressive, and tax brackets narrowed. However, even when deductions reduced taxable income and moved the income earner to a lower tax bracket, the tax rate differences were small, and the effect on the marginal tax wedge was minimal.

Figure 1. Summary of taxes affecting the marginal tax wedge on labor income, 1862–2013.



* The defense tax of 1913 was due in 1915, 1916 and 1917. ** Part of the taxpayers' wealth was included in taxable income between 1911 and 1947. *** The state appropriation tax was transformed into a local tax in the 1911 tax reform, and the appropriation system functioned as a parallel local tax system between 1911 and 1928.

**** Since 2006, the contributions have been fully compensated by an equally large tax reduction.

3. Development of the components of the marginal tax wedge

This section will briefly present the development of state and local income taxes and employer- and employee-paid SSCs. Figures are presented in the text to illustrate the development. Complete tables with all tax rates and tax brackets for the whole period examined are presented in the Appendices to avoid cluttering and a highly fragmented text. The presentation of the state income taxes is more extensive because it includes several major changes. In Sweden, income taxes have been paid to counties (*landsting*) and to municipalities (*kommuner*; local government) and to the state (*staten*; central government) throughout the period under review. Our computation of the state marginal income tax rates begins with a major reform of the so-called state appropriation tax system, which was implemented in 1862. Temporary taxes have been introduced in times of distress, most notably to rearm the military during the World Wars. Social security contributions were introduced in the twentieth century. Figure 1 summarizes the taxes that affect the marginal tax wedge on labor income.

3.1 Central government taxation, the state income tax¹⁶

Major state income tax reforms were implemented in 1862, 1903, 1911, 1920, 1939, 1948, 1971, 1983–1985 and 1990–1991.¹⁷ Initially, the tax system had a purely fiscal function, that is, taxes were collected to finance public expenditures; the state budget needed to be in balance. In the 1930s, the tax system's function was expanded to also dampen cyclical fluctuations and stabilize the economy by under- or over-financing the budget. Toward the end of the 1940s, the tax system also assumed a more pronounced redistributive function.

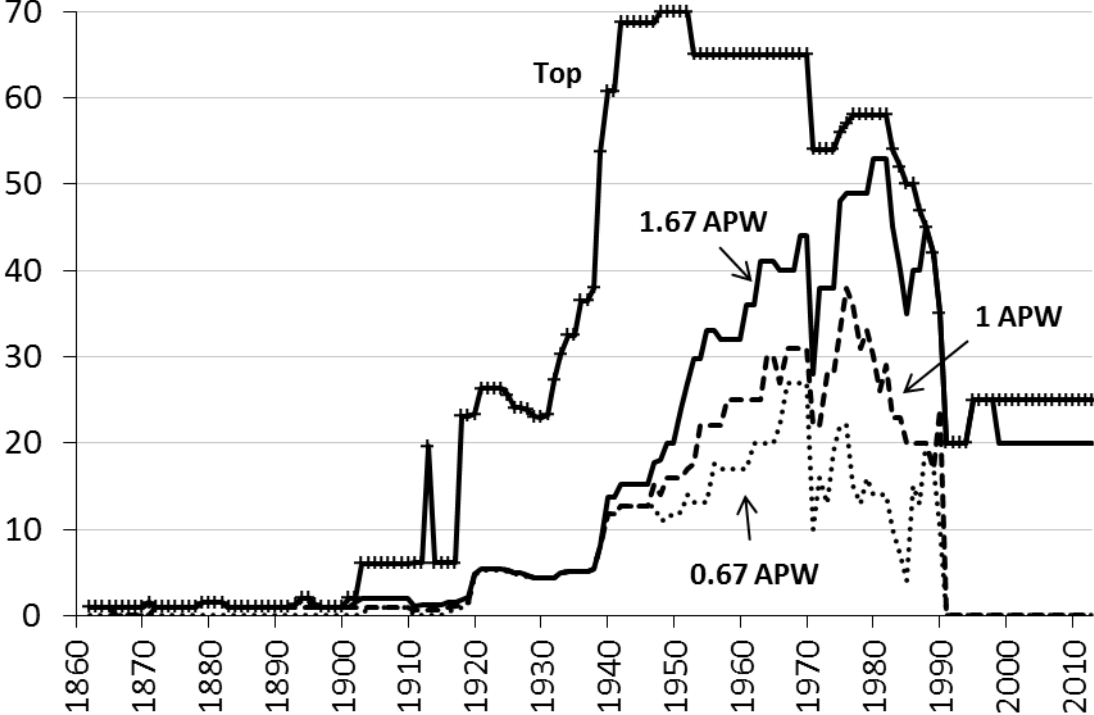
Alongside the ordinary state income tax, temporary taxes were in place during and between the World Wars. When the ordinary state income tax was reformed, temporary tax increases were often included in the new ordinary tax system schedule, and temporary tax increases were thus made permanent, which is largely true for the tax reforms in 1920, 1939 and 1948. Part of wealth was also included in taxable income between 1911 and 1947.

¹⁶ If not otherwise stated, this section is based on Eberstein (1929, 1937), Genberg (1942), Gårestad (1987), Rodriguez (1980) and Söderberg (1996). In this section, the term marginal income tax rate refers to the state marginal income tax rate.

¹⁷ Normally, new tax rules have been implemented in the year after approval, e.g., the tax system that was implemented in 1862 was approved in 1861. In the literature, the year associated with the introduction of a tax reform can either refer to the year the tax rules were approved or implemented. We use the year when the tax system was implemented.

The presentation below is divided into nine subsections to describe the major state tax reforms. Along with the state top marginal income tax rate, Figure 2 shows the state marginal income tax rates paid by our three categories of income earners.

Figure 2. State marginal income tax rates, 1862–2013 (%).



Note: The spike in the state top marginal income tax rate in 1913 refers to a temporary defense tax that was approved in 1914 but paid in 1915, 1916 and 1917. In 1918 and 1919, new temporary defense taxes were implemented. The dip in 1971 is explained by the adjustment of the state tax schedule due to the abolition of the deduction of local taxes paid.

Source: Own calculations based on sources detailed in Appendix A.

The income tax, 1862–1902

During the nineteenth century, Sweden had a state tax system based on so-called “appropriations,” which was a heterogeneous system with deep historical roots. A major reform was implemented in 1862 that simplified the system by reducing the number of income tax groups from eight to two (appropriation on real estate income and appropriation on labor or capital income). Alongside these income taxes, there were also some basic taxes (*grundskatter*) that can be characterized as lump-sum taxes. These taxes were largely phased out in the 1890s.

According to the appropriation system, the tax level on labor or capital income was normally set at one percent. Occasionally, additional appropriation taxes were levied if the ordinary appropriation taxes yielded insufficient tax revenue (Gårestad 1987, 204). The tax level could then increase to two percent of income.

The income tax, 1903–1910

A completely new state income tax system—which is considered the predecessor of today’s “modern” tax system—was implemented in 1903. Among other things, it became mandatory for all taxpayers to provide an income tax return. This tax system was slightly progressive. The old appropriation tax system was not abolished, and two parallel systems existed side by side, until a new state tax reform was implemented in 1911.¹⁸ The new tax system was accepted without major conflicts, partly because the proposed progressivity was very low and partly because public opinion strongly supported a new income tax to rearm the military. The reform’s main objective was to increase funding for public expenditures.

Although the income tax system was progressive, its progressivity was moderate. The marginal income tax rates varied from one to five percent. Taxpayers had to begin paying the lowest tax rate, one percent, for income above SEK 1,000 (roughly 1.3 APWs in 1903), which meant that most taxpayers did not pay the new income tax.¹⁹ The highest marginal income tax rate was paid for income above SEK 80,000 (which was analogous to more than 100 APWs in 1903). There was also an average tax cap that limited total state tax to at most four percent of taxable income. The old appropriation system continued to be used alongside the new system.²⁰

The income tax, 1911–1919

In 1911, the tax brackets were slightly revised. Tax-exempt income was reduced from SEK 1,000 to SEK 800, but at this income level, the marginal tax rate was only 0.4 percent. The top marginal income tax rate was increased to six percent, with an average tax cap of five percent of taxable income. One-sixtieth of taxpayers’ wealth was also added to taxable income to form a combined income and wealth tax system. At this point, the appropriation system was abolished as a state income tax and was transformed into a local tax. The tax was paid to the state, which distributed it to the local governments (Eberstein 1929, 131).²¹

¹⁸ The political voting system was differentiated and based on the appropriation paid. Abolishing the appropriation system would force a change in the voting law; many politicians feared this shift would prompt potential changes in the voting system, which was highly debated at the turn of the century. Equal voting rights for all males were introduced in 1909. For a thorough discussion of how voting systems affected tax systems in Western Europe, see Aidt and Jensen (2009).

¹⁹ SEK = Swedish kronor. There were roughly five Swedish kronor to the US\$ during the Bretton Woods era. In recent decades the exchange rate has, with few exceptions, oscillated between six and nine kronor to the dollar.

²⁰ In other words, the total marginal tax rate was one percentage point higher, including the appropriation tax.

²¹ The appropriation system worked as a parallel local tax system between 1911 and 1928, but at a symbolic tax level of 0.1 percent. Despite the reformed voting rules, it was difficult to abolish the appropriation system

As a result of World War I, temporary progressive defense taxes (*värmskatter*) were introduced for necessary military expenditures. The tax rates could be relatively high (up to 17 percent on the margin) but only affected people with high incomes.²²

The income tax, 1920–1938

After World War I, a new state income tax replaced the ordinary income tax and temporary defense taxes. This tax was thought to be more flexible and stable than previous systems. Technically, the tax structure—the tax brackets and the imposed progressivity—was fixed, but the specific tax rates were flexible and determined by Parliament on an annual basis. The idea was that politicians should be able to easily change state tax rates in accordance with perceived financial needs. Hence, there was no need to introduce and establish a new tax system when a change in tax revenue was deemed necessary. Another innovation within this tax system was the introduction of basic state (and local) income tax allowances. Amounts paid in local taxes were also deductible.

The tax was progressive, with marginal income tax rates running from 4.5–5.5 percent to 22–28 percent.²³ A tax cap remained, which restricted the average tax to 17.5–21.5 percent of taxable income. The first tax bracket was very wide (the upper limit corresponded to more than three APWs in 1920) and included the majority of all taxpayers.²⁴ As a result, although the new income tax schedule comprised 13 different tax brackets with rising marginal income tax rates, it could nevertheless be regarded as proportional in practice.

Several additional temporary state income taxes were introduced alongside this new income tax. In 1928, the local tax system was rearranged (see Section 3.2) and part of the local tax was transformed into a separate additional state income tax, called the equalization tax (*utjämningskatt*). Tax revenue from this tax was used to compensate municipalities that had weak tax bases or high costs as a result of their demographic structures. The tax was slightly progressive, but the tax rates were modest (initially 1.5 percent at most).

because the local tax system was also based on it (the voting system for local government was still based on taxes paid, although to a lesser degree, until 1919). Therefore, the appropriation system had to remain in place until the major reform of the local tax system in 1928.

²² In 1913, one had to earn approximately five APWs to begin paying this tax. The defense tax of 1913 was enacted in 1914 (hence, it was a retroactive tax) and was considered so onerous that payment was split over three years, 1915, 1916 and 1917 (Genberg 1942, 6).

²³ Because the tax rates were flexible, it is impossible to give exact tax rates. The tax rates refer to the rates used in practice during this time.

²⁴ In 1920, about 98 percent of all persons with a taxable income had a taxable income implying that they paid the lowest marginal state tax rate or no state tax at all (see Statistics Sweden 1923, Table 210).

Due to the Depression at the beginning of the 1930s, another temporary tax, the extra income tax (*extra inkomstskatt*), was introduced in 1932 to compensate for deteriorated tax bases and to finance increasing public expenditures. The extra income tax was slightly progressive; however, it only affected taxpayers with taxable incomes above SEK 6,000 (roughly 3.5 APWs) and had a top marginal income tax rate of four percent. Due to the increased need for tax revenue, the equalization tax rates and extra income tax rates were doubled in 1934 and 1936, respectively. A separate wealth tax was also introduced in 1934, although wealth was already partially taxed in the regular income tax system.

In practice, most people paid neither the state equalization tax nor the extra income tax. However, the tax rates in the ordinary tax system were also increased, which affected all taxpayers during the Depression. Revenue from the state income tax was now partly understood as an important means to finance expenditures in the social area.

Hence, the income tax remained mainly proportional. Nonetheless, the top marginal income tax levied on taxable income above SEK 1,000,000 (corresponding to almost 500 APWs) was significantly higher than that levied on the majority of the population.

The income tax, 1939–1947

Just before World War II, the rates in the ordinary tax system were raised, and the state equalization tax and extra income tax were abolished. In effect, the temporary tax increase was made permanent in the ordinary income tax system. The average tax cap was also removed from the tax system. The part of wealth that was added to and taxed as income was reduced, whereas the separate wealth tax was extended.

Technically, the income tax consisted of one flexible tax rate (the bottom tax/*bottensskatt*), determined by Parliament on an annual basis, and one fixed tax rate (the surtax/*tillägsskatt*). That is, this income tax was partly constructed in the same way as the one it replaced. The bottom tax was only slightly progressive, whereas the surtax was highly progressive. However, the surtax was only levied on high incomes (corresponding to more than three APWs in 1939). All in all, these changes resulted in increased progressivity in the tax system.

Although the equalization tax and extra income tax were abolished to simplify the income tax system, a new, supposedly temporary, defense tax (*värnska*tt), was introduced in 1939. This defense tax was a highly progressive income tax that was to be paid by most taxpayers. It was raised in 1940 and 1942. This tax and the defense tax during World War I were similarly motivated; they were both supposed to be used to strengthen military capacity.

It is also clear that the government had an increasing interest in raising taxes for social and distributional purposes (Rodriguez 1981, 32–33). Due to rising military tensions throughout the world at that time, the 1939 tax reform stirred little debate or criticism. It was passed almost unanimously.

In practice, the income tax implemented in 1939, and the defense tax combined with high inflation and high wage increases caused a sharp increase in the marginal income tax rate for many taxpayers.

The income tax, 1948–1970

The tax system was changed once again in the 1948 tax reform. The progressive defense tax was abolished while the tax level and progressivity in the ordinary income tax system was increased. The highest *state* marginal income tax rate was 70 percent and was paid by taxpayers with an annual income of approximately 40 APWs in 1948. This tax rate was almost twice as high as that of the ordinary income tax that was replaced, but it was roughly the same when including the temporary defense tax. The higher tax level that had been approved as a temporary tax measure during World War II was thus made permanent for many taxpayers. As military expenses declined, tax revenue could be used for other public expenditures. The separate wealth tax was also raised, whereas inclusion of part of the taxpayer's wealth in taxable income was discontinued.²⁵

²⁵ Beginning in 1947, tax collection at the source (*källskattesystemet*) was introduced, which made employers responsible for withholding taxes before paying out wages and salaries. Before 1947, the employees themselves had to pay their income taxes one or two years after receipt of their wages and salaries.

This tax reform provided the foundation of the Swedish system with a high and progressive tax schedule and a high level of public expenditures. In addition to financing expenditures, tax revenues were used to meet distributional objectives (Lodin 2011, Chapter 2). As a result, the fiscal policy debate in Parliament was unusually intense before passage of this new income tax (Elvander 1972; Rodriguez 1981).

The income tax schedule was slightly adjusted several times during the 1950s and the 1960s (1952, 1953, 1957, 1962 and 1966). In nominal terms, these adjustments were minor tax reductions. For instance, the top marginal income tax rate was lowered to 65 percent in 1953.²⁶ However, none of these adjustments was sufficient to prevent tax increases in real terms when price and wage inflation pushed taxpayers into higher tax brackets. Marginal income tax rates thus continued to rise during this period.

The income tax, 1971–1982

In 1971, a new income tax was introduced to address at least two unintended consequences that evolved in the current tax system. First, because the local tax was deductible, the increase in local tax rates meant that state taxable income was reduced, which simultaneously reduced state revenue and benefitted high-income earners with high marginal income tax rates. Second, an income tax system with high progressivity and joint taxation of families made it unfavorable for second income earners (generally the wife) to work outside the household.²⁷

The 1971 tax reform implied that the local tax was no longer deductible. State income tax rates were lowered, but the total marginal income tax rate could be substantially higher when the local tax had to be paid in full but also lower for low-income taxpayers. For redistributional purposes, marginal income tax rates were further increased.²⁸ Individual taxation of spouses also became compulsory.

High inflation rates and the nominal progressive tax system made it necessary to adjust tax schedules on a regular basis to keep the real tax level constant and dampen inflationary pressures. These tax rate cuts were focused on low-income earners who faced lower marginal income tax rates. However, to avoid having the decreased marginal income tax rates in the lowest tax bracket result in lower total taxes for high-income earners, marginal

²⁶ However, the income when this new top marginal tax rate began to apply was substantially decreased (40 percent in nominal terms).

²⁷ However, separate income tax schedules for married and unmarried taxpayers, with somewhat lower rates for married income earners, were introduced as early as 1953. In 1966, voluntary individual taxation was also introduced (Söderberg 1996). See Appendix B for some calculations for joint taxation.

²⁸ Lindbeck (1997, 1275) concludes: “The efforts to redistribute income via very high marginal tax rates increased gradually, culminating in the 1971 tax reform.”

income tax rates for average- and high-income earners were increased, which resulted in an increased progressivity of the tax system (Jakobsson and Normann 1974; Söderberg 1996; Lodin 2011).²⁹ To finance the nominal tax cuts on low incomes, the SSCs were increased between 1973 and 1977 because the tax increase for high-income earners was not enough to finance the reform.³⁰ In 1978, tax brackets were tied to the consumer price index, and an explicit marginal tax cap was introduced in 1980 to avoid excessive marginal income tax rates. The tax cap initially restricted the total marginal income tax rate to 80 and 85 percent in the two highest tax brackets, respectively.

The income tax, 1983–1990

Sweden's top marginal income tax rate increases came to an end with the introduction of the marginal tax cap in 1980. With high marginal income tax rates and favorable deduction provisions, taxpayers had strong incentives to avoid taxes by incurring deductible costs and debt services, including, in particular, interest payments on housing. As interest payments on housing were fully deductible at the same time that inflation was high and interest rates on housing were subsidized due to regulations, the real cost of housing was substantially reduced, and even strongly negative, that is, “you got paid for owning a house.” In 1981, a coalition of parties in Parliament—which did not include the Conservative Party (*Moderaterna*) or the Communist Party (*Vänsterpartiet kommunisterna*)—jointly agreed to change the tax system and to gradually reduce marginal income tax rates to mitigate the distortions they caused.

Between 1983 and 1985, the marginal income tax rates decreased by five to 15 percentage points for the same nominal income at the same time as the scope for deductions was reduced.³¹ The policy made it considerably more expensive for taxpayers with high

²⁹ Real net wage increases—demanded by workers and trade unions—required high nominal wage increases due to the high marginal tax rates. However, high nominal wage increases may push wages into higher tax brackets with even higher marginal tax rates for many taxpayers, which increased the nominal wage demand even further. Inflation increased from 4.1 percent on average during the 1960s to 9.2 percent on average during the 1970s. Lodin (2011, 43–44) claims that income taxation was trapped in a “vicious cycle of self-generating reforms” with a constant need for tax reforms that increased the progressivity of the system. He also claims that an industrial worker during this period would need an annual wage increase of about 20 percent to avoid a drop in the real after-tax wage.

³⁰ This policy of financing decreases in income taxes by increasing SSCs has been called the “Haga policy” after negotiations conducted at the Haga Castle between the government, the opposition parties and the labor market organizations in the 1970s. The opposition parties were against the idea of financing the inflation adjustment of the tax rates. Because there was no tax decrease in real terms, no compensation was called for; compensation made the tax increase, which was caused by high inflation, permanent by increasing other taxes. Although the marginal tax rate was decreased in nominal terms, the average tax rate and the marginal tax rate in real terms did not decrease.

³¹ This tax reform is known as “the tax reform of the wonderful night” (*den underbara nattens skattereform*).

marginal income tax rates to incur debt and pay mortgage interests. The tax reform in 1983–1985 can be characterized as a tax switchover from labor income taxation to SSCs and consumption taxes.³² However, the marginal income tax began to rise again for many income earners after the reform.

Alongside these changes, the marginal tax cap in the highest tax bracket was reduced to 84 percent in 1983, 82 percent in 1984 and 80 percent in 1985. Marginal income tax rates were also slightly reduced between 1987 and 1989, and the number of tax brackets was greatly reduced. By 1987, the marginal tax cap no longer served any purpose and was abolished.

The income tax, 1990–2013

In the late 1980s, the government summoned three committees to thoroughly analyze the Swedish tax system. Leading politicians and labor market agents urged for major tax reform—a Swedish equivalent to the tax reforms that had been implemented in many other Western countries.³³ As a result, a major tax reform was implemented in two steps in 1990 and 1991 that was called “the tax reform of the century” (*århundradets skattereform*). The tax reform substantially reduced marginal income tax rates and greatly diminished the scope for interest payment deductions. The reform, which aimed to be revenue-neutral, was financed by a broadened tax base for the corporate income tax (fewer accounting provisions) and for the VAT, taxation on formerly untaxed employee benefits and full taxation of capital gains.³⁴

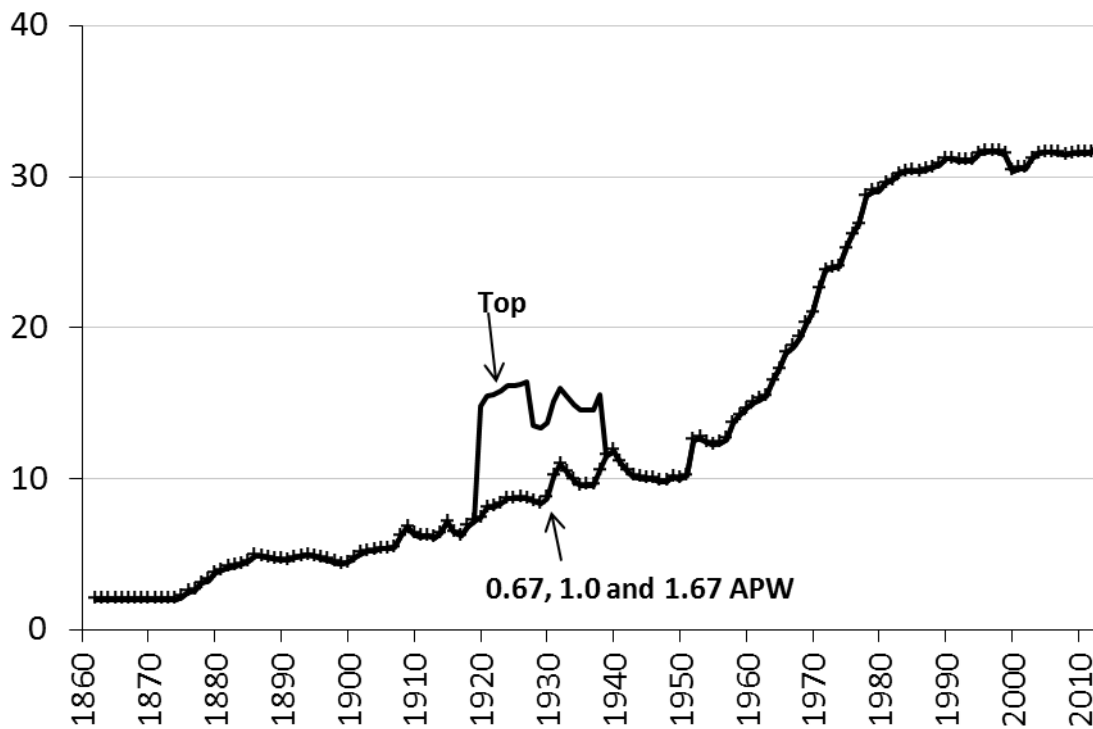
The tax schedule consisted of one state income tax rate, 20 percent. At this point, most taxpayers only paid labor income tax to the municipality. As a result of the depression of the 1990s, the tax rate was increased to 25 percent and then split into two new tax brackets with tax rates of 20 and 25 percent, respectively. In 2007, an earned income tax credit was introduced and extended four times during the 2008–2013 period. A minor tax credit for low- and average-income earners was put in place between 1999 and 2002.

³² Note that our calculations do not include the effects of deductions. As long as the deduction implied that the taxpayer’s taxable income was still in the same tax bracket, only the average and not the marginal tax rate was altered by this change. Calculations including effects of estimated deductions of interest costs, commuting costs and other deductible expenses for the years between 1952 and 2003 can be found in Du Rietz (1994) and Johansson (2004). Including the effect of deductions, the marginal tax rate may have been somewhat lower (at most five percentage points) before the tax reform.

³³ For example, in 1988, Kjell-Olof Feldt, Minister of Finance, and Stig Malm, the leader of the Swedish Trade Union Federation (*Landsorganisationen*, LO), said at a highly publicized press conference that the Swedish tax system had become “rotten and perverse” (Feldt 1991).

³⁴ See Agell, Englund and Södersten (1995, 1998) for a detailed examination of the tax reform.

Figure 3. Local marginal income tax rates, 1862–2013 (%).



Note: Statistics on local taxes are incomplete before 1875. We impute a tax rate of two percent between 1862 and 1874.

Source: Own calculations based on sources detailed in Appendix A.

3.2 Local government taxation, the local income tax

A major reform of the local tax system was implemented in 1863, which simplified the system and included a proportional income tax. Previously, the system had been highly complex, with major differences across municipalities. Still, a few small lump-sum taxes and in-kind taxes were retained, but these were gradually abolished in the late nineteenth and early twentieth century and transformed into monetary taxes based on taxable income. In the nineteenth century, the marginal local tax rate was low and gradually increased from approximately two to five percent.

After having stayed flat for more than a decade, the local tax rate began to gradually rise again in the first few years of the twentieth century, reaching a level of roughly seven percent in 1920. With the state tax reform in 1920, a provisional local tax reform was implemented (*kommunalskatteprovisorium*) and, for instance, basic allowances were introduced for the local income tax (as had been done in the state income tax system). The local tax was also deductible and reduced state taxable income and, as a result, lowered the required tax payments to the central government.

An extra local progressive tax was also introduced parallel to the ordinary local income tax but based on state taxable income. The top marginal income tax rate was eight percent, but it had an average tax cap of six percent. The high tax rates were only applicable on very high incomes. Initially, one had to earn about two APWs to begin paying this tax, and the marginal income tax rate was then only 0.5 percent. Only people earning at least 70 APWs paid the top marginal rate of eight percent.

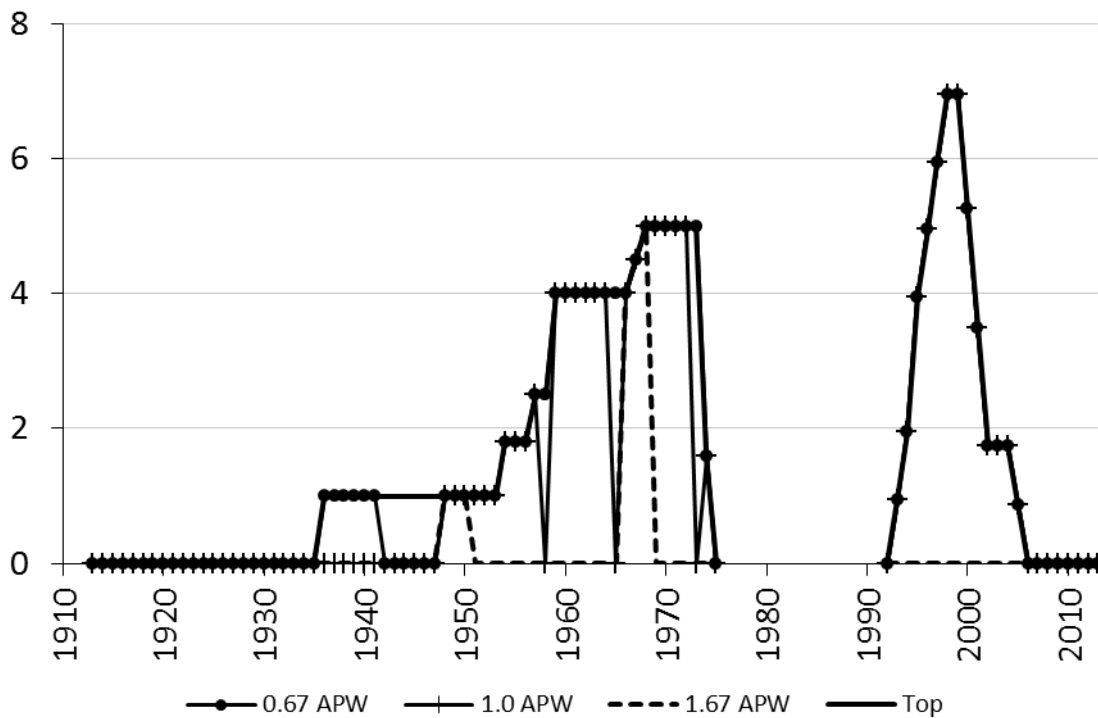
In 1928, a major local tax reform was implemented that mainly affected the technical and legal part of the local tax. This reform still constitutes the foundation of the local tax system (Skatteverket 2013). However, the local progressive tax was rearranged, and part of it was transformed into an additional state income tax, the equalization tax described above. The remaining tax was abolished in 1938. This tax had a top marginal income tax rate of five percent and an average tax cap of 4.5 percent. In 1930, the ordinary local tax rate had increased to approximately ten percent, and it fluctuated near this level until the end of World War II.

At the beginning of the 1950s, the local tax rate began to increase rapidly. The tax rate was 10 percent in 1950, 15 percent in 1960, and 20 percent in 1970, that is, it doubled in twenty years. The increase can largely be explained by increased obligations for local governments, which were often decided at the national level. In addition, rapid urbanization led to high costs, which were financed by local taxes. Because the local tax was deductible, the effect of the sharply increasing local tax rates was reduced. In addition, the basic local income tax allowance was steeply increased in 1958, which also served to reduce the effect of increased tax rates. The 1971 tax reform abolished the deductibility of local tax payments from the tax base for state tax income. The local tax rate continued to increase in the 1970s, approaching almost 30 percent in 1980. The rapid rise then came to a halt, and the tax has only increased by some two percentage points since 1980.

Along with the local top marginal income tax rate, Figure 3 shows the local marginal income tax rates paid by our three categories of income earners. Ignoring the temporary local progressive tax, the figure shows that the local tax increased slowly before World War II.³⁵ After the War, it increased faster and almost tripled by 1980. Since then, it has increased very little.

³⁵ Including the temporary local progressive tax, the top tax rate increased profoundly between the World Wars. As the figure shows, this tax did not affect the examined income categories.

Figure 4. Marginal employee-paid SSCs, 1913–2013 (%).



Note: The required contributions were often fixed within certain pre-determined income brackets. Hence, the marginal effects within the brackets were zero. Alternative measures to approximate the marginal effect for income increases between tax brackets would increase the marginal SSCs by at most one percent.
 Source: Own calculations based on sources detailed in Appendix A.

3.3 Employee-paid social security contributions

Employee-paid social security contributions consist of many components, several of which have been introduced and abolished during the period under study. Figure 4 depicts this evolution. In 1913, employees began paying the first SSC, the national basic pension contribution (*folkpensionsavgift*). Until 1935, the contribution was rather small and was specified as a fixed amount within certain tax brackets; hence, the marginal effect within the brackets was zero. Beginning in 1936, this contribution was one percent of taxable income (up to a cap). The rate increased slowly to five percent by 1973. It was then transformed into an employer-paid SSC. In 1955, a sick leave benefit fee (*sjukförsäkringsavgift*) was introduced, which was partly financed by an employee-paid SSC. As with the national basic pension contribution, the sick leave benefit fee paid by the employee was quite small and was specified as a fixed amount within certain tax brackets. This contribution also had an upper income cap, above which no contribution was paid, and the marginal effect was zero. In 1974, when the national basic pension contribution was converted into an employer-paid contribution, the sick leave benefit fee was abolished. Hence, beginning in 1975, employees paid no SSCs.

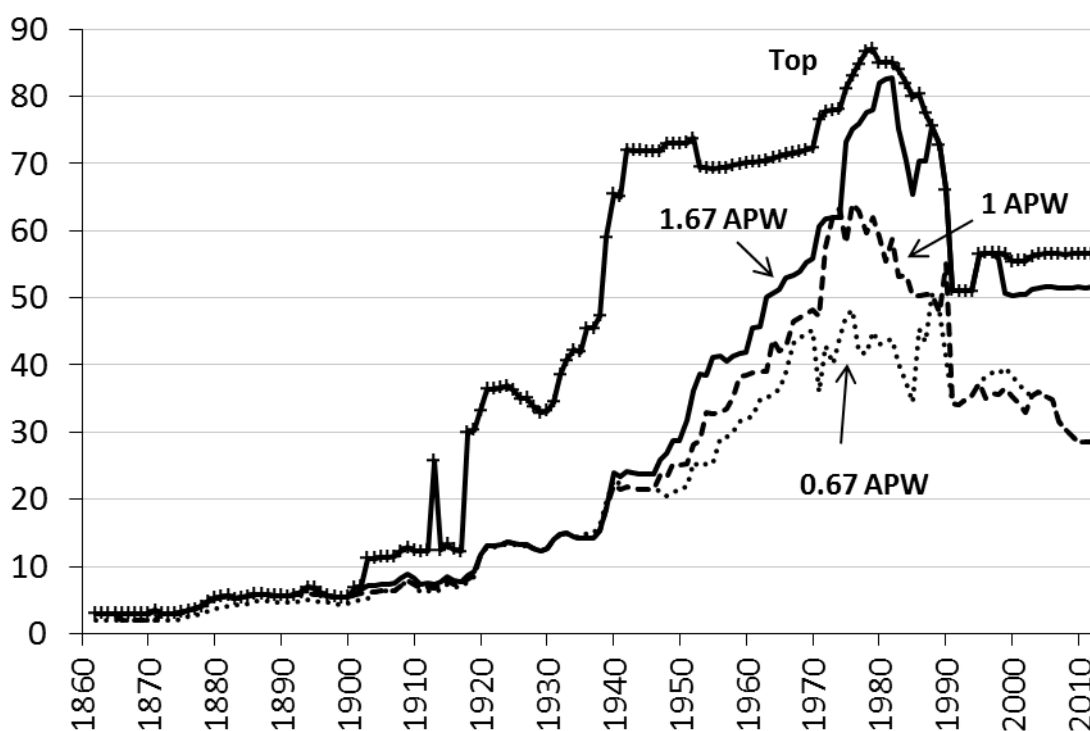
Employee-paid SSCs were reintroduced in 1993 and were called general SSCs (*allmänna egenavgifter*). The rate increased from 0.95 percent in 1993 to seven percent in 2000 (up to an income cap, which changed annually). At the beginning, these SSCs consisted of three parts: universal health insurance, universal unemployment insurance and universal pension insurance. Beginning in 1998, they consisted only of universal pension insurance (Skatteverket 1998, 48). Beginning in 2000, the contributions were compensated by a tax reduction. Since 2006, the contributions have been fully compensated and do not affect the marginal tax or the marginal tax wedge (Skatteverket 2006, 72).³⁶

3.4 The marginal tax rate

The marginal tax rate, that is, the combined effect of the state and local income tax rates and employee-paid SSCs, is shown in Figure 5. It largely follows the same evolution as the state marginal income tax rate. At the end of the 1980s, the formal top marginal tax rate coincided with the actual marginal tax rate paid by the high-income earner. In 1980, the marginal tax cap was introduced. The state tax reforms in 1983–1985 and 1990–1991 lowered the top marginal tax from at most 85 percent to approximately 57 percent in 2013, including a state income tax of 25 percent and local income tax of, on average, approximately 32 percent. At the end of the period examined, the marginal tax rate was approximately 30 percent for the low- and average-income earners (who only pay local income taxes) and approximately 52 percent for the high-income earner (including a state income tax of 20 percent and the local income tax). Since 2007, the tax rates have decreased for the low- and average-income earners due to the earned income tax credit.

³⁶ There is still a marginal effect on small incomes that fall far below the incomes of full-time employees (Skatteverket 2006, 72).

Figure 5. Marginal tax rates, 1862–2013 (%).



Note: The marginal tax rate is the sum of the state and local marginal income tax rates as well as SSCs paid by employees, considering that the local income taxes were deductible from the state income tax base between 1920 and 1970.

Source: Own calculations based on sources detailed in Appendix A.

3.5 Employer-paid social security contributions

Employer-paid SSCs also consist of many components, which have been introduced and abolished over the years. Before 1982, the contributions differed substantially depending on income.

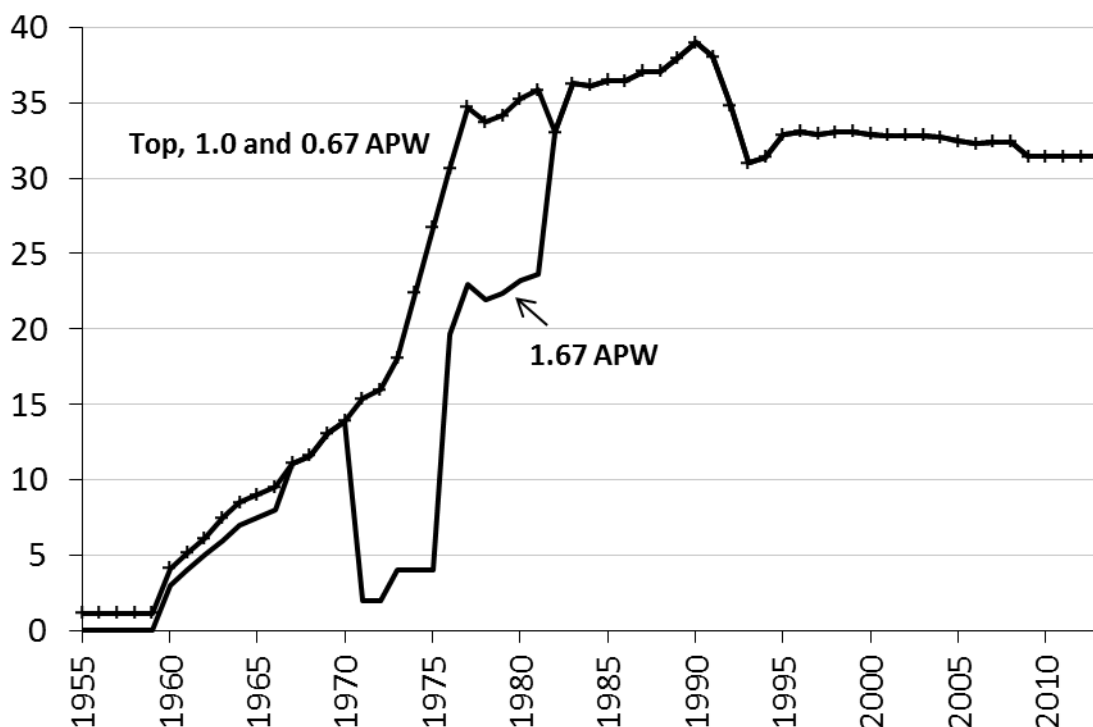
In 1955, together with the introduction of the second employee-paid SSC, the first employer-paid SSC (a sick leave benefit fee) was implemented. This employer-paid SSC was 1.14 percent of the wage. In 1960, two new employer-paid SSCs were introduced, the national supplementary pension contribution (*ATP-avgift*), at a rate of three percent, and the work injury insurance contribution (*arbets-skadeavgift*), at a rate of 0.4 percent. These contributions were increased in the 1960s, and an unspecified payroll tax (*allmän arbetsgivaravgift*) was introduced in 1969 at an initial rate of one percent, which increased to four percent in 1973.

Due to the so-called “Haga policy” discussed above, the employer-paid SSCs continued to rise in the 1970s, and the national basic pension contribution was converted into an employer-paid contribution in 1974. As with the employee-paid SSC, all these

contributions had income caps. The caps in the employer-paid SSCs were removed in two steps in 1976 and 1982, which mainly affected high-income earners. In 1982, when all caps had been removed, the rate of the SSCs had increased to 33 percent and was the same for all workers, independent of income. In the 1990s, employer-paid SSCs began slowly to decline, although new contributions were introduced in the late 1990s (the parental insurance contribution, *föräldraförsäkringsavgift*, and the survivors' pension contribution, *efterlevandepensionsavgift*).

Figure 6 presents the top marginal employer-paid SSCs and the marginal employer-paid SSCs for the three income categories. The top marginal SSCs coincide with the marginal SSCs for the low- and average-income earners. The SSCs increased sharply in the 1960s and 1970s and then decreased slightly during the crisis in the early 1990s. During the 1970s, the marginal SSCs were much lower for high-income earners due to income caps implying that high-income earners only paid some of the SSCs on marginal income increases. Due to the removal of income caps, marginal SSCs increased sharply in 1976 and 1982.

Figure 6. Marginal employer-paid SSCs, 1955–2013 (%).

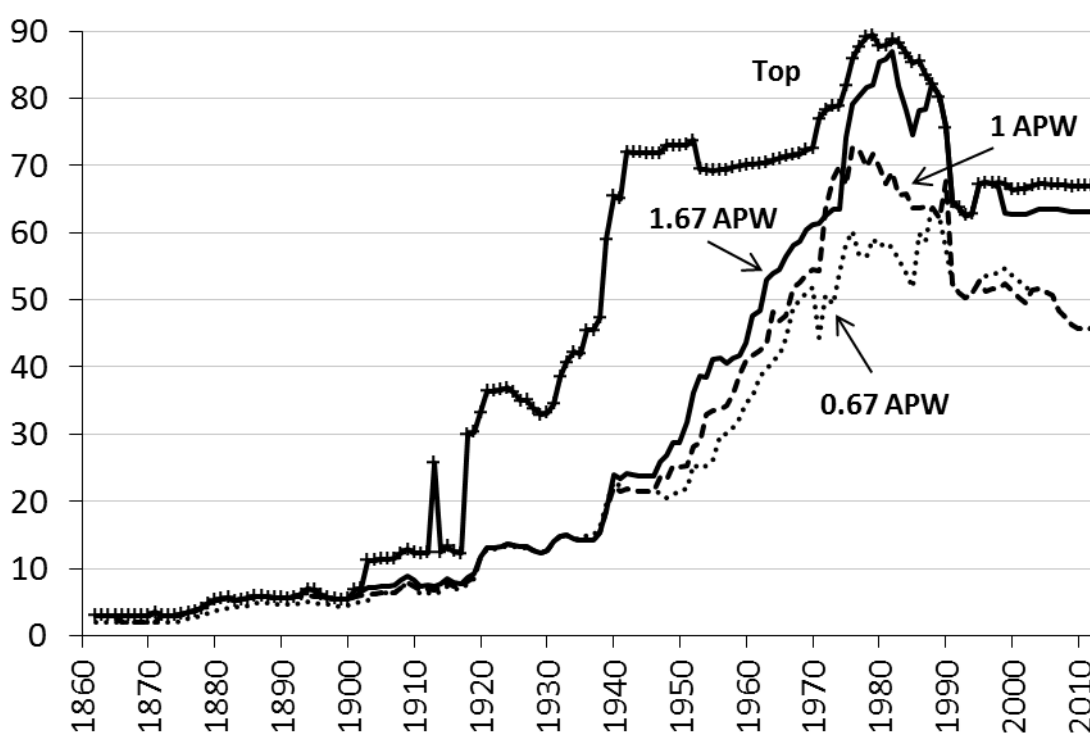


Note: Top refers to the highest possible marginal SSCs rate.
Source: Own calculations based on sources detailed in Appendix A.

4. The marginal tax wedge on labor income

We now present the development of the marginal tax wedge on labor income, that is, the combined marginal effect of all the taxes described above. The marginal tax wedge is presented for the three income levels and the income level at which the top marginal tax wedge begins to be applied. Figure 7 depicts the marginal tax wedge for our three categories and the top marginal tax wedge between 1862 and 2013 (excluding consumption taxes). Figures 8a, 8b and 8c depict the top marginal tax wedge and the income level at which the top marginal tax wedge begins to be applied. Figure 9 depicts the marginal tax wedge, including consumption taxes.

Figure 7. Marginal tax wedges on labor income, 1862–2013 (%).



Note: In the early 1970s, the tax wedge of the average-income earner is higher than that of the high-income earner due to the much lower marginal SSCs paid by the high-income earner. In the late 1990s, the tax wedge of the low-income earner is higher than that of the average-income earner, as the low-income earner's basic allowance decreases as income increases, which affects the marginal tax rate for the low-income earner.
Source: Own calculations based on sources detailed in Appendix A.

4.1 The marginal tax wedge for the low-, average- and high-income earner

Figure 7 shows that the marginal tax wedges for the examined income categories were all approximately three percent in 1862. At the turn of the twentieth century, these wedges had increased to approximately five percent. The main explanation was higher local taxes. Nonetheless, the marginal tax wedges were low compared with future levels.

Until the 1920 tax reform, the marginal tax wedges increased only slightly for the three income categories. Although the state income tax schedule was progressive, the marginal tax wedges were about the same because progressivity did not set in until higher levels of income. The defense taxes during World War I did not affect our three income categories.

At the beginning of the 1920s, the marginal tax wedges began to increase due to the new state tax system and increasing local taxes. The wedges oscillated around 12 percent. Nevertheless, there were no major differences in the wedges across the three categories. During the Depression, the introduction of temporary taxes and the ordinary tax rate increases led to marginal tax wedge increases. The marginal tax wedges did not decline after the Depression, and the wedges were approximately 15 percent in 1938.

Along with the 1939 tax reform, new temporary defense taxes further increased the marginal tax wedges. At this point, the wedges of the three income categories began to diverge slightly. At the end of the war, the marginal tax wedge was between 20 and 25 percent. The increase was driven by the changes in the state income tax system. The combined effect of the new tax system in 1939 and the defense taxes was large for the state marginal income tax rate. Compared to ten years before, the state marginal income tax rate had almost tripled for the low-income earner and more than tripled for the high-income earner by 1947. In addition to higher formal tax rates, the progressive nominal tax schedule, high inflation and high wage increases automatically increased marginal income tax rates during World War II.

The wedge increases were made permanent after World War II, when the defense taxes were abolished and a new tax system was introduced. The marginal tax wedge had roughly doubled in 20 years. After World War II, the marginal tax wedge continued to increase. In 1960, the marginal tax wedge was approximately 35 percent for the low-income earner and slightly and well above 40 percent for the average- and high-income earners, respectively. The driving force behind this sharp increase was, again, price and wage inflation and the highly progressive tax schedule introduced in 1948, which pushed taxpayers into higher tax brackets with higher marginal income tax rates. This inflation-driven tax increase mechanism implied that Parliament did not have to pass new tax laws to increase tax rates and tax revenue.

In the 1960s, this development continued, but the marginal tax wedge increases were also a result of increasing SSCs. In 1970, the marginal tax wedges were approximately

50, 55 and 60 percent, respectively, for the three income categories. The marginal tax wedge had again doubled over a 20-year period.

In 1971, efforts to redistribute income culminated in the implementation of a new tax reform. The progressivity of the income tax was strengthened. Later, the so-called “Haga policy” of the 1970s attempted to dampen marginal income tax rate increases. However, even when the statutory state marginal income tax rates were reduced, particularly for low- and average-income earners, the local income tax rates and, in particular, the SSCs continued to increase. Moreover, the local tax was no longer deductible. In tandem with this development, inflation accelerated during the 1970s, which led to increased bracket creep. As a result, the marginal tax wedge continued to increase for the high-income earner but fluctuated for the low- and average-income earners. Around 1980, the wedges were approximately 60, 70 and 85 percent, respectively, for the three income levels analyzed. Marginal tax wedges had thus tripled in 40 years.

The 1983–1985 tax reform reduced the marginal tax wedge for all three income categories by 5–10 percentage points, whereas it fluctuated for the remainder of the 1980s. The 1990–1991 tax reform decreased marginal tax wedges by 10–15 percentage points. At the end of the period examined, the marginal tax wedge was approximately 46 percent for the low-income earner, approximately 48 percent for the average-income earners and approximately 63 percent for the high-income earner.

4.2. The top marginal tax wedge

In addition to the marginal tax wedge at three income levels, the evolution of the top marginal tax wedge over time also commands our attention.

To prevent extreme tax rates, tax caps have occasionally been introduced. Average tax caps were in place between 1903 and 1938 on the state income tax and between 1920 and 1938 on the local progressive tax. These tax caps reduced the marginal tax rates on very high incomes, which implied that the top marginal tax rate did not apply to the highest income levels. An explicit marginal tax rate cap was in place between 1980 and 1987 for the marginal tax rate (including both the state and the local taxes). This cap directly reduced the top marginal tax rate and tax wedge.³⁷

Figure 7 shows that the top marginal tax wedge was low during the nineteenth century and the early twentieth century compared with later levels. During World War I, the

³⁷ There were also tax caps that restricted the sum of wealth and income taxes (see Du Rietz and Henrekson 2015).

top wedge rose sharply. The postwar tax reform and the introduction of a local progressive tax meant that the top marginal tax wedge increased from about ten percent to 35 percent in 20 years. About half of the effect can be attributed to the state marginal tax rate.

During the 1920s, the top marginal tax wedge decreased slightly when the economy was booming. During the 1930s and the Depression, new taxes were imposed and ordinary tax rates increased. As a result, the top marginal tax wedge increased again to almost 50 percent.

The top marginal tax wedge continued to increase after the Depression to more than 70 percent during World War II. The increase was mainly caused by supposedly temporary tax increases to strengthen military capacity. However, this level was maintained after the war and throughout subsequent decades. The top marginal tax wedge increased slowly due to increasing local taxes and slowly increasing SSCs. However, the top marginal tax wedge was slightly reduced in 1953, when the top marginal state tax rate was lowered. In the 1970s, the top marginal tax wedge again increased more sharply due to increased income taxes and increased employer-paid SSCs. The top marginal tax wedge peaked at almost 90 percent at the end of the 1970s.

The top marginal tax wedge was slightly reduced due to the marginal tax cap and the tax reform in the first half of the 1980s. However, it was not until the major 1990–1991 tax reform that the top marginal tax wedge substantially decreased to approximately 65 percent. Since that reform, the top marginal tax wedge has slightly increased. In 2013, the top marginal tax wedge was at the same level as it was at the beginning of World War II.

The top marginal tax wedge has often been substantially higher than the marginal tax wedge for the high-income earners (1.67 APW). The figures begin to deviate at the beginning of the twentieth century with the new tax system. Nonetheless, the top marginal tax wedge was moderate at that time compared with later levels. The marginal tax wedge paid by the high-income earners deviated sharply from the top marginal tax wedge between the wars. At the end of the 1930s, the top marginal tax wedge was almost 50 percent, whereas the marginal tax wedge of the high-income earner was less than half that value.

After World War II, high inflation and bracket creep pushed all three types of income earners closer to the top marginal tax rate. Around 1980, the tax wedge of the high-income earner peaked at close to 90 percent. By the end of the 1980s, the formal top marginal tax wedge coincided with the actual marginal tax wedge of the high-income earner at approximately 80 percent, and these figures continued to roughly coincide during the remainder of the period.

The evolution clearly shows how temporary tax increases during the World Wars and depressions, are made permanent after the crises. The top marginal tax wedge increased stepwise until the beginning of the 1980s and then decreased.³⁸ The early development supports the idea that the acceptable burden of taxation increases during crises and the acceptance of a higher tax level remains following the crises, leading to a stepwise increasing function of tax rates.³⁹ The sharp decrease in marginal tax wedges after the tax reform at the beginning of the 1990s represents a break from this pattern.

4.3. The relative top tax income threshold

Considering the income at which the top marginal tax wedge begins to be applied can further extend this analysis. To make this income comparable over time, some form of relative income level should be calculated. Thus, we compute the relative top tax income threshold, which is defined as the wage at which the top marginal tax wedge begins to be applied, divided by the APW. The results are presented in Figures 8a–8c.

Before 1903, the income tax was proportional, and we do not report any figures before this year. When the progressive income tax system was introduced in 1903, the relative top tax income threshold was approximately 100 APWs. The top marginal tax rate was slightly more than ten percent at that time.

Ignoring the defense taxes during World War I, which almost tripled the relative top tax income threshold, the threshold decreased slowly until the 1920 tax reform. With the tax reform in 1920, the top marginal wedge increased to 35 percent, and this wedge initially applied to incomes above almost 400 APWs. The nominal income at which a taxpayer had to begin paying top marginal tax rates was unchanged between the World Wars, but the threshold normally fluctuated between 450 and 550 APWs due to changing wages (including wage cuts).

The 1939 tax reform and the defense tax increased the top marginal tax wedge to almost 60 percent at the same time as the threshold decreased to less than 100 APWs, which was the largest decrease during the entire period. Due to increasing wages, the threshold continued to fall during World War II. In 1948, the threshold was almost halved

³⁸ This stepwise pattern is more pronounced during the first half of the period examined. After World War II, the development may be described as a slow increase in the 1950s and the 1960s and a more rapid increase in the 1970s.

³⁹ The idea was originally put forward by Peacock and Wiseman (1961). Higgs (1987) shows that economic crises and wars may explain (part of) the increase of federal expenditures in the U.S. during the twentieth century. Rodriguez (1980) also argues that the Swedish evolution supports this idea. However, the hypothesis is difficult to formally test and empirical support analyzing the evolution of public spending during, for instance, World War II is inconclusive (Henrekson 1993).

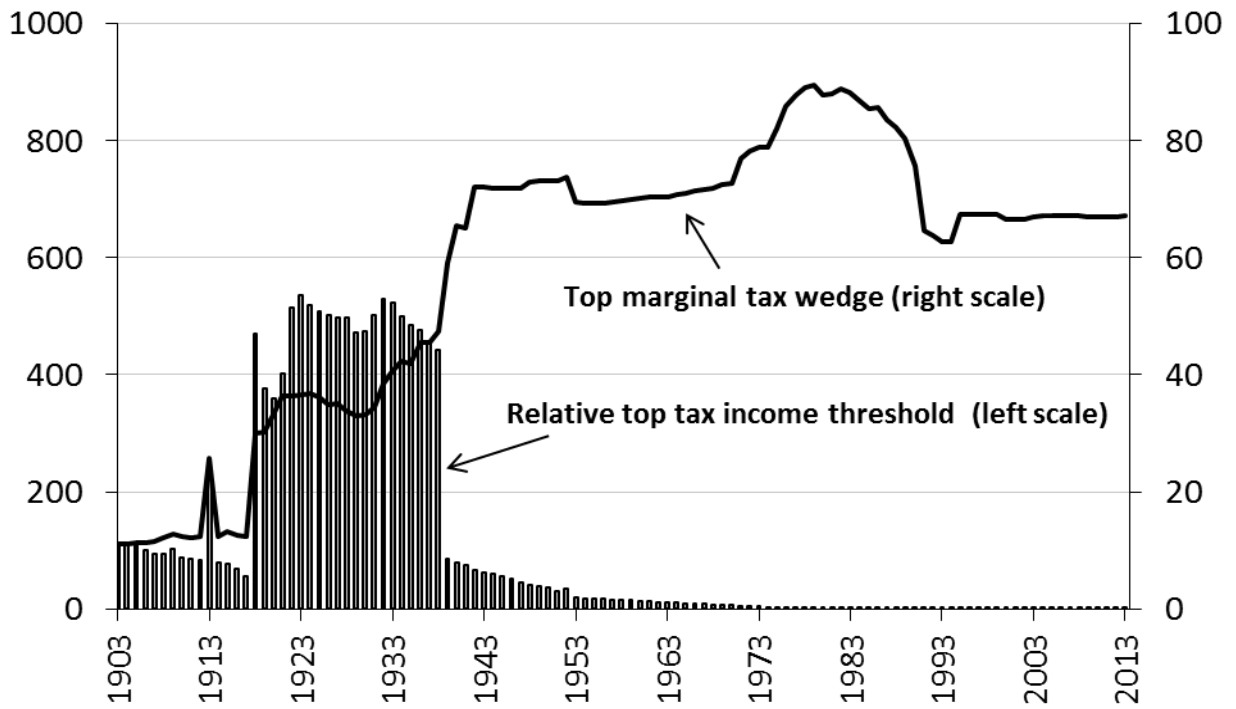
compared with 1939. However, the top marginal tax wedge continued to increase to approximately 70 percent due to high defense taxes during World War II. The tax reform did not imply any major changes. The temporary increase of the marginal tax wedges was made permanent and the income at which the top marginal tax wedge begins to be applied, was about the same.

Although the top marginal tax wedge did not change much until the 1970s, the threshold continued to fall, mainly due to nominal wage increases. In 1970, it had decreased to seven APWs from approximately 40 in 1948.⁴⁰ This development continued during the 1970s, at the same time as the top marginal income tax wedge began to increase again. In 1979, the year before the marginal tax cap was introduced, the top marginal income tax wedge was almost 90 percent, and the threshold was 2.6 APWs. Since the end of the 1980s, the threshold has been below two.

Hence, during the period examined, the threshold decreased from at most nearly 600 APWs in the 1920s to less than two in the late 1990s. Analyzing the top marginal tax wedge only gives half of the story, as it does not say anything about the income level at which it begins to be applied. It is true that the top marginal income tax rate did not change much during the 1950s and 1960s, but the threshold decreased significantly, pushing more people into the highest tax bracket.

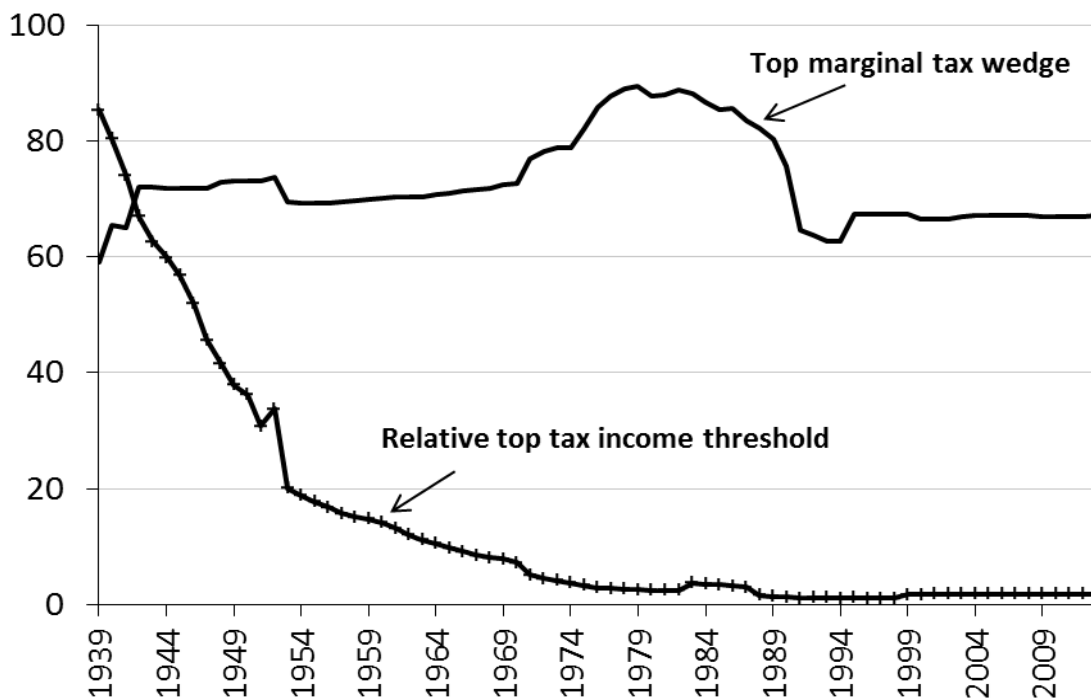
⁴⁰ The slightly lowered top marginal income tax rate in 1953 was associated with a sharp decrease in nominal income when the tax was applied. The threshold declined from 34 to 20 APWs in this year alone.

Figure 8a. The top marginal tax wedge and the relative top tax income threshold, 1903–2013.



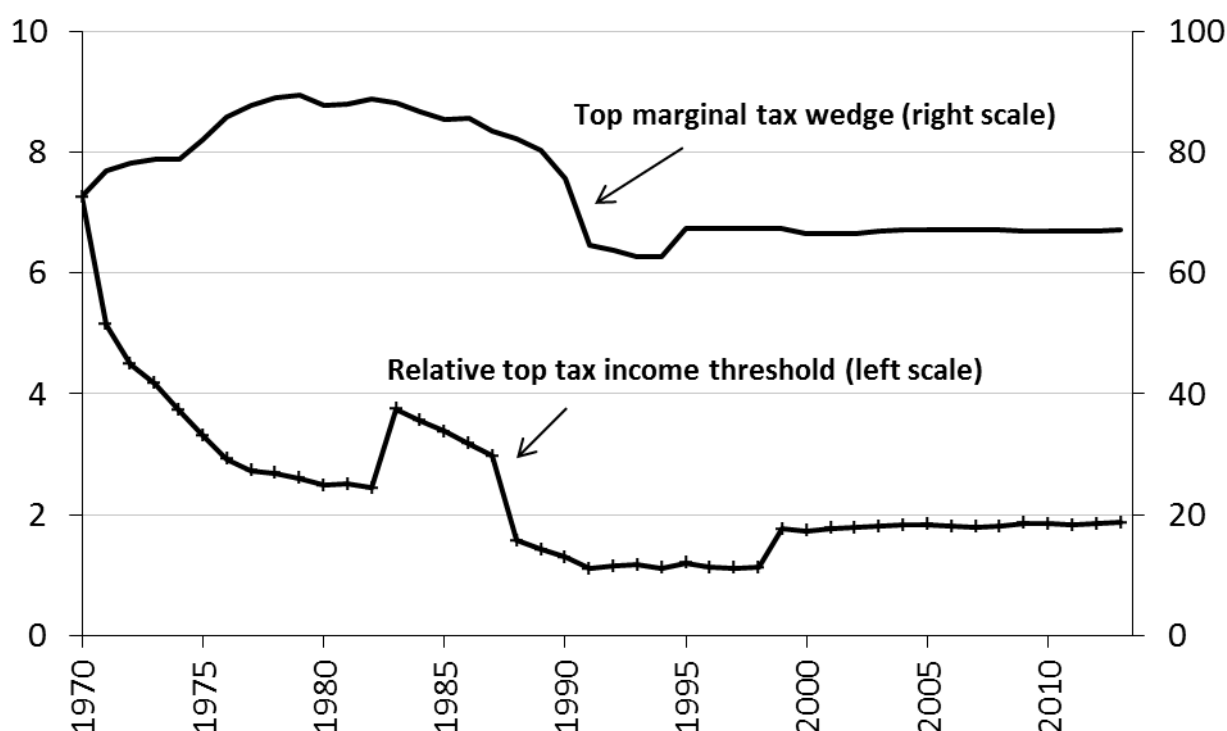
Note: The right scale refers to the marginal tax wedge (%), and the left scale refers to the relative top tax income threshold, which is expressed as the number of APWs at which the top marginal tax wedge begins to be applied.
 Source: Own calculations based on sources detailed in Appendix A.

Figure 8b. The top marginal tax wedge and the relative top tax income threshold, 1939–2013.



Note: The scale refers both to the marginal tax wedge (%) and the relative top tax income threshold, which is expressed as the number of APWs at which the top marginal tax wedge begins to be applied.
 Source: Own calculations based on sources detailed in Appendix A.

Figure 8c. The top marginal tax wedge and the relative top tax income threshold, 1970–2013.



Note: The right scale refers to the marginal tax wedge (%), and the left scale refers to the relative top tax income threshold, which is expressed as the number of APWs at which the top marginal tax wedge begins to be applied. *Source:* Own calculations based on sources detailed in Appendix A.

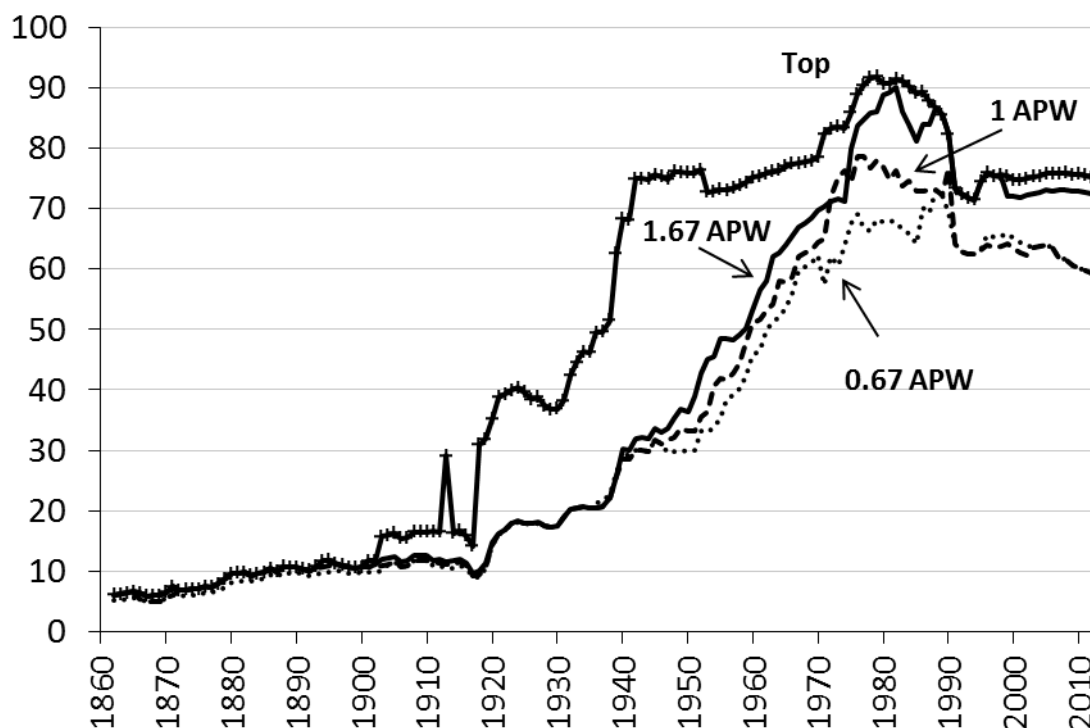
4.4 The marginal tax wedges including consumption taxes

In Section 4.1, we excluded consumption taxes when we calculated the marginal tax wedge; in this section, we will show the evolution of the marginal tax wedge when consumption taxes are taken into account. We have computed consumption taxes as the sum of value-added taxes, sales taxes, all specific consumption taxes and excise duties (including energy and environmental taxes), divided by total private consumption.

Including consumption taxes, the average-income earner's tax wedge increases by five to ten percentage points until the beginning of the 1990s and between ten and 15 percentage points by the end of the period (see Figure 9). The difference is somewhat higher for the low-income earner and somewhat lower for the high-income earner and for the top marginal tax wedge.⁴¹

⁴¹ See Stenkula (2015) for further details regarding consumption taxes.

Figure 9. Marginal tax wedges on labor income, including consumption taxes, 1862–2013 (%).



Note: In the early 1970s, the average-income earner’s tax wedge is higher than that of the high-income earner, as a result of much lower marginal SSCs paid by the high-income earner. In the late 1990s, the low-income earner’s tax wedge is higher than that of the average-income earner because the low-income earner’s basic allowance decreases as income increases, which affects the marginal tax rate for the low-income earner.

Source: Own calculations based on sources detailed in Appendix A.

4.5 Discussion

The analysis shows that there are distinct periods with certain features, which are distinguishable from other periods and separated by turning points caused by major tax reforms that represent a break with previous periods. The evolution might broadly be divided into five separate periods.

The first period stretches from 1862 until World War I. Marginal tax wedges were low and slowly increasing. The income tax was also proportional until the 1903 tax reform and only slightly progressive until World War I. The second period stretches from World War I and the 1920 tax reform until World War II, in which the marginal tax wedges increased. In particular, the top marginal tax wedge increased sharply. Although the progressivity was higher, the tax brackets were wide, and most taxpayers were situated in the lowest tax bracket, which led to a less pronounced marginal tax wedge increase.

A high top marginal tax wedge, along with increasing tax wedges—which became very high for “ordinary” taxpayers—characterizes the third period, after World War II

until the 1971 tax reform. The tax system had a distinct progressive feature with an explicit distributional purpose, beginning with the tax reform implemented in 1948. Although there were no more substantial increases in the top marginal tax wedge until the tax reform implemented in 1971, the income level where the top marginal tax wedge began to be applied dropped sharply. This threshold declined from more than 400 APWs just before World War II to seven APWs by 1970.

The fourth period begins with the 1971 tax reform, in which efforts to redistribute income culminated (Elvander 1972; Lindbeck 1997; Lodin 2011), and lasts until “the tax reform of the century” in 1990–1991. This period is distinguished by the highest tax wedges of the entire period (1862–2013). Tax wedges peaked around 1980 when the top marginal tax wedge and the marginal tax wedge for the high-income earner could reach 90 percent. Employer-paid SSCs were sharply increased. Taxpayers were increasingly subject to the top marginal tax wedge, as the relative top tax income threshold continued to drop until an income of less than two APWs was enough to pay the top marginal tax wedge.

The major tax reform in 1990–1991 decreased the marginal tax wedges to levels that prevailed before the fourth period. This reform was the starting point for the fifth period, which was characterized by falling tax wedges.

5. Conclusions

The effect of marginal taxes on economic behavior and economic development has attracted great interest from researchers and policymakers because marginal taxes influence, among other things, the supply of hours, effort at work, taxable income, occupational choice, career aspirations and educational effort. A wider measure, such as the marginal tax wedge, often better captures the combined effect from different taxes on individual choices than a measure that studies the effect of one narrow form of taxation, such as the marginal tax rate. Therefore, a wider measure is often preferable. The analysis may also benefit from a longer time perspective, as tax systems may change slowly, and it may take a long time—sometimes generations—before all effects are played out.

In this paper, we have derived a homogenous series of marginal tax wedges on labor income in Sweden. We have compiled information on the tax system and computed tax wedges for more than 150 years of tax history (1862–2013). We are interested in determining whether the evolution of tax wedges reveals periods with different characteristics and whether turning points in Swedish tax history are detectable.

Following the OECD, we have calculated marginal tax wedges for low-, average- and high-income earners. We have also computed the top marginal tax wedge on labor and the income at which the top marginal tax wedge begins to be applied. These data and analyses are unique: no one has thus far calculated this for Sweden. Moreover, we also do not know of a corresponding study for any other country.

The analysis shows that marginal tax wedges were low and about the same for a low-, average- and high-income worker until the 1920 tax reform, although progressivity was previously introduced in the 1903 tax reform. The top marginal tax wedge increased considerably during World War I and increased further during the Depression in the 1930s. The wedges rose sharply through temporary defense taxes during World War II, which were made permanent by the 1948 tax reform. The marginal tax wedges for the three income categories continued to increase thereafter, mainly as the result of increased local government taxes, the introduction and increase of employer-paid SSCs and bracket creep, that is, as a result of inflation, which—together with a progressive tax schedule—pushed taxpayers into tax brackets with higher marginal tax rates. The income when the top marginal tax wedge began to be applied decreased sharply during this period. It required close to 500 APWs to be subject to the top marginal tax in 1938, about seven APWs in 1970 and a mere 1.6 APWs by the end of the 1980s. The wedges peaked around 1980. At this point, the high-income earner began to pay the top marginal tax wedge, which could be as high as 90 percent. The major tax reform in 1990–1991 lowered the tax wedges to levels that matched pre-1971 levels (before the 1971 tax reform). In 2013, the final year of the study, the top marginal tax wedge was approximately 67 percent, which mirrored the 1941–1942 level.

The evolution can be divided into five distinct periods. During the first period, from 1862 until World War I, the income tax system was largely proportional and featured low and slowly increasing tax wedges. In the second period, during the interwar period, the tax wedges, particularly the top marginal tax wedge, increased. The third period, stretching from the 1948 tax reform until the 1971 tax reform, was characterized by steadily increasing tax wedges and a more progressive income tax system. The 1971 tax reform constitutes the beginning of the fourth period, during which efforts to redistribute income culminated and the tax wedges were peaking. The 1990–1991 tax reform represents the beginning of the final and ongoing period with decreasing marginal tax wedges.

Notably, the periods we identify largely coincide with the categorization of the Swedish economic system into the four “models” of Swedish economist Assar Lindbeck (Lindbeck 2012, 342–359): the market-oriented period (1870–1939), the welfare capitalism

period (1945–1970), the interventionist period (1970–1990) and the partial liberalization period (starting in 1990).⁴² It is conceivable that the same ideologies, economic theories and structural changes underlying tax reforms and tax policy also affect other policy areas. Our time series can be used in future research to study the conjecture that tax policy coevolves with other policies, such as labor market policy and monetary policy. A further step might be taken to relate taxation and other economic policy areas to economic outcomes, such as employment, structural change, the size distribution of firms and economic growth.

⁴² Our first two periods coincide with the first period in Lindbeck's classification.

Appendix A. Sources.

Information regarding the marginal income tax rates during the appropriation system was collected from SFS 1861:34, SFS 1871:30, SFS 1879:25, SFS 1880:46, SFS 1881:29, SFS 1883:51, SFS 1892:44, SFS 1892:111, SFS 1893:34, SFS 1894:76, SFS 1895:62, SFS 1897:111, SFS 1901:31, SFS 1901:34, SFS 1902:50, SFS 1910:116, SFS 1920:759, Eberstein (1929, 119–135), Eberstein (1937, 694–695), Genberg (1942, 4–5, 18) and Gårestad (1987, 38–40).

Data on the marginal income tax rates from the 1903 tax reform onwards were collected from SFS 1902:84, SFS 1910:115, SFS 1917:513, SFS 1918:512–513, Genberg (1942), Söderberg (1996) and OECD stats extracts, *Taxing Wages*.⁴³

Statistics on local taxes are incomplete before 1875 (Gårestad 1987, 197, 213–215). We impute a tax rate of two percent between 1862 and 1874, which is slightly below the estimated tax level in 1875. For 1875–1914, Gårestad (1987, 212–213, Table 4) has compiled information regarding the total amount of various income taxes paid to local governments. For this period, we estimate the tax rate as total income taxes paid to the municipalities (excluding local lump-sum taxes), divided by total labor income earned by the taxpayers, as reported by Edvinsson (2005, 385–388). For 1915–1920, we base our estimate on Rodriguez (1981, 107–108) and Edvinsson (2005, 385–388). After 1920, the marginal local tax rate is found using the available statutory tax rates reported in Söderberg (1996, 63–64) and Statistics Sweden.⁴⁴ Because the tax rates differ among cities, the average local tax rate was used. Until 1952, a tax earmarked for the national church was mandatory and included in the local tax.⁴⁵ After 1952, this tax was not levied on taxpayers who had left the national church. Since 2000, the national church has been separate from the government, and the fee to the national church is no longer regarded as a tax (Skatteverket 2000, 56). In our time series, we follow the OECD and exclude the national church tax beginning in 2000.⁴⁶

The income tax system also includes tax relief in the form of allowances and tax credits, where allowances are applied to pre-tax income to obtain taxable income. Basic local

⁴³ See <http://stats.oecd.org/Index.aspx?DataSetCode=AWCOMP>
http://stats.oecd.org/Index.aspx?DataSetCode=AWCOMP_OLD
http://stats.oecd.org/Index.aspx?DataSetCode=AWHIST_OLD

⁴⁴ See <http://www.scb.se/sv/Hitta-statistik/Statistik-efter-amne/Offentlig-ekonomi-/Finanser-for-den-kommunala-sektorn/Kommunalskatterna/11849/11856/67892/>

⁴⁵ Tithes had to be paid to the church earlier in history. In reforms carried out in 1527 by King Gustav Vasa, part of the tithe was abolished, part was converted to a central state tax and the remaining part was later transformed into a local tax (Eberstein 1937, 822–832).

⁴⁶ The formal tax rate differed somewhat between parishes. In 1953, the national church tax was about 0.80 percent on average. In 2013, there was a compulsory fee for a funeral service, averaging 0.22 percent. The voluntary fee to the church was 1.01 percent on average (Skatteverket 2013, 137).

and state income tax allowances were introduced in 1920 (Söderberg 1996, 2). The basic tax allowances differed somewhat among cities until 1960, depending on the price level in each city. We refer to the average city when calculating the basic tax allowance. Information is gathered from Genberg (1942), Söderberg (1996), Skattebetalarnas förening (1997) and Skatteverket (1998–2013). The local tax was also deductible from the state taxable income between 1920 and 1970. The basic state and local income tax allowances may positively or negatively affect the marginal income tax rate because these allowances occasionally depend on and change with income level. Information regarding tax credits for the 1999–2002 period and for the 2007–2013 period was gathered from Skatteverket (2002, 50) and Ministry of Finance (2006–2012), respectively.

Information about employee-paid social security contributions was collected from Elmér (1960), Söderberg (1996) and Skatteverket (1998–2013), and information about employer-paid social security contributions was collected from Söderberg (1996, 117–119) and Skatteverket (2013, 144, Table 7.32).

Information about consumption taxes was collected from Statistics Sweden (1914–2011) and Ekonomistyrningsverket (2010–2014), whereas information about private consumption was retrieved from Edvinsson (2005, 322–326) and Statistics Sweden.⁴⁷

⁴⁷ Consumption taken from Annual estimates, National Accounts, http://www.scb.se/en_/Finding-statistics/Statistics-by-subject-area/National-Accounts/.

Appendix B. Extensions.

We have followed the approach by the OECD and included income taxes and social security contributions (SSCs) in the marginal tax wedges. We have also calculated the marginal tax wedge with and without consumption taxes. In line with the OECD, the SSCs have been treated as a pure tax. In this appendix, we show the evolution of the marginal tax wedge when the benefit component of social security contributions is taken into account and how this evolution differs from our calculations in the main text. In addition, we report the effects of marriage and joint taxation.

Accounting for the benefit component of the SSCs

The OECD treats all SSCs as taxes. Heady (2004) claims that all SSCs should be treated as taxes because they are compulsory and unrequited payments to the government. Although there might be some link between contributions and benefits, country comparisons should treat SSCs as a tax because the country choice between general taxes and earmarked compulsory contribution should not alter the comparison. McKee, Visser and Saunders (1986) further argue that the *perceived* relationship between incremental contributions and incremental benefits is likely weak when the contributions are compulsory. Moreover, it is difficult to estimate the benefit component of the SSCs. Most researchers also ignore the benefit components and treat social security contributions as pure taxes. However, Disney, Boeri and Jappelli (2004) and Disney (2006) argue that it is important to adjust the SSCs for the benefit component. In their view, a description and analysis of the tax system without these adjustments will be skewed and will then yield an incorrect picture of actual taxes. Comparison over time within a country should thus include an adjustment for the benefit component.

Employer-paid SSCs were introduced in 1955. We apply the estimates used by, for instance, SOU (SOU 1989:33, 61–63), that three-quarters of the employer-paid marginal SSCs were initially taxes.⁴⁸ Since 1987, the high-income earner's wage has exceeded the benefit caps; hence, the marginal tax effect is 100 percent. Since 2000, 60 percent of the employer contributions have been regarded as taxes for the low- and average-income earner. The decreased tax share is a result of pension contributions becoming more actuarial, that is, the connection between contributions paid and benefits received was higher (Skatteverket 1998, 46).

⁴⁸ SOU (*Statens offentliga utredningar*) is the Swedish official series of reports of committees appointed by the Swedish Government.

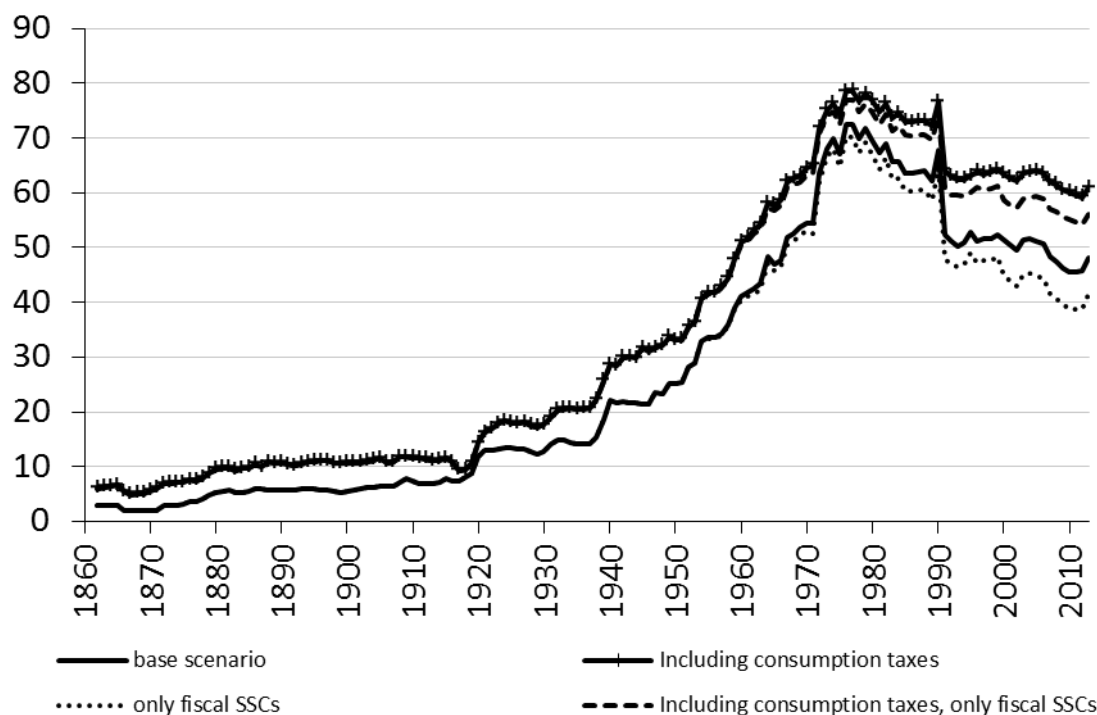
The first employee-paid SSC, the national basic pension contribution, introduced in 1913, corresponded fully to a benefit until 1935. The benefit share was gradually reduced beginning in 1936, and from 1948 until 1973 (when it was abolished), the national basic pension contribution was a tax (Elmér 1960, 222). The second employee-paid SSC, the sick leave benefit fee, introduced in 1955, is estimated to have a benefit share of 50 percent in 1974 (the same year as it was abolished) because there was some connection between the contribution and benefit. For the other years, this SSC had no benefit share. In 1993, employee-paid SSCs were reintroduced and were called general SSCs. In effect, they were pure taxes.⁴⁹

Adjustments for the estimated benefit component had no discernible effect on the tax wedge until the 1970s. The marginal tax wedge decreased by seven percentage points at most at the end of the period examined for the average-income earner (see Figure 10). Excluding or including the benefit component does not impact the general evolution of the tax wedge to a large extent, although the explicit tax wedge will certainly be lower when one adjusts the SSCs for the estimated benefit component. The effect is about the same for the low-income earner, whereas the effect on the high-income earner is negligible, because, beginning in 1987, the SSCs give no marginal benefit at an annual income of 1.67 APW.

The marginal tax wedge increases by at most about ten percentage points for the average-income earner when both consumption taxes and the benefit component of the SSCs are considered. The effects on low- and high-income earners are similar. For most years, the long-term evolution for the three income categories remains basically the same. Near the end of the period examined, the tax wedges are admittedly lower when the benefit component of the SSCs is adjusted for taxpayers with low incomes, in particular.

⁴⁹ See, e.g., the discussion in Lewin (2009). Despite that the employee-paid SSCs rate was decreasing (beginning in 2000), the benefits which were supposed to be linked to the contributions were unaffected, implying that the contributions in practice were fiscal.

Figure 10. Marginal tax wedge, given different assumptions, for the average-income earner, 1862–2013 (%).



Source: Own calculations based on sources detailed in Appendix A.

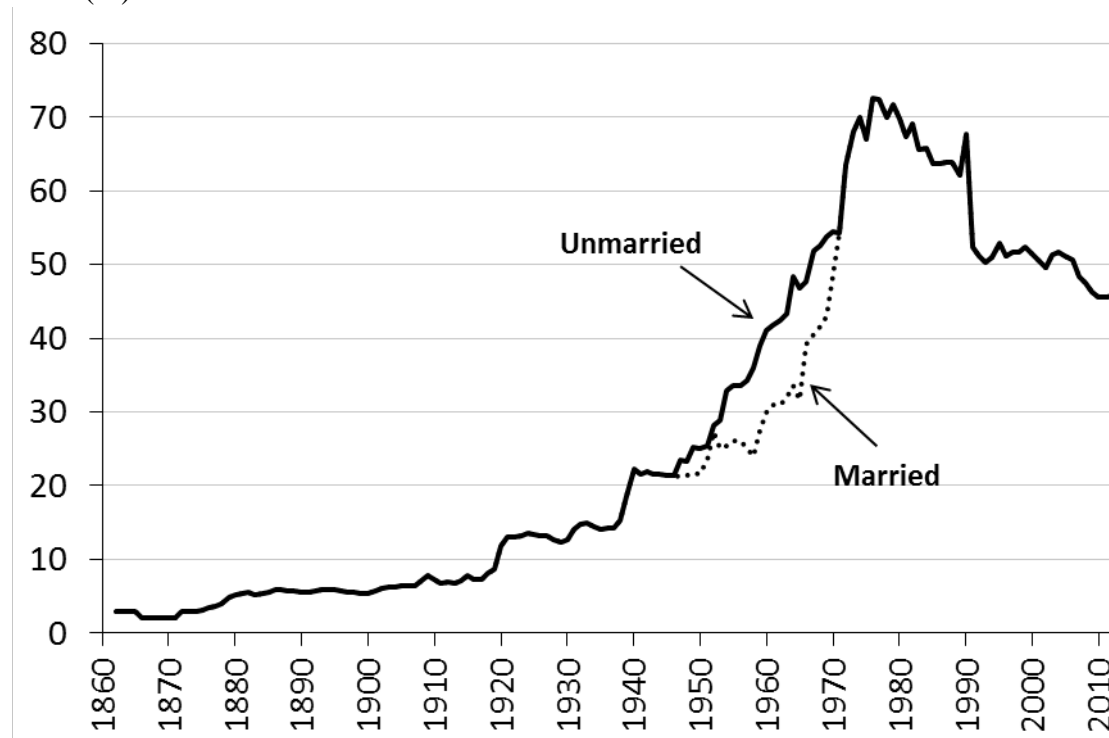
Alleviation for married couples

The marginal tax rates and marginal tax wedges calculated thus far have been based on a single person with no children. However, the tax rates for married couples were more favorable, partly because they had more generous basic allowances (between 1920 and 1970) and partly because they had lower tax rates (between 1953 and 1970) for a given taxable income. Before 1971, married couples were also taxed jointly.

To check the robustness of our results, we have calculated the marginal tax wedge, given that the taxpayer is married (but assuming that all other assumptions are unchanged). The results are shown in Figure 11, which shows the evolution for a taxpayer earning 1.0 APW. There was no effect before World War II. The marginal tax wedge was lower after World War II, and the tax wedge increase was initially somewhat slower during the 1950s. It increased more quickly during the 1960s and then caught up with the tax wedge for unmarried persons after 1971. The long-term evolution for the other two categories is similar.⁵⁰

⁵⁰ To mitigate the effect of separate taxation for families with only one income earner, a small tax reduction was implemented in 1971. This reduction remained in place until 1991.

Figure 11. Marginal tax wedge for married and unmarried average-income earners, 1862–2013 (%).



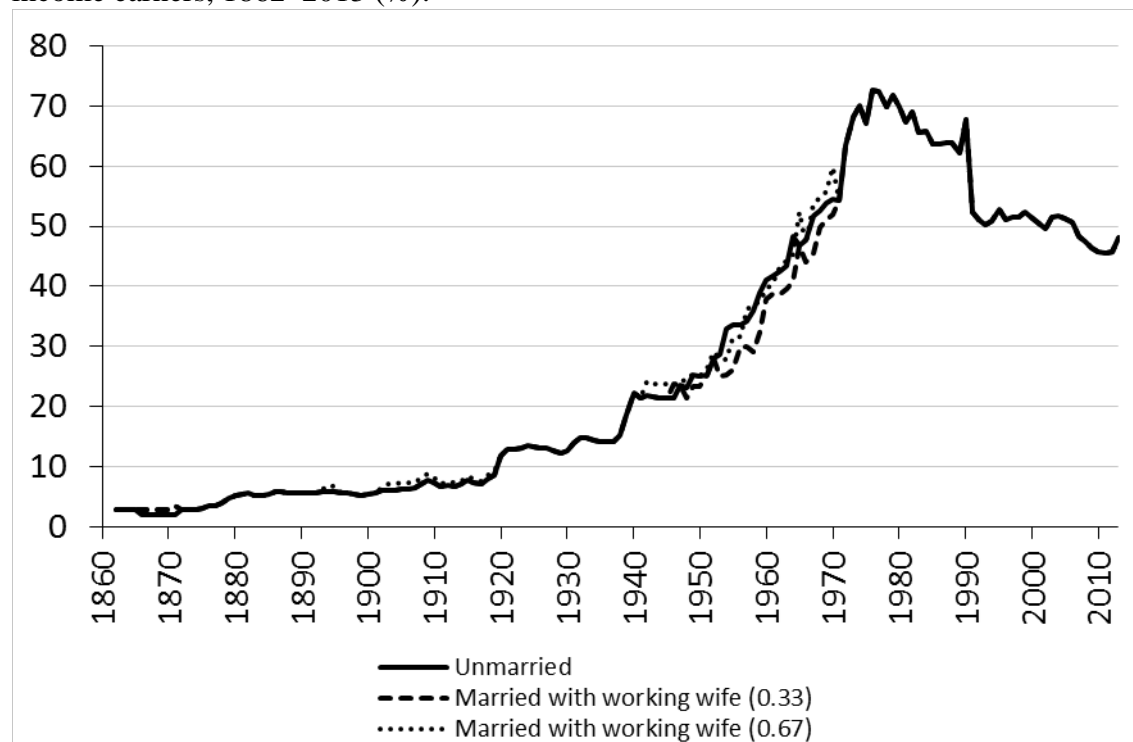
Note: “Married” refers to a couple where one spouse works on the regular labor market with a wage equal to one APW, while the other spouse has no regular income.

Source: Own calculations based on sources detailed in Appendix A.

The calculation in Figure 11 refers to a household with one income earner. In Figure 12, we have, in line with the OECD, calculated the marginal tax wedge for a married couple, assuming that one spouse is working full time, earning 1.0 APW, and that the other spouse is working part time, earning 0.33 or 0.67 APW.⁵¹ The difference between the unmarried and two-earner married couple is minor. A couple with a spouse earning 0.67 APW might occasionally even have a higher marginal tax wedge than an unmarried taxpayer.

⁵¹ If both spouses were working, there was also an additional small allowance between 1921 and 1984.

Figure 12. Marginal tax wedge for married with working spouse and unmarried average-income earners, 1862–2013 (%).



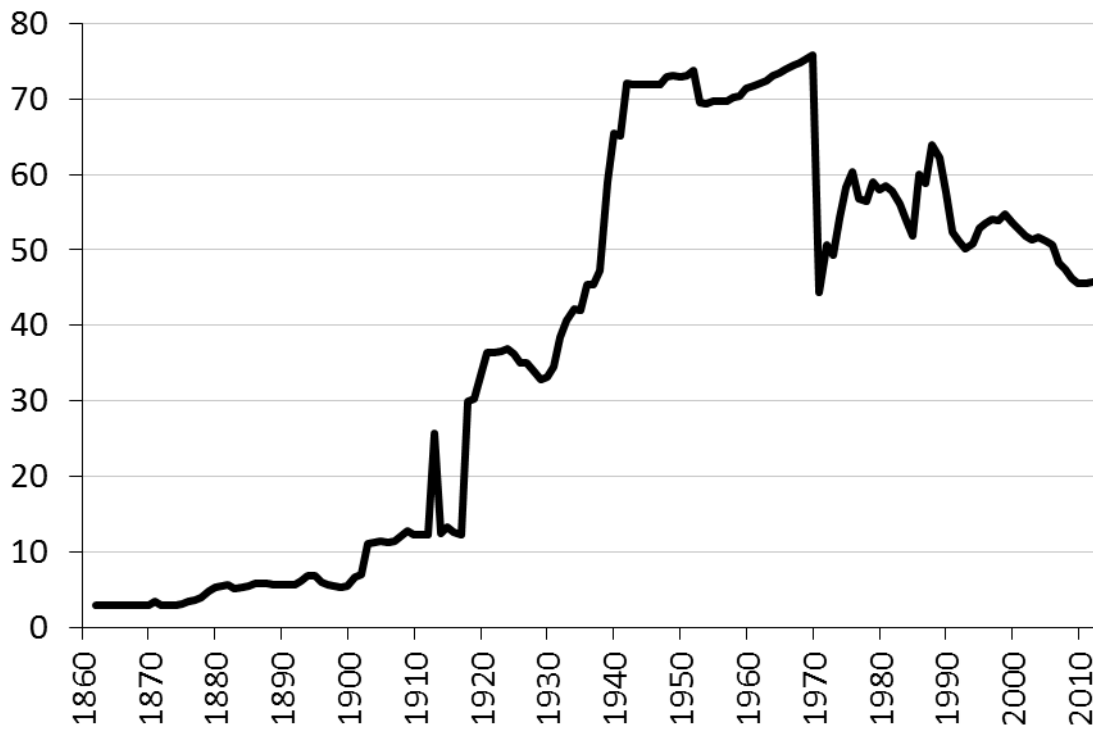
Note: 0.33 refers to a couple where the principal earner's income is one APW and the other spouse's income is 0.33 APW. 0.67 refers to a couple where the principal earner's income is one APW and the other spouse's income is 0.67 APW. The figure shows the principal earner's marginal tax wedge from 1971.

Source: Own calculations based on sources detailed in Appendix A.

In Figure 13, we have calculated the marginal tax wedge for a married couple, assuming that the household head works full time and faces the top marginal tax rate and that the other spouse earns 0.67 APW. The figure shows the second earner's marginal tax wedge. When joint taxation of families was abolished in 1971, the tax wedge decreased substantially—from over 70 percent to below 50 percent. Even if the principal earner was facing a higher marginal tax rate after the 1971 tax reform, the second earner received a decreased tax wedge. This change made it more profitable for women to work and led to an increasing share of women participating in the labor market.⁵²

⁵² See, e.g., Gustafsson (1992) for a discussion of female labor participation and wages.

Figure 13. Marginal tax wedge, second income earner married to top income earner, 1862–2013 (%).



Note: The figure shows the second income earner's marginal tax wedge, assuming that the principal earner faces the top marginal tax rate and that the other part earns 0.67 APW.

Source: Own calculations based on sources detailed in Appendix A.

Appendix C. Results.

Table 1. Marginal tax rates and marginal tax wedges, 1862–2013.

Year	Low-income earner (0.67 APW)			Average-income earner (1.0 APW)			High-income earner (1.67 APW)		
	Wage	Marginal tax rate %	Marginal Tax wedge %	Wage	Marginal tax rate %	Marginal tax wedge %	Wage	Marginal tax rate %	Marginal tax wedge %
1862	273	2.0	2.0	408	3.0	3.0	681	3.0	3.0
1863	286	2.0	2.0	427	3.0	3.0	713	3.0	3.0
1864	283	2.0	2.0	423	3.0	3.0	706	3.0	3.0
1865	278	2.0	2.0	416	3.0	3.0	694	3.0	3.0
1866	261	2.0	2.0	389	2.0	2.0	650	3.0	3.0
1867	248	2.0	2.0	371	2.0	2.0	619	3.0	3.0
1868	238	2.0	2.0	356	2.0	2.0	594	3.0	3.0
1869	246	2.0	2.0	367	2.0	2.0	613	3.0	3.0
1870	246	2.0	2.0	367	2.0	2.0	613	3.0	3.0
1871	250	2.0	2.0	373	2.0	2.0	623	3.5	3.5
1872	276	2.0	2.0	412	3.0	3.0	688	3.0	3.0
1873	304	2.0	2.0	454	3.0	3.0	757	3.0	3.0
1874	324	2.0	2.0	483	3.0	3.0	807	3.0	3.0
1875	327	2.2	2.2	488	3.2	3.2	814	3.2	3.2
1876	323	2.5	2.5	482	3.5	3.5	805	3.5	3.5
1877	332	2.6	2.6	495	3.6	3.6	827	3.6	3.6
1878	300	3.0	3.0	447	4.0	4.0	747	4.0	4.0
1879	288	3.3	3.3	431	4.8	4.8	719	4.8	4.8
1880	310	3.8	3.8	463	5.3	5.3	773	5.3	5.3
1881	320	3.9	3.9	477	5.4	5.4	797	5.4	5.4
1882	328	4.1	4.1	490	5.6	5.6	819	5.6	5.6
1883	329	4.2	4.2	491	5.2	5.2	819	5.2	5.2
1884	338	4.3	4.3	505	5.3	5.3	844	5.3	5.3
1885	335	4.5	4.5	499	5.5	5.5	834	5.5	5.5
1886	325	4.9	4.9	484	5.9	5.9	809	5.9	5.9
1887	330	4.9	4.9	493	5.9	5.9	823	5.9	5.9
1888	343	4.8	4.8	512	5.8	5.8	856	5.8	5.8
1889	364	4.7	4.7	544	5.7	5.7	908	5.7	5.7
1890	376	4.6	4.6	561	5.6	5.6	936	5.6	5.6
1891	379	4.6	4.6	565	5.6	5.6	944	5.6	5.6
1892	375	4.7	4.7	560	5.7	5.7	936	5.7	5.7
1893	379	4.8	4.8	565	5.8	5.8	944	6.1	6.1
1894	384	4.9	4.9	573	5.9	5.9	957	6.9	6.9
1895	391	4.8	4.8	583	5.8	5.8	974	6.8	6.8
1896	399	4.7	4.7	596	5.7	5.7	996	5.7	5.7
1897	416	4.6	4.6	621	5.6	5.6	1036	5.6	5.6
1898	443	4.5	4.5	662	5.5	5.5	1105	5.5	5.5
1899	464	4.3	4.3	693	5.3	5.3	1157	5.3	5.3
1900	480	4.4	4.4	717	5.4	5.4	1198	5.4	5.4
1901	476	4.8	4.8	710	5.8	5.8	1186	5.8	5.8
1902	482	5.0	5.0	720	6.0	6.0	1202	6.5	6.5
1903	496	5.2	5.2	740	6.2	6.2	1236	7.2	7.2
1904	511	6.2	6.2	762	6.2	6.2	1273	7.2	7.2

Year	Low-income earner (0.67 APW)			Average-income earner (1.0 APW)			High-income earner (1.67 APW)		
	Wage	Marginal tax rate %	Marginal Tax wedge %	Wage	Marginal tax rate %	Marginal tax wedge %	Wage	Marginal tax rate %	Marginal tax wedge %
1905	518	6.4	6.4	773	6.4	6.4	1291	7.4	7.4
1906	566	6.4	6.4	844	6.4	6.4	1410	7.4	7.4
1907	604	6.4	6.4	901	6.4	6.4	1505	7.4	7.4
1908	605	7.2	7.2	902	7.2	7.2	1507	8.2	8.2
1909	565	7.8	7.8	843	7.8	7.8	1408	8.8	8.8
1910	653	7.3	7.3	975	7.3	7.3	1628	8.3	8.3
1911	661	6.2	6.2	986	6.8	6.8	1647	7.2	7.2
1912	692	6.3	6.3	1033	6.9	6.9	1726	7.5	7.5
1913	711	6.2	6.2	1062	6.8	6.8	1773	7.4	7.4
1914	717	6.5	6.5	1071	7.1	7.1	1788	7.7	7.7
1915	741	7.3	7.3	1105	7.9	7.9	1846	8.5	8.5
1916	837	7.0	7.0	1249	7.4	7.4	2086	8.0	8.0
1917	1006	6.9	6.9	1502	7.3	7.3	2508	7.7	7.7
1918	1376	7.7	7.7	2054	8.1	8.1	3429	8.7	8.7
1919	1724	8.5	8.5	2574	8.7	8.7	4298	9.3	9.3
1920	2015	11.7	11.7	3008	11.8	11.8	5023	11.8	11.8
1921	1816	12.9	12.9	2711	13.0	13.0	4527	13.0	13.0
1922	1419	12.9	12.9	2118	13.0	13.0	3537	13.0	13.0
1923	1364	13.1	13.1	2035	13.2	13.2	3399	13.2	13.2
1924	1417	13.5	13.5	2114	13.5	13.5	3531	13.5	13.5
1925	1449	13.3	13.3	2162	13.4	13.4	3611	13.4	13.4
1926	1466	13.1	13.1	2189	13.2	13.2	3655	13.2	13.2
1927	1475	13.1	13.1	2202	13.2	13.2	3678	13.2	13.2
1928	1477	12.6	12.6	2205	12.7	12.7	3682	12.7	12.7
1929	1549	12.3	12.3	2312	12.3	12.3	3860	12.3	12.3
1930	1553	12.7	12.7	2317	12.7	12.7	3870	12.7	12.7
1931	1491	14.1	14.1	2225	14.1	14.1	3715	14.1	14.1
1932	1426	14.8	14.8	2128	14.8	14.8	3554	14.8	14.8
1933	1430	14.9	14.9	2134	14.9	14.9	3564	14.9	14.9
1934	1492	14.5	14.5	2227	14.5	14.5	3720	14.5	14.5
1935	1533	14.2	14.2	2288	14.2	14.2	3821	14.2	14.2
1936	1555	15.0	15.0	2320	14.2	14.2	3875	14.2	14.2
1937	1628	15.0	15.0	2430	14.2	14.2	4058	14.2	14.2
1938	1697	16.2	16.2	2533	15.4	15.4	4230	15.4	15.4
1939	1775	19.5	19.5	2649	18.7	18.7	4424	18.7	18.7
1940	1893	23.0	23.0	2825	22.2	22.2	4717	24.0	24.0
1941	2035	22.3	22.3	3037	21.5	21.5	5072	23.3	23.3
1942	2236	21.9	21.9	3337	21.9	21.9	5573	24.2	24.2
1943	2381	21.6	21.6	3554	21.6	21.6	5935	23.9	23.9
1944	2490	21.6	21.6	3717	21.6	21.6	6207	23.8	23.8
1945	2622	21.5	21.5	3913	21.5	21.5	6535	23.7	23.7
1946	2865	21.5	21.5	4277	21.5	21.5	7142	23.7	23.7
1947	3255	21.3	21.3	4859	23.6	23.6	8114	25.8	25.8
1948	3572	20.6	20.6	5331	23.2	23.2	8903	26.8	26.8
1949	3930	20.8	20.8	5865	25.3	25.3	9795	28.8	28.8
1950	4104	21.6	21.6	6125	25.1	25.1	10229	28.7	28.7
1951	4848	21.8	21.8	7235	25.3	25.3	12083	31.7	31.7
1952	5671	25.5	25.5	8464	28.1	28.1	14135	36.1	36.1

Year	Low-income earner (0.67 APW)			Average-income earner (1.0 APW)			High-income earner (1.67 APW)		
	Wage	Marginal tax rate %	Marginal Tax wedge %	Wage	Marginal tax rate %	Marginal tax wedge %	Wage	Marginal tax rate %	Marginal tax wedge %
1953	5818	25.0	25.0	8684	28.8	28.8	14502	38.6	38.6
1954	6169	25.3	25.3	9208	32.9	32.9	15377	38.4	38.4
1955	6542	25.2	26.0	9765	32.8	33.5	16307	41.2	41.2
1956	6917	29.1	29.9	10323	32.9	33.6	17240	41.3	41.3
1957	7374	29.3	30.1	11007	33.5	34.3	18381	40.6	40.6
1958	7783	30.1	30.9	11616	35.3	36.0	19399	41.3	41.3
1959	8007	31.6	32.4	11951	38.2	38.9	19958	41.7	41.7
1960	8433	32.0	34.7	12587	38.5	41.0	21020	41.9	43.6
1961	9092	32.3	35.6	13570	38.8	41.8	22662	45.6	47.7
1962	9994	34.9	38.7	14916	39.0	42.5	24911	45.8	48.3
1963	10791	35.1	39.6	16107	39.1	43.4	26898	50.1	52.9
1964	11576	35.9	40.9	17277	43.9	48.3	28853	50.7	54.0
1965	12569	36.4	41.7	18760	42.1	46.9	31330	51.2	54.6
1966	13703	38.8	44.1	20453	42.7	47.7	34156	52.9	56.4
1967	14711	43.3	49.0	21956	46.4	51.8	36667	53.4	58.1
1968	15620	44.1	49.9	23313	47.1	52.6	38933	54.0	58.8
1969	16341	44.7	51.1	24390	47.7	53.8	40732	55.3	60.5
1970	17793	45.2	51.9	26557	48.2	54.5	44350	55.8	61.2
1971	19500	35.9	44.5	29104	47.3	54.3	48604	60.6	61.4
1972	22399	42.8	50.7	33432	57.7	63.5	55831	61.8	62.5
1973	24072	40.1	49.3	35929	62.3	68.1	60001	61.9	63.4
1974	26970	43.9	54.2	40254	63.2	69.9	67224	62.0	63.5
1975	31222	47.2	58.4	46600	58.2	67.0	77822	73.2	74.3
1976	35443	48.2	60.3	52900	64.2	72.6	88343	75.2	79.2
1977	37855	41.9	56.8	56500	62.9	72.4	94355	75.9	80.4
1978	38525	41.7	56.4	57500	59.7	69.9	96025	77.7	81.7
1979	42849	45.0	59.0	63954	62.0	71.7	106803	78.0	82.0
1980	46900	43.1	57.9	70000	59.1	69.8	116900	82.1	85.5
1981	51381	43.6	58.4	76688	55.6	67.3	128069	82.6	85.9
1982	56682	43.7	57.7	84600	58.7	69.0	141282	82.7	87.0
1983	58691	40.2	56.1	87598	53.2	65.6	146289	75.2	81.8
1984	64457	37.3	53.9	96205	53.3	65.7	160662	70.3	78.2
1985	69588	34.4	51.9	103862	50.4	63.6	173450	65.4	74.6
1986	74003	45.3	59.9	110452	50.3	63.6	184455	70.3	78.3
1987	79098	43.4	58.7	118057	50.4	63.8	197155	70.4	78.4
1988	85199	50.6	63.9	127162	50.6	63.9	212361	75.6	82.2
1989	94095	47.8	62.2	140440	47.8	62.2	234535	72.8	80.3
1990	103622	41.2	57.7	154660	55.2	67.7	258282	66.2	75.6
1991	108808	34.3	52.4	162400	34.3	52.4	271208	51.2	64.6
1992	114570	34.1	51.2	171000	34.1	51.2	285570	51.0	63.7
1993	116513	34.8	50.2	173900	34.8	50.2	290413	51.0	62.6
1994	122677	35.5	50.9	183100	35.5	50.9	305777	51.1	62.7
1995	124378	37.4	52.8	185639	37.4	52.8	310017	56.5	67.3
1996	137158	38.2	53.6	204714	35.0	51.2	341872	56.7	67.4
1997	140173	38.9	54.0	209214	35.7	51.6	349387	56.7	67.4
1998	144378	38.6	53.9	215490	35.6	51.6	359868	55.8	66.7
1999	147831	39.7	54.7	220644	36.6	52.4	368475	50.6	62.9
2000	154247	38.3	53.6	230220	35.2	51.3	384467	50.4	62.7

Year	Low-income earner (0.67 APW)			Average-income earner (1.0 APW)			High-income earner (1.67 APW)		
	Wage	Marginal tax rate %	Marginal Tax wedge %	Wage	Marginal tax rate %	Marginal tax wedge %	Wage	Marginal tax rate %	Marginal tax wedge %
2001	154860	37.2	52.7	231134	34.2	50.4	385994	50.5	62.8
2002	161983	36.0	51.8	241766	32.9	49.5	403749	50.5	62.7
2003	166098	35.5	51.4	247908	35.5	51.4	414006	51.2	63.2
2004	168359	35.9	51.7	251282	35.9	51.7	419641	51.5	63.5
2005	169845	35.4	51.2	253500	35.4	51.2	423345	51.6	63.5
2006	174803	34.8	50.7	260900	34.8	50.7	435703	51.6	63.4
2007	181905	31.6	48.3	271500	31.6	48.3	453405	51.6	63.4
2008	188538	30.4	47.4	281400	30.4	47.4	469938	51.4	63.3
2009	193563	29.5	46.3	288900	29.5	46.3	482463	51.5	63.1
2010	197583	28.6	45.6	294900	28.6	45.6	492483	51.6	63.1
2011	205489	28.6	45.6	306700	28.6	45.6	512189	51.6	63.1
2012	212792	28.6	45.7	317600	28.6	45.7	530392	51.6	63.2
2013	216142	28.7	45.8	322600	31.7	48.1	538742	51.7	63.3

Note: All amounts in the tables refer to SEK. APW = average annual wage of a production worker. The marginal tax rate is the sum of the state and local marginal income tax rates and employee-paid SSCs.

Source: Own calculations based on references detailed in Appendix A.

Table 2. Top marginal tax rates, top marginal tax wedges and relative top tax income, 1862–2013.

Year	Wage (in thousands)	Relative top tax income threshold	Top state marginal income tax rate %	Top state marginal income tax rate* %	Top marginal tax rate %	Top marginal tax wedge %
1862	-	-	1.0		3.0	3.0
1863	-	-	1.0		3.0	3.0
1864	-	-	1.0		3.0	3.0
1865	-	-	1.0		3.0	3.0
1866	-	-	1.0		3.0	3.0
1867	-	-	1.0		3.0	3.0
1868	-	-	1.0		3.0	3.0
1869	-	-	1.0		3.0	3.0
1870	-	-	1.0		3.0	3.0
1871	-	-	1.5		3.5	3.5
1872	-	-	1.0		3.0	3.0
1873	-	-	1.0		3.0	3.0
1874	-	-	1.0		3.0	3.0
1875	-	-	1.0		3.2	3.2
1876	-	-	1.0		3.5	3.5
1877	-	-	1.0		3.6	3.6
1878	-	-	1.0		4.0	4.0
1879	-	-	1.5		4.8	4.8
1880	-	-	1.5		5.3	5.3
1881	-	-	1.5		5.4	5.4
1882	-	-	1.5		5.6	5.6
1883	-	-	1.0		5.2	5.2
1884	-	-	1.0		5.3	5.3
1885	-	-	1.0		5.5	5.5
1886	-	-	1.0		5.9	5.9
1887	-	-	1.0		5.9	5.9
1888	-	-	1.0		5.8	5.8
1889	-	-	1.0		5.7	5.7
1890	-	-	1.0		5.6	5.6
1891	-	-	1.0		5.6	5.6
1892	-	-	1.0		5.7	5.7
1893	-	-	1.3		6.1	6.1
1894	-	-	2.0		6.9	6.9
1895	-	-	2.0		6.8	6.8
1896	-	-	1.3		6.0	6.0
1897	-	-	1.0		5.6	5.6
1898	-	-	1.0		5.5	5.5
1899	-	-	1.0		5.3	5.3
1900	-	-	1.0		5.4	5.4
1901	-	-	2.0		6.8	6.8
1902	-	-	2.0		7.0	7.0
1903	84.4	114	6.0		11.2	11.2
1904	84.4	111	6.0		11.2	11.2
1905	84.5	109	6.0		11.4	11.4
1906	84.5	100	6.0		11.4	11.4
1907	84.6	94	6.0		11.4	11.4

Year	Wage (in thousands)	Relative top tax income threshold	Top state marginal income tax rate %	Top state marginal income tax rate* %	Top marginal tax rate %	Top marginal tax wedge %
1908	85.3	95	6.0		12.2	12.2
1909	85.8	102	6.0		12.8	12.8
1910	85.4	88	6.0		12.3	12.3
1911	85.2	86	6.1		12.2	12.2
1912	85.3	83	6.1		12.3	12.3
1913	239.5	226	19.6		25.7	25.7
1914	85.5	80	6.1		12.5	12.5
1915	86.2	78	6.1		13.3	13.3
1916	85.5	68	6.1		12.6	12.6
1917	85.3	57	6.1		12.3	12.3
1918	966.0	470	23.1		29.9	29.9
1919	969.6	377	23.1		30.3	30.3
1920	1081.8	360	23.4	20.3	33.3	33.3
1921	1089.6	402	26.4	22.8	36.4	36.4
1922	1089.6	514	26.4	22.7	36.5	36.5
1923	1092.2	537	26.4	22.7	36.6	36.6
1924	1096.3	519	26.4	22.6	36.9	36.9
1925	1096.5	507	25.6	21.9	36.2	36.2
1926	1096.9	501	24.1	20.6	35.0	35.0
1927	1096.5	498	24.1	20.6	35.1	35.1
1928	1094.5	496	23.9	20.8	33.8	33.8
1929	1092.4	473	23.0	20.1	32.9	32.9
1930	1097.0	473	23.0	19.9	33.1	33.1
1931	1114.6	501	23.3	19.8	34.5	34.5
1932	1124.5	528	27.3	23.0	38.5	38.5
1933	1118.4	524	30.3	25.7	40.7	40.7
1934	1111.2	499	32.5	27.8	42.2	42.2
1935	1106.9	484	32.5	27.9	42.0	42.0
1936	1107.3	477	36.5	31.4	45.4	45.4
1937	1107.3	456	36.5	31.4	45.4	45.4
1938	1117.7	441	38.0	32.3	47.3	47.3
1939	226.0	85	53.7	47.5	59.0	59.0
1940	226.9	80	60.8	53.5	65.4	65.4
1941	224.9	74	60.8	54.0	65.1	65.1
1942	223.5	67	68.8	61.5	72.0	72.0
1943	222.6	63	68.8	61.8	71.9	71.9
1944	222.4	60	68.8	61.8	71.9	71.9
1945	222.2	57	68.8	61.9	71.9	71.9
1946	222.2	52	68.8	61.9	71.9	71.9
1947	221.7	46	68.8	62.0	71.8	71.8
1948	221.8	42	70	63.1	72.9	72.9
1949	222.5	38	70	62.9	73.0	73.0
1950	222.1	36	70	63.0	73.0	73.0
1951	222.7	31	70	62.9	73.1	73.1
1952	285.8	34	70	61.2	73.8	73.8
1953	174.0	20	65	56.7	69.5	69.5
1954	173.3	19	65	56.9	69.3	69.3
1955	173.0	18	65	57.0	69.3	69.3

Year	Wage (in thousands)	Relative top tax income threshold	Top state marginal income tax rate %	Top state marginal income tax rate* %	Top marginal tax rate %	Top marginal tax wedge %
1956	173.3	17	65	57.0	69.3	69.3
1957	173.7	16	65	56.8	69.4	69.4
1958	175.9	15	65	56.1	69.8	69.8
1959	177.0	15	65	55.8	70.0	70.0
1960	177.9	14	65	55.5	70.1	70.1
1961	178.6	13	65	55.3	70.3	70.3
1962	179.6	12	65	55.1	70.3	70.3
1963	180.1	11	65	55.0	70.4	70.4
1964	182.3	11	65	54.3	70.8	70.8
1965	184.0	9.8	65	53.8	71.0	71.0
1966	186.3	9.1	65	53.1	71.4	71.4
1967	187.3	8.5	65	52.8	71.5	71.5
1968	188.8	8.1	65	52.4	71.8	71.8
1969	190.9	7.8	65	51.8	72.1	72.4
1970	192.7	7.3	65	51.4	72.4	72.6
1971	150.0	5.2	54		76.5	77.0
1972	150.0	4.5	54		77.8	78.2
1973	150.0	4.2	54		77.9	78.8
1974	150.0	3.7	54		78.0	78.9
1975	154.5	3.3	56		81.2	82.0
1976	154.5	2.9	57		83.2	85.9
1977	154.5	2.7	58		84.9	87.7
1978	154.5	2.7	58		86.7	89.1
1979	166.5	2.6	58		87.0	89.4
1980	174.0	2.5	58		85.0	87.8
1981	192.0	2.5	58		85.0	87.9
1982	207.0	2.4	58		85.0	88.7
1983	328.5	3.8	54		84.0	88.3
1984	342.0	3.6	52		82.0	86.8
1985	351.0	3.4	50		80.0	85.3
1986	351.0	3.2	50		80.3	85.6
1987	351.0	3.0	47		77.4	83.5
1988	200.0	1.6	45		75.6	82.2
1989	200.0	1.4	42		72.8	80.3
1990	200.0	1.3	35		66.2	75.6
1991	180.3	1.1	20		51.2	64.6
1992	197.3	1.2	20		51.0	63.7
1993	204.1	1.2	20		51.0	62.6
1994	203.8	1.1	20		51.1	62.7
1995	223.4	1.2	25		56.5	67.3
1996	231.1	1.1	25		56.7	67.4
1997	234.3	1.1	25		56.7	67.4
1998	242.7	1.1	25		56.7	67.4
1999	389.5	1.8	25		56.5	67.3
2000	398.5	1.7	25		55.4	66.4
2001	411.1	1.8	25		55.5	66.5
2002	430.9	1.8	25		55.5	66.5
2003	447.2	1.8	25		56.2	67.0

Year	Wage (in thousands)	Relative top tax income threshold	Top state marginal income tax rate %	Top state marginal income tax rate* %	Top marginal tax rate %	Top marginal tax wedge %
2004	458.9	1.8	25		56.5	67.2
2005	465.2	1.8	25		56.6	67.2
2006	472.3	1.8	25		56.6	67.2
2007	488.6	1.8	25		56.6	67.2
2008	507.1	1.8	25		56.4	67.1
2009	538.8	1.9	25		56.5	66.9
2010	545.2	1.8	25		56.6	66.9
2011	560.9	1.8	25		56.6	66.9
2012	587.2	1.8	25		56.6	67.0
2013	604.7	1.9	25		56.7	67.1

Note: The relative top tax income threshold is defined as the income at which the top marginal tax wedge begins to be applied, divided by the APW. This series stretches from 1903 to 2013 because the income tax system was proportional before 1903. An average tax cap that reduced the marginal tax rates on very high income levels was in place in some years, that is, the top marginal tax rate was paid between an interval where we present the lower bound.

* The top state marginal income tax rate includes the effect from the deductible local taxes in 1920–1970.

Source: Own calculations based on references detailed in Appendix A.

Appendix D. Tax tables.

Table 3. The local tax rate and the consumption tax rate, 1862–2013.

Year	Local tax %	Consumption tax %	Year	Local tax %	Consumption tax %
1862	2.0	3.1	1907	5.44	4.7
1863	2.0	3.3	1908	6.20	4.9
1864	2.0	3.5	1909	6.81	4.3
1865	2.0	3.7	1910	6.34	4.7
1866	2.0	3.5	1911	6.15	4.9
1867	2.0	2.9	1912	6.21	4.8
1868	2.0	3.1	1913	6.07	4.6
1869	2.0	3.1	1914	6.38	4.3
1870	2.0	3.6	1915	7.15	3.9
1871	2.0	4.1	1916	6.46	3.7
1872	2.0	3.9	1917	6.19	2.1
1873	2.0	4.1	1918	6.83	1.4
1874	2.0	4.2	1919	7.18	2.2
1875	2.18	4.0	1920	7.39	2.8
1876	2.51	4.1	1921	8.52	3.7
1877	2.60	3.9	1922	8.57	4.5
1878	3.05	4.0	1923	8.79	5.3
1879	3.29	4.1	1924	9.13	5.5
1880	3.76	4.5	1925	9.15	5.2
1881	3.93	4.5	1926	9.18	5.4
1882	4.13	4.4	1927	9.17	5.6
1883	4.21	4.3	1928	9.02	5.5
1884	4.33	4.5	1929	8.84	5.7
1885	4.52	4.5	1930	9.23	5.6
1886	4.88	4.9	1931	10.67	5.7
1887	4.86	4.3	1932	11.46	6.4
1888	4.78	5.3	1933	10.97	6.6
1889	4.66	5.2	1934	10.39	7.1
1890	4.64	5.3	1935	10.04	7.3
1891	4.60	5.0	1936	10.08	7.4
1892	4.74	4.6	1937	10.08	7.5
1893	4.84	4.9	1938	10.53	8.0
1894	4.94	5.1	1939	11.51	8.6
1895	4.84	5.4	1940	11.87	8.1
1896	4.73	5.6	1941	11.09	8.8
1897	4.62	5.7	1942	10.53	10.3
1898	4.47	5.5	1943	10.17	10.7
1899	4.33	5.5	1944	10.09	10.6
1900	4.44	5.5	1945	10.00	13.0
1901	4.76	5.3	1946	10.00	12.2
1902	5.05	5.0	1947	9.80	10.6
1903	5.17	5.1	1948	9.83	11.6
1904	5.21	5.3	1949	10.12	11.2
1905	5.37	5.5	1950	9.97	10.6
1906	5.36	4.6	1951	10.19	10.6

Year	Local tax %	Consumption tax %	Year	Local tax %	Consumption tax %
1952	12.53	10.3	1983	30.15	23.7
1953	12.72	10.6	1984	30.30	25.8
1954	12.39	11.4	1985	30.38	25.6
1955	12.24	12.4	1986	30.34	25.6
1956	12.36	12.2	1987	30.44	25.7
1957	12.60	13.0	1988	30.56	25.4
1958	13.68	13.3	1989	30.80	26.6
1959	14.20	14.6	1990	31.16	27.6
1960	14.63	17.0	1991	31.15	24.6
1961	15.00	17.1	1992	31.04	24.0
1962	15.24	18.6	1993	31.04	24.5
1963	15.46	19.1	1994	31.05	23.5
1964	16.50	19.0	1995	31.50	21.7
1965	17.25	20.5	1996	31.65	26.0
1966	18.29	20.9	1997	31.66	24.4
1967	18.71	21.1	1998	31.65	25.1
1968	19.34	21.1	1999	31.48	24.8
1969	20.24	20.2	2000	30.38	24.9
1970	21.00	21.7	2001	30.53	24.6
1971	22.54	23.4	2002	30.52	25.2
1972	23.79	22.9	2003	31.17	25.0
1973	23.94	22.2	2004	31.51	25.0
1974	24.03	21.1	2005	31.60	26.1
1975	25.23	22.0	2006	31.60	26.1
1976	26.15	21.8	2007	31.55	26.4
1977	26.85	22.7	2008	31.44	26.8
1978	28.71	22.7	2009	31.52	26.4
1979	29.02	22.5	2010	31.56	26.5
1980	29.09	23.6	2011	31.55	25.9
1981	29.55	23.0	2012	31.60	24.9
1982	29.74	23.7	2013	31.73	24.9

Note: As the tax rates differ among cities, the average local tax rate has been used. Following the convention used by the OECD, the national church tax is excluded beginning in 2000.

Source: See Appendix A.

Table 4. The state marginal income tax rate (appropriation tax), 1862–1910.

State taxable income	Marginal tax rate % 1862–1883	State taxable income	Marginal tax rate % 1884–1910
0	0.0	0	0.0
400	1.0	500	1.0

Note: 1862–1883: If the state taxable income did not exceed SEK 1,800, SEK 300 were exempted from taxation. 1884–1910: If the state taxable income did not exceed SEK 1,200, SEK 450 were exempted from taxation. If the taxable income exceeded SEK 1,200 but did not exceed SEK 1,800, SEK 300 were exempted from taxation. The tax rates do not include extra appropriations. The rows in Tables 4–24 regarding the marginal income tax rate refer to the tax bracket beginning at the indicated income. In 1873, the currency unit was changed from *riksdaler* (rdr) to *kronor* (SEK).

Source: SFS 1861:34; SFS 1883:51; SFS 1897:111.

Table 5. Extra temporary appropriation tax, 1871–1902.

State taxable income	Marginal tax rate %							
	1871	1879– 1882	1893	1894	1895	1896	1901	1902
0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
400	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
800	0.5	0.5	0.3	1.0	1.0	0.0	0.0	0.0
1,200	0.5	0.5	0.3	1.0	1.0	0.15	0.5	0.5
1,800	0.5	0.5	0.3	1.0	1.0	0.3	1.0	1.0

Source: SFS 1871:30; 1879:25; SFS 1880:46; SFS 1881:29; SFS 1892:111; SFS 1893:34; SFS 1894:76; SFS 1895:62; SFS 1901:34; SFS 1902:50.

Table 6. The state marginal income tax rate (appropriation tax), 1911–1928.

State taxable income	Marginal tax rate %
0	0.0
500	0.1

Note: If the state taxable income did not exceed SEK 1,200, SEK 450 were exempted from taxation. If the taxable income exceeded SEK 1,200 but did not exceed SEK 1,800, SEK 300 were exempted from taxation.

Source: SFS 1910:116; SFS 1920:759.

Table 7. The state marginal income tax rate, 1903–1919.

State taxable income	Marginal tax rate, % 1903–1910	State taxable income	Marginal tax rate, % 1911–1919
0	0	0	0
1,000	1.0	800	0.4
6,000	1.5	900	0.6
10,000	2.0	1,100	0.8
15,000	2.5	1,400	1.0
20,000	3.0	1,700	1.2
30,000	3.5	2,000	1.4
50,000	4.0	2,500	1.6
80,000	5.0	3,000	1.8
145,500	4.0	3,600	2.0
		4,500	2.2
		6,000	3.0
		8,000	3.5
		12,000	4.0
		20,000	4.5
		30,000	5.0
		50,000	5.5
		80,000	6.0
		104,500	5.0

Note: 1903–1910: If the state taxable income did not exceed SEK 2,000, SEK 800 were exempted from taxation. If the taxable income exceeded SEK 2,000 but did not exceed SEK 3,000, SEK 600 were exempted from taxation. If the taxable income amounted to SEK 3,000 but did not exceed SEK 4,000, SEK 400 were exempted from taxation.

1911–1919: Tax rates up to SEK 6,000 indicate how much the taxpayer paid in taxes on the *entire* taxable income, for instance, if the taxpayer earned SEK 900, (s)he paid 0.6 percent of the entire income, and if the taxpayer earned SEK 1,100, (s)he paid 0.8 percent of the entire income. Hence, the table shows the marginal tax within the brackets. If the income increases and pushes the taxpayer into a higher bracket, for instance, from SEK 900 to SEK 1,100, the taxes paid on this increase will not be 0.6 percent but 1.7 percent: $(1,100 \cdot 0.008 - 900 \cdot 0.006) / (1,100 - 900)$. If the income exceeded SEK 6,000, the taxpayer paid 2.2 percent in tax on the first SEK 6,000 and the stated marginal tax rates on any income above SEK 6,000. One-sixtieth of the taxpayer's wealth was also added to state taxable income.

In the highest tax bracket, the marginal income tax rate is lower due to the average tax cap. Appropriation and defense taxes are not included in the figures.

Source: SFS 1902:84; SFS 1910:115; Genberg (1942, 21–22); own calculations.

Table 8. The state marginal income tax rate, 1920–1947.

State taxable income	1920–1938		State taxable income		1939–1947			
	Base amount %		Bottom tax %	Surtax %	Withdrawal percentage			
0	3	0	4.5	0	1920	155	1934	170
10,000	4	3,000	5.5	0	1921	175	1935	170
20,000	5	6,000	6.5	0	1922	175	1936	170
40,000	6	8,000	6.5	2	1923	175	1937	170
60,000	7	10,000	6.5	4	1924	175	1938	180
100,000	8	15,000	6.5	8	1925	170	1939	120
150,000	9	25,000	6.5	12	1926	160	1940	150
200,000	10	40,000	6.5	16	1927	160	1941	150
300,000	11	60,000	6.5	20	1928	150	1942	150
400,000	12	100,000	6.5	24	1929	145	1943	150
600,000	13	200,000	6.5	28	1930	145	1944	150
800,000	14				1931	145	1945	150
1,000,000	15				1932	145	1946	150
1,226,670	12				1933	165	1947	150

Note: Between 1920 and 1938, one-sixtieth of the taxpayer's wealth was added to the state taxable income. Between 1939 and 1947, one percent of the taxpayer's wealth was also added to the state taxable income. A state equalization tax and an extra state income tax were levied 1928–1938 and 1932–1938 and are not included in the figures above. In the highest tax bracket between 1920 and 1938, the marginal income tax rate was lower due to the average tax cap. To calculate the exact state marginal income tax rate for a specific year between 1920 and 1938, one must multiply the base amount with the withdrawal percentage for the specific year. To calculate the exact state marginal income tax rate for a specific year between 1939 and 1947, one must multiply the bottom tax by the withdrawal percentage for the specific year and then add the surtax.

Source: Genberg (1942, 22–24).

Table 9. The state marginal income tax rate, 1948–1956.

State taxable income	Marginal tax rate % 1948–1951	State taxable income	Marginal tax rate % 1952	State taxable income	Marginal tax rate % 1953–1956
0	10	0	10	0	13.2
1,000	11	1,000	11	4,000	17.6
2,000	12	2,000	12	6,000	22.0
3,000	14	3,000	14	8,000	26.4
4,000	16	4,000	16	10,000	29.7
6,000	18	6,000	17	12,000	33.0
8,000	20	8,000	19	16,000	37.4
10,000	24	9,000	20	20,000	41.8
12,000	28	10,000	23	30,000	46.2
14,000	32	12,000	27	40,000	50.6
16,000	36	14,000	32	60,000	55.0
20,000	40	16,000	35	100,000	60.5
30,000	45	18,000	36	150,000	65.0
40,000	50	20,000	39		
60,000	55	30,000	45		
100,000	60	40,000	49		
200,000	70	50,000	50		
		60,000	54		
		80,000	55		
		100,000	59		
		150,000	60		
		200,000	69		
		250,000	70		

Source: Söderberg (1996, 82–85).

Table 10. The state marginal income tax rate, 1957–1970.

State taxable income	Marginal tax rate % 1957–1961	State taxable income	Marginal tax rate % 1962–1965	State taxable income	Marginal tax rate % 1966–1970
0	11	0	10	0	10
4,000	17	6,000	20	6,000	15
6,000	22	9,000	25	8,000	22
8,000	25	12,000	30	10,000	27
10,000	28	16,000	36	15,000	31
12,000	32	20,000	41	20,000	36
16,000	36	30,000	45	25,000	40
20,000	41	40,000	49	30,000	44
30,000	45	60,000	54	40,000	49
40,000	49	100,000	59	60,000	54
60,000	54	150,000	65	100,000	59
100,000	59			150,000	65
150,000	65				

Source: Söderberg (1996, 86–89).

Table 11. The state marginal income tax rate, 1971–1975.

State taxable income	Marginal tax rate % 1971–1972	State taxable income	Marginal tax rate % 1973–1974	State taxable income	Marginal tax rate % 1975
0	10	0	7	0	7
15,000	16	15,000	13	15,000	12
20,000	22	20,000	19	20,000	17
30,000	28	30,000	28	25,000	22
52,500	38	52,500	38	30,000	28
70,000	44	70,000	47	40,000	33
100,000	49	100,000	49	45,000	38
150,000	54	150,000	54	65,000	43
				70,000	48
				100,000	52
				150,000	56

Note: Beginning in 1971, the local tax was no longer deductible.

Source: Söderberg (1996, 90–91).

Table 12. The state marginal income tax rate, 1976–1978.

State taxable income	Marginal tax rate % 1976	State taxable income	Marginal tax rate % 1977	State taxable income	Marginal tax rate % 1978
0	4	0	2	0	2
20,000	10	15,000	4	15,000	4
25,000	20	20,000	6	25,000	8
30,000	22	25,000	10	30,000	13
35,000	28	30,000	15	35,000	16
40,000	33	35,000	21	40,000	21
45,000	38	40,000	26	45,000	27
65,000	43	45,000	35	50,000	31
70,000	48	50,000	36	55,000	34
80,000	49	55,000	37	60,000	35
100,000	53	60,000	38	65,000	40
150,000	57	65,000	43	70,000	45
		70,000	48	80,000	49
		80,000	49	100,000	53
		100,000	53	150,000	58
		150,000	58		

Source: Söderberg (1996, 91–93).

Table 13. The state marginal income tax rate, 1979–1981.

State taxable income	Marginal tax rate, % 1979	State taxable income	Marginal tax rate, % 1980	State taxable income	Marginal tax rate, % 1981
0	2	0	1	0	1
16,200	4	5,800	2	6,400	2
27,000	8	23,200	4	25,600	4
32,400	13	29,000	5	32,000	5
37,800	16	34,800	8	38,400	8
43,200	20	40,600	11	44,800	11
48,600	25	46,400	14	51,200	14
54,000	29	52,200	20	57,600	20
59,400	33	58,000	22	64,000	22
64,800	35	63,800	26	70,400	26
70,200	40	69,600	30	76,800	29
75,600	45	75,400	34	83,200	33
86,400	49	81,200	39	89,600	38
108,000	53	87,000	44	96,000	44
162,000	58	92,800	45	102,400	45
		98,600	48	108,800	48
		116,000	53	128,000	53
		174,000	58	192,000	58

Note: In 1980 (1981), a marginal tax cap was in place that limited the total marginal income tax—local and state—to at most 80 percent on taxable incomes up to SEK 174,000 (192,000) and 85 percent on taxable incomes above SEK 174,000 (192,000).

Source: Söderberg (1996, 94–96).

Table 14. The state marginal income tax rate, 1982–1984.

State taxable income	Marginal tax rate % 1982	State taxable income	Marginal tax rate % 1983	State taxable income	Marginal tax rate % 1984
0	0	0	0	0	0
6,900	2	7,300	3	7,600	3
27,600	4	29,200	4	30,400	4
48,300	9	51,100	7	53,200	6
55,200	14	58,400	10	60,800	7
62,100	23	65,700	19	68,400	17
69,000	26	73,000	23	76,000	22
82,800	29	87,600	26	91,200	23
89,700	33	94,900	29	98,800	25
96,600	38	102,200	32	106,400	26
103,500	44	109,500	36	114,000	28
110,400	45	116,800	38	121,600	32
117,300	48	124,100	40	136,800	36
138,000	53	138,700	42	144,400	40
207,000	58	146,000	45	174,800	43
		167,900	47	197,600	47
		189,800	49	228,000	49
		219,000	52	342,000	52
		328,500	54		

Note: In 1982 (1983; 1984), a marginal tax cap was in place that limited the total marginal income tax—local and state—to at most 80 percent of taxable income up to SEK 207,000 (219,000; 228,000) and 85 (84; 82) percent on taxable incomes above SEK 207,000 (219,000; 228,000).

Source: Söderberg (1996, 97–99).

Table 15. The state marginal income tax rate, 1985–1987.

State taxable income	Marginal tax rate % 1985–1986	State taxable income	Marginal tax rate % 1987
0	0	0	4.5
7,800	4	63,000	13
70,200	15	72,000	20
78,000	20	126,000	25
124,800	25	135,000	30
140,400	29	144,000	34
148,200	34	180,000	40
163,800	35	189,000	45
179,400	40	342,000	47
202,800	45		
351,000	50		

Note: In 1985–1986, a marginal tax cap was in place that limited the total marginal income tax (local and state) to at most 80 percent of taxable income.

Source: Söderberg (1996, 100–101).

Table 16. The state marginal income tax rate, 1988–1990.

State taxable income	Marginal tax rate % 1988	State taxable income	Marginal tax rate % 1989	State taxable income	Marginal tax rate % 1990
0	5	0	5	0	3
70,000	20	75,000	17	75,000	10
140,000	34	140,000	31	140,000	24
190,000	45	190,000	42	190,000	35

Source: Söderberg (1996, 102–103).

Table 17. The state marginal income tax rate, 1991–1998.

State taxable income	Marginal tax rate, % 1991–1994	Marginal tax rate, % 1995–1998	Year	Tax limit
0	0	0	1991	170,000
Tax limit	20	25	1992	186,600
			1993	190,600
			1994	198,700
			1995	203,900
			1996	209,100
			1997	209,100
			1998	213,100

Source: Söderberg (1996, 103–105); Skatteverket (2009, 71, Table 4.20).

Table 18. The state marginal income tax rate, 1999–2013.

State taxable income	Marginal tax rate, % 1999–2013	Year	Lower tax limit	Upper tax limit
0	0	1999	219,300	360,000
Lower tax limit	20	2000	232,600	374,000
Upper tax limit	25	2001	252,000	390,400
		2002	273,800	414,200
		2003	284,300	430,000
		2004	291,800	441,300
		2005	298,600	450,500
		2006	306,000	460,600
		2007	316,700	476,700
		2008	328,800	495,000
		2009	367,600	526,200
		2010	372,100	532,700
		2011	383,000	548,300
		2012	401,100	574,300
		2013	413,200	591,600

Source: Skatteverket (2013, 152, Table 7.40).

Table 19. Defense taxes, 1913, 1918–1919.

Taxable income	Marginal tax rate % 1913	Taxable income	Marginal tax rate % 1918	Taxable income	Marginal tax rate % 1919
0	0	0	0	0	0
5,000	2.5	6,000	1.5	10,000	2.5
8,000	3.0	8,000	2.0	12,000	3.0
12,000	3.5	10,000	2.5	15,000	3.5
14,000	4.0	12,000	3.0	20,000	4.0
17,000	4.5	15,000	3.5	30,000	4.5
20,000	5.0	20,000	4.0	50,000	5.0
25,000	6.0	30,000	4.5	80,000	6.0
30,000	7.0	50,000	5.0	100,000	7.0
40,000	8.0	80,000	6.0	125,000	8.0
50,000	9.0	150,000	7.0	150,000	9.0
70,000	10.0			200,000	10.0
100,000	11.0			300,000	11.0
150,000	12.5			400,000	12.0
225,000	13.5			500,000	13.0
537,000	12.0			600,000	14.0
				700,000	15.0
				800,000	16.0
				900,000	17.0
				988,700	12.0

Note: Taxable income refers to state taxable income. The defense tax in 1913 included one-tenth of wealth, and the payment was split over three years, 1915, 1916 and 1917. The defense taxes in 1918 and 1919 included one-sixtieth of wealth. In the highest tax bracket, the marginal income tax rate was lower due to the average tax cap. *Source:* 1913: Genberg (1942, 21–22); 1918: SFS 1917:513; 1919: SFS 1918:513.

Table 20. Defense surtax, 1918.

Taxable income	Marginal tax rate %
0	0
100,000	1.0
125,000	2.0
200,000	3.0
300,000	4.0
400,000	5.0
500,000	6.0
600,000	7.0
700,000	8.0
800,000	9.0
900,000	10.0
925,000	5.0

Note: Taxable income refers to state taxable income and included one-sixtieth of taxpayer's wealth. In the highest tax bracket, the marginal income tax rate was lower due to the average tax cap. *Source:* SFS 1918:512.

Table 21. Defense taxes during World War II, 1939–1947.

Taxable income	Marginal tax rate, % 1939	Taxable income	Marginal tax rate, % 1940–41	Taxable income	Marginal tax rate, % 1942–47
0	2.7	0	5.0	0	6.0
3,000	3.3	3,000	5.5	3,000	7,0
6,000	3.9	6,000	6.5	6,000	8,0
8,000	4.9	9,000	8.0	9,000	10,0
10,000	5.9	12,000	10.0	12,000	12,5
15,000	7.9	15,000	12.0	15,000	15,0
25,000	9.9	25,000	14.0	25,000	18,0
40,000	11.9	35,000	16.0	35,000	21,0
60,000	13.9	50,000	18.0	50,000	24,0
100,000	15.9	100,000	20.5	100,000	27,5
200,000	17.9	200,000	23.0	200,000	31,0

Note: Formally, the defense tax in 1939 was half of the state income tax. Hence, if the taxpayer paid 5.4 percent in state income tax, (s)he had to pay an additional 2.7 percent of taxable income in defense tax. Taxable income refers to state taxable income, including one percent of wealth.

Source: Genberg (1942, 24–25).

Table 22. The local progressive income tax (*den kommunala progressivskatten*), 1920–1938.

State taxable income	Base amount 1920–1927 %	State taxable income SEK	Base amount 1928–1938 %	Withdrawal percentage	
0	0	0	0	1920	92.50
3,000	0.5	3,000	0.5	1921	92.50
6,000	1.0	9,000	1.0	1922	93.75
10,000	2.0	15,000	2.0	1923	93.75
25,000	3.0	35,000	3.0	1924	93.75
40,000	4.0	60,000	4.0	1925	93.75
60,000	5.0	100,000	5.0	1926	93.75
100,000	6.0	432,000	4.5	1927	96.25
150,000	7.0				
200,000	8.0				
294,750	6.0				

Note: The base amount multiplied by the withdrawal percentage yields the marginal income tax rate.

Source: Genberg (1942, 22–23); Söderberg (1996, 75–76).

Table 23. The state equalization tax (*den statliga utjämningskatten*), 1928–1938.

State taxable income	Base amount 1928–1933 %	State taxable income	Base amount 1934–1938 %	Withdrawal percentage	
0	0	0	0	1928	85
3,000	0.167	3,000	0.333	1929	85
9,000	0.333	9,000	0.667	1930	80
15,000	0.667	15,000	1.333	1931	100
35,000	1.000	35,000	2.000	1932	100
60,000	1.333	60,000	2.667	1933	100
100,000	1.667	100,000	3.333		
432,000	1.500	432,000	3.000		

Note: Formally, the state equalization tax was one-third of the local progressive income tax between 1928 and 1933 and two-thirds between 1934 and 1938. To calculate the exact marginal income tax rate for a specific year between 1928 and 1933, one must multiply the base amount by the withdrawal percentage for the specific year. *Source:* Genberg (1942, 23); Söderberg (1996, 77).

Table 24. The extra state income tax (*den statliga extra inkomstskatten*), 1932–1938.

State taxable income	Marginal tax rate, % 1932–1935	State taxable income	Marginal tax rate, % 1936–1938
0	0	0	0
6,000	0.5	6,000	1.0
8,000	1.0	8,000	2.0
12,000	1.5	10,000	3.0
20,000	2.0	12,000	4.0
30,000	2.5	20,000	5.0
40,000	3.0	30,000	6.0
60,000	3.5	50,000	7.0
100,000	4.0	100,000	8.0

Source: Genberg (1942, 23).

Appendix E. Basic local and state income tax allowances.

Table 25. The basic state and local allowances, 1920–1990.

Year	Local allowance	State allowance
1920	600	1,200
1921	600	1,200
1922	450	900
1923	450	900
1924	450	900
1925	450	900
1926	450	900
1927	400	800
1928	420	840
1929	420	840
1930	420	840
1931	420	840
1932	420	840
1933	420	840
1934	420	840
1935	420	840
1936	420	840
1937	420	840
1938	420	See Table 26
1939	420	See Table 26
1940	420	See Table 26
1941	420	See Table 26
1942	420	See Table 26
1943	420	See Table 26
1944	420	See Table 26
1945	420	See Table 26
1946	420	See Table 26
1947	420	See Table 26
1948	420	See Table 27
1949	420	See Table 27
1950	420	See Table 27
1951	420	See Table 27
1952	1,290	See Table 27
1953	1,290	1,840
1954	1,290	1,840
1955	1,290	1,840
1956	1,290	1,840
1957	1,290	1,840
1958	1,840	1,840
1959	1,840	1,840
1960	1,840	1,840
1961	1,840	1,840
1962	2,250	2,250
1963	2,250	2,250
1964	2,250	2,250
1965	2,250	2,250

Year	Local allowance	State allowance
1966	2,250	2,250
1967	2,250	2,250
1968	2,250	2,250
1969	2,250	2,250
1970	2,250	2,250
1971	See Table 28	See Table 28
1972	See Table 28	See Table 28
1973	See Table 28	See Table 28
1974	See Table 28	See Table 28
1975	4,500	4,500
1976	4,500	4,500
1977	4,500	4,500
1978	4,500	4,500
1979	4,500	4,500
1980	6,000	0
1981	6,000	0
1982	7,500	0
1983	7,500	0
1984	7,500	0
1985	7,500	0
1986	7,500	0
1987	9,000	9,000
1988	10,000	10,000
1989	10,000	10,000
1990	10,000	10,000

Note: Until 1961 (local allowance) or 1937 (state allowance), the allowance was 50 percent higher, given that the assessed income was twice as high as the original allowance. If the assessed income was between the original allowance and double the original allowance, the allowance was increased by half of the difference between the assessed income and the original allowance. The basic tax allowances differed somewhat among cities until 1960, depending on the price level in each city. In Tables 25–27, we refer to the basic tax allowance in the average city. The local tax was deductible from the state taxable income between 1920 and 1970. In addition, the following allowance was guaranteed, even if the local tax was lower: in 1966, the guaranteed allowance was at least 25 percent of the total net income, and from 1967–1970, the guaranteed allowance was at least SEK 2,500 for single persons (Söderberg 1996, 65).

Source: Basic local allowance: Söderberg (1996, 54–62). Basic state allowance: Söderberg (1996, 67–73).

Table 26. Basic state income allowances, 1938–1947.

Assessed income	Allowance
0	Allowance = state assessed income
810	SEK 810 plus SEK 10 for each SEK 20 exceeding SEK 810 in state assessed income
1,170	990
1,210	1,000
1,230	1,010
1,250	1,020
1,270	1,030
1,310	1,040
1,330	1,050
1,350	1,060
1,410	1,070
1,430	1,080
1,450	1,090
1,510	1,100
1,530	1,110
1,550	1,120
1,610	1,130
1,900	SEK 1,120 minus SEK 10 for each SEK 50 exceeding SEK 1,900 in state assessed income
2,400	1,020
5,300	SEK 1,010 minus SEK 10 for each SEK 100 exceeding SEK 5,300 in state assessed income
13,800	SEK 160 minus SEK 10 for each SEK 50 exceeding SEK 13,800 in state assessed income
14,600	0

Note: For example, if the state assessed income was SEK 2,000, the allowance was calculated as $1,120 - 10 \cdot ((2,000 - 1,900) / 50) = 1,100$.

Source: Söderberg (1996, 68).

Table 27. Basic state income allowances, 1948–1952.

State assessed income	Allowance	State assessed income	Allowance	State assessed income	Allowance	State assessed income	Allowance
0	1,800	4,850	1,340	6,900	880	8,950	420
2,850	1,790	4,900	1,330	6,950	870	9,000	410
2,900	1,780	4,950	1,320	7,000	860	9,030	400
2,950	1,770	5,000	1,310	7,030	850	9,070	390
3,000	1,760	5,030	1,300	7,070	840	9,100	380
3,030	1,750	5,070	1,290	7,100	830	9,150	370
3,070	1,740	5,100	1,280	7,150	820	9,200	360
3,100	1,730	5,150	1,270	7,200	810	9,250	350
3,150	1,720	5,200	1,260	7,250	800	9,300	340
3,200	1,710	5,250	1,250	7,300	790	9,350	330
3,250	1,700	5,300	1,240	7,350	780	9,400	320
3,300	1,690	5,350	1,230	7,400	770	9,430	310
3,350	1,680	5,400	1,220	7,430	760	9,470	300
3,400	1,670	5,430	1,210	7,470	750	9,500	290
3,430	1,660	5,470	1,200	7,500	740	9,550	280
3,470	1,650	5,500	1,190	7,550	730	9,600	270
3,500	1,640	5,550	1,180	7,600	720	9,650	260
3,550	1,630	5,600	1,170	7,650	710	9,700	250
3,600	1,620	5,650	1,160	7,700	700	9,750	240
3,650	1,610	5,700	1,150	7,750	690	9,800	230
3,700	1,600	5,750	1,140	7,800	680	9,830	220
3,750	1,590	5,800	1,130	7,830	670	9,870	210
3,800	1,580	5,830	1,120	7,870	660	9,900	200
3,830	1,570	5,870	1,110	7,900	650	9,950	190
3,870	1,560	5,900	1,100	7,950	640	10,000	180
3,900	1,550	5,950	1,090	8,000	630	10,050	170
3,950	1,540	6,000	1,080	8,050	620	10,100	160
4,000	1,530	6,050	1,070	8,100	610	10,150	150
4,050	1,520	6,100	1,060	8,150	600	10,200	140
4,100	1,510	6,150	1,050	8,200	590	10,230	130
4,150	1,500	6,200	1,040	8,230	580	10,270	120
4,200	1,490	6,230	1,030	8,270	570	10,300	110
4,230	1,480	6,270	1,020	8,300	560	10,350	100
4,270	1,470	6,300	1,010	8,350	550	10,400	90
4,300	1,460	6,350	1,000	8,400	540	10,450	80
4,350	1,450	6,400	990	8,450	530	10,500	70
4,400	1,440	6,450	980	8,500	520	10,550	60
4,450	1,430	6,500	970	8,550	510	10,600	50
4,500	1,420	6,550	960	8,600	500	10,630	40
4,550	1,410	6,600	950	8,630	490	10,670	30
4,600	1,400	6,630	940	8,670	480	10,700	20
4,630	1,390	6,670	930	8,700	470	10,750	10
4,670	1,380	6,700	920	8,750	460	10,800	0
4,700	1,370	6,750	910	8,800	450		
4,750	1,360	6,800	900	8,850	440		
4,800	1,350	6,850	890	8,900	430		

Source: Söderberg (1996, 69–72).

Table 28. Basic local and state income tax allowances, 1971–1974.

Assessed income	Allowance
0	4,500
30,000	$4,500 - 0.2 \cdot (T - 30,000)$
52,500	0

Note: T = assessed income.

Source: Söderberg (1996, 58).

Table 29. Basic local and state income tax allowances, 1991–1992.

Assessed income	Allowance 1991	Assessed income	Allowance 1992
0	10,300	0	10,700
60,300	$10,304 + 0.25 \cdot (T - 59,892)$	62,800	$10,784 + 0.25 \cdot (T - 62,682)$
92,700	18,500	97,200	19,400
98,900	$18,596 - 0.1 \cdot (T - 97,888)$	103,100	$19,462 - 0.1 \cdot (T - 102,448)$
179,900	10,300	189,100	10,700

Note: T = assessed income. The calculated amount is rounded down to closest hundred SEK.

Source: Söderberg (1996, 59–60).

Table 30. Basic local and state income tax allowances, 1993–1994.

Assessed income	Allowance 1993	Assessed income	Allowance Local 1994
0	11,000	0	8,800
64,400	$11,004 + 0.25 \cdot (T - 63,984)$	65,900	$8,800 + 0.25 \cdot (T - 65,472)$
99,200	19,800	101,500	17,800
105,300	$19,866 - 0.1 \cdot (T - 104,576)$	107,700	$17,864 - 0.1 \cdot (T - 107,008)$
192,300	11,000	196,700	8,800

Note: T = assessed income. The calculated amount is rounded down to closest hundred SEK. In 1994, there was no allowance at the state level.

Source: Söderberg (1996, 60–61).

Table 31. Basic local and state income tax allowances, 1995–1996.

Assessed income	Allowance 1995	Assessed income	Allowance 1996
0	8,900	0	8,600
66,700	$8,925 + 0.25 \cdot (T - 66,402)$	67,400	$8,688 + 0.25 \cdot (T - 67,332)$
103,200	18,100	104,600	18,000
108,800	$18,118 - 0.1 \cdot (T - 108,528)$	110,200	$18,009 - 0.1 \cdot (T - 110,048)$
199,800	8,900	203,200	8,600

Note: T = assessed income. The calculated amount is rounded down to closest hundred SEK.

Source: Söderberg (1996, 61–62).

Table 32. Basic local and state income tax allowances, 1997–1998.

Assessed income	Allowance 1997	Assessed income	Allowance 1998
0	8,700	0	8,700
67,900	$8,712 + 0.25 \cdot (T - 67,518)$	68,000	$8,800 + 0.25 \cdot (T - 68,000)$
104,700	18,000	105,200	18,100
111,000	$18,059 - 0.1 \cdot (T - 110,352)$	110,800	$18,000 - 0.1 \cdot (T - 110,800)$
203,000	8,700	203,800	8,700

Note: T = assessed income. The calculated amount is rounded down to closest hundred SEK.

Source: Skattebetalarnas förening (1997, 35); Skatteverket (1998, 41).

Table 33. Basic local and state income tax allowances, 1999–2000.

Assessed income	Allowance 1999	Assessed income	Allowance 2000
0	8,700	0	8,700
68,000	$8,800 + 0.25 \cdot (T - 68,000)$	68,200	$8,800 + 0.25 \cdot (T - 68,200)$
105,200	18,100	105,800	18,200
110,800	$18,000 - 0.1 \cdot (T - 110,800)$	111,400	$18,100 - 0.1 \cdot (T - 111,400)$
203,800	8,700	205,400	8,700

Note: T = assessed income. The calculated amount is rounded down to closest hundred SEK in 1999 and 2000.

Source: Skatteverket (1999, 46); Skatteverket (2000, 51).

Table 34. Basic local and state income tax allowances, 2001–2002.

Assessed income	Allowance 2001	Assessed income	Allowance 2002
0	10,000	0	11,200
68,800	$10,100 + 0.25 \cdot (T - 68,800)$	70,900	$11,300 + 0.25 \cdot (T - 70,900)$
106,400	19,500	109,300	20,900
112,900	$19,400 - 0.1 \cdot (T - 112,900)$	115,900	$20,800 - 0.1 \cdot (T - 115,900)$
206,900	10,000	211,900	11,200

Note: T = assessed income. The calculated number is rounded to closest hundred SEK in 2001 and rounded up to closest hundred SEK in 2002.

Source: Skatteverket (2001, 50); Skatteverket (2002, 51).

Table 35. Basic local and state income tax allowances, 2003–2004.

Assessed income	Allowance 2003	Assessed income	Allowance 2004
0	16,400	0	16,700
57,600	$16,400 + 0.17 \cdot (T - 57,600)$	58,557	$16,700 + 0.2 \cdot (T - 58,557)$
105,000	25,900	106,896	26,400
119,700	$25,900 - 0.1 \cdot (T - 119,700)$	121,830	$26,400 - 0.1 \cdot (T - 121,830)$
265,200	11,400	269,991	11,600

Note: T = assessed income. The calculated number is rounded up to closest hundred SEK.

Source: Skatteverket (2002, 51); Skatteverket (2003, 67).

Table 36. Basic local and state income tax allowances, 2005.

Assessed income	Allowance 2005
0	0.423 PBB
1.185 PBB	$0.423 + 0.20 \cdot (T - 1.185 \text{ PBB})$
2.72 PBB	0.73 PBB
3.11 PBB	$0.73 \text{ PBB} - 0.10 \cdot (T - 3.11 \text{ PBB})$
7.48 PBB	0.293 PBB

Note: PBB = price basic amount (*prisbasbelopp*). T = assessed income. PBB 2005 = SEK 39,400. The calculated number is rounded up to closest hundred SEK.

Source: Skatteverket (2004, 70).

Table 37. Basic local and state income tax allowances, 2006–2013.

Assessed income	Allowance	Year	PBB
0	0.423 PBB	2006	39,700
0.99 PBB	$0.423 \text{ PBB} + 0.20 \cdot (T - 0.99 \text{ PBB})$	2007	40,300
2.72 PBB	0.77 PBB	2008	41,000
3.11 PBB	$0.77 \text{ PBB} - 0.10 \cdot (T - 3.11 \text{ PBB})$	2009	42,800
7.88 PBB	0.293 PBB	2010	42,400
		2011	42,800
		2012	44,000
		2013	44,500

Note: PBB = price basic amount (*prisbasbelopp*). T = assessed income. The calculated number is rounded up to closest hundred SEK.

Source: Skatteverket (2005, 68); Skatteverket (2006, 69); Skatteverket (2007, 70); Skatteverket (2008, 70); Skatteverket (2009, 70); Skatteverket (2010, 70); Skatteverket (2011, 70); Skatteverket (2013, 130).

Appendix F. National basic pension contribution paid by employees (*folkpensionsavgift*).

Table 38. National basic pension contribution, 1913–1921.

State assessed income	Fee
0	3
500	5
800	8
1,200	13

Source: Elmér (1960, 222).

Table 39. National basic pension contribution, 1922–1935.

State assessed income	Fee
0	3
600	5
800	8
1,200	13
3,000	18
5,000	23
7,000	28
10,000	33

Source: Elmér (1960, 222).

Table 40. National basic pension contribution, 1936–1974.

Year	Fee
1936–1947	1.0 percent of the state assessed income, however at least SEK 6 and at the most SEK 20.
1948–1951	1.0 percent of the state assessed income, however at least SEK 6 and at the most SEK 100.
1952–1953	Same as above although no minimum amount.
1954–1956	1.8 percent of the state assessed income. For unmarried individuals a maximum of SEK 180. No fee if the assessed income is less than SEK 1,200.
1957–1958	2.5 percent of the state assessed income. For unmarried individuals a maximum of SEK 250. No fee if the assessed income is less than SEK 1,200.
1959–1961	4.0 percent of the state assessed income. A maximum of SEK 600 for unmarried individuals. No fee if the assessed income is less than SEK 1,200.
1962–1965	Same as above although the exemption from fee for low incomes is expanded up to SEK 2,400 in state assessed income.
1966	4.0 percent of the state taxable income. A maximum of 1,200 SEK for unmarried individuals.
1967	4.5 percent of the state taxable income. A maximum of 1,350 SEK for unmarried individuals.
1968–1973	5.0 percent of the state taxable income. A maximum of 1,500 SEK per individual.

Source: Söderberg (1996, 111–113).

Appendix G. Health insurance fee paid by employees (*sjukförsäkringsavgift*).

Table 41. Health insurance fee, 1955–1962.

Annual wage	Fee		
	1955–1958	1959–1961	1962
0	65	75	100
1,800	75	85	105
2,400	80	90	110
3,000	85	95	115
3,600	95	100	120
4,200	100	105	125
5,000	105	115	135
5,800	110	120	140
6,800	125	130	150
8,400	140	145	165
10,200	155	155	175
12,000	170	170	190
14,000	185	180	200

Note: Because the fee was a fixed amount in SEK within certain income brackets until 1973, the marginal effect within the brackets was zero.

Source: Söderberg (1996, 49).

Table 42. Health insurance fee, 1963–1966.

Annual wage	Fee		
	1963–1964	1965	1966
0	120	130	140
1,800	120	130	140
2,600	130	135	150
3,400	135	145	155
4,200	140	150	165
5,000	150	160	175
5,800	160	170	185
6,800	170	185	200
8,400	190	200	215
10,200	200	215	235
12,000	215	230	250
14,000	230	245	265
16,000	245	260	285
18,000	265	285	310
21,000	290	310	335

Note: Because the fee was a fixed amount in SEK within certain income brackets until 1973, the marginal effect within the brackets was zero.

Source: Söderberg (1996, 50).

Table 43. Health insurance fee, 1967–1973.

Annual wage	Fee						
	1967	1968	1969	1970	1971	1972	1973
0	145	205	240	240	0	0	0
1,800	145	205	240	240	255	295	310
2,600	155	210	245	245	260	300	320
3,400	160	220	250	255	265	305	325
4,200	165	225	255	260	275	310	335
5,000	170	230	260	265	280	320	340
5,800	185	245	275	280	285	330	355
6,800	195	260	285	295	305	345	370
8,400	205	270	300	305	320	360	385
10,200	225	290	315	325	340	380	405
12,000	245	310	335	345	360	400	425
14,000	260	330	350	365	380	420	450
16,000	280	350	370	385	400	440	470
18,000	295	370	390	405	420	460	490
21,000	315	390	405	425	440	475	515
24,000	335	410	425	445	460	495	535
27,000	350	430	440	465	480	515	555
30,000	370	450	460	485	500	535	575
33,000	385	470	485	505	520	555	600
36,000	405	490	495	525	540	575	620
39,000	425	510	515	545	560	595	640

Note: Because the fee was a fixed amount in SEK within certain income brackets until 1973, the marginal effect within the brackets was zero.

Source: Söderberg (1996, 51).

Table 44. Health insurance fee, 1974.

1974	SEK 300 + 1.6 percent of salary up to SEK 60,750. (Hence, the maximum fee was SEK 1,272.)
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Source: Söderberg (1996, 52).

Appendix H. General employee-paid social security contributions (*allmänna egenavgifter*).

Table 45. General employee-paid social security contributions, 1993–2013.

Year	Fee %	Income cap	Tax compensation %	Marginal effect %	Allowance to local and state income tax %
1993	0.95	258,000	0	0.95	100
1994	1.95	264,000	0	1.95	100
1995	3.95	270,000	0	3.95	100
1996	4.95	276,000	0	4.95	100
1997	5.95	277,500	0	5.95	100
1998	6.95	299,000	0	6.95	100
1999	6.95	299,800	0	6.95	100
2000	7.0	301,000	25	5.25	75
2001	7.0	304,200	50	3.5	50
2002	7.0	313,100	75	1.75	25
2003	7.0	330,000	75	1.75	25
2004	7.0	341,300	75	1.75	25
2005	7.0	349,400	87.5	0.875	12.5
2006	7.0	359,100	100	0	0
2007	7.0	370,400	100	0	0
2008	7.0	387,300	100	0	0
2009	7.0	410,700	100	0	0
2010	7.0	412,300	100	0	0
2011	7.0	420,400	100	0	0
2012	7.0	440,600	100	0	0
2013	7.0	456,700	100	0	0

Note: Beginning in 2000, taxpayers were compensated for the fee, which lowered the marginal effect. The allowance to the local and state income tax was decreased commensurately.

Source: 1993–1996: Söderberg (1996, 52). 1997–2013: Skatteverket (2013, Table 7.32).

Appendix I. Income tax credits (*skattereduktion för arbetsinkomster*).

Table 46. Tax credits, 1999–2002.

Income	Tax credit
0	1,320
135,000	SEK 1,320 minus 1.2% times the income exceeding SEK 135,000
245,000	0

Note: 1999–2001: Income refers to pension-entitled income. In 2002, it refers to taxable income.

Source: Skatteverket (2002, 50).

Table 47. Earned income tax credit, 2007.

Income from active work per year (AI)	Tax credit
0	$(AI - GA) \cdot KI$
0.79 PBB	$(0.79 \text{ PBB} + 0.2 \cdot (AI - 0.79 \text{ PBB}) - GA) \cdot KI$
2.72 PBB	$(1.176 \text{ PBB} - GA) \cdot KI$

Note: Refers to persons below age 65.

PBB = Price basic amount according to the National Insurance Act

AI = Labor income

GA = The sum of all basic allowances and sea income tax reduction

KI = The tax rate for municipal income tax

In 2007, the price basic amount was SEK 40,300.

Source: Ministry of Finance (2006, 46–47).

Table 48. Earned income tax credit, 2008.

Income from active work per year (AI)	Tax credit
0	$(AI - GA) \cdot KI$
0.91 PBB	$(0.91 \text{ PBB} + 0.2 \cdot (AI - 0.91 \text{ PBB}) - GA) \cdot KI$
2.72 PBB	$(1.272 \text{ PBB} + 0.033 \cdot (AI - 72 \text{ PBB}) - GA) \cdot KI$
7.00 PBB	$(1.413 \text{ PBB} - GA) \cdot KI$

Note: Refers to persons below age 65.

PBB = Price basic amount according to the National Insurance Act

AI = Labor income

GA = The sum of all basic allowances and sea income tax reduction

KI = The tax rate for municipal income tax

In 2008, the price basic amount was SEK 41,000.

Source: Ministry of Finance (2007, 43).

Table 49. Earned income tax credit, 2009.

Income from active work per year (AI)	Tax credit
0	$(AI - GA) \cdot KI$
0.91 PBB	$(0.91 \text{ PBB} + 0.25 \cdot (AI - 0.91 \text{ PBB}) - GA) \cdot KI$
2.72 PBB	$(1.363 \text{ PBB} + 0.065 \cdot (AI - 2.72 \text{ PBB}) - GA) \cdot KI$
7.00 PBB	$(1.642 \text{ PBB} - GA) \cdot KI$

Note: Refers to persons below age 65.

PBB = Price basic amount according to the National Insurance Act

AI = Labor income

GA = The sum of all basic allowances and sea income tax reduction

KI = The tax rate for municipal income tax

In 2009, the price basic amount was SEK 42,800.

Source: Ministry of Finance (2008, 46–47).

Table 50. Earned income tax credit, 2010–2013

Income from active work per year (AI)	Tax credit
0	$(AI - GA) \cdot KI$
0.91 PBB	$(0.91 \text{ PBB} + 0.304 \cdot (AI - 0.91 \text{ PBB}) - GA) \cdot KI$
2.72 PBB	$(1.461 \text{ PBB} + 0.095 \cdot (AI - 2.72 \text{ PBB}) - GA) \cdot KI$
7.00 PBB	$(1.868 \text{ PBB} - GA) \cdot KI$

Note: Refers to persons below age 65.

PBB = Price basic amount according to the National Insurance Act

AI = Labor income

GA = The sum of all basic allowances and sea income tax reduction

KI = The tax rate for municipal income tax

In 2010 (2011; 2012; 2013) the price basic amount was SEK 42,400 (42,800; 44,000; 44,500).

Source: Ministry of Finance (2009, 61–62); Ministry of Finance (2010, 66); Ministry of Finance (2011, 66); Ministry of Finance (2012, 68).

**Appendix J. Employer-paid social security contributions
(arbetsgivaravgifter).**

Table 51. Employer-paid social security contributions, 1955–2013.

Year	Fee, %	Levied on
1955–1959	1.14	wage share up to SEK 15,000
1960	1.14	wage share up to SEK 4,200
	4.14	wage share between SEK 4,200 and SEK 15,000
	3,00	wage share between SEK 15,000 and SEK 31,500
1961	1.14	wage share up to SEK 4,300
	5.14	wage share between SEK 4,300 and SEK 15,000
	4.00	wage share between SEK 15,000 and SEK 32,250
1962	1.14	wage share up to SEK 4,500
	6.14	wage share between SEK 4,500 and SEK 15,000
	5,00	wage share between SEK 15,000 and SEK 33,750
1963	1.50	wage share up to SEK 4,700
	7.50	wage share between SEK 4,700 and SEK 22,000
	6,00	wage share between SEK 22,000 and SEK 35,250
1964	1.50	wage share up to SEK 4,800
	8.50	wage share between SEK 4,800 and SEK 22,000
	7.00	wage share between SEK 22,000 and SEK 36,000
1965	1.50	wage share up to SEK 5,000
	9.00	wage share between SEK 5,000 and SEK 22,000
	7.50	wage share between SEK 22,000 and SEK 37,500
1966	1.50	wage share up to SEK 5,300
	9.50	wage share between SEK 5,300 and SEK 22,000
	8.00	wage share between SEK 22,000 and SEK 39,750
1967	2.60	wage share up to SEK 5,500
	11.1	wage share between SEK 5,500 and SEK 41,250
1968	2.60	wage share up to SEK 5,700
	11.6	wage share between SEK 5,700 and SEK 42,750
1969	3.60	wage share up to SEK 5,800
	13.1	wage share between SEK 5,800 and SEK 43,500
	1.00	wage share exceeding SEK 43,500
1970	3.90	wage share up to SEK 6,000
	13.9	wage share between SEK 6,000 and SEK 45,000
	1.00	wage share exceeding SEK 45,000
1971	5.12	wage share up to SEK 6,400
	15.37	wage share between SEK 6,400 and SEK 48,000
	2.00	wage share exceeding SEK 48,000
1972	5.47	wage share up to SEK 7,100
	15.97	wage share between SEK 7,100 and SEK 53,250
	2.00	wage share exceeding SEK 53,250
1973	7.57	wage share up to SEK 7,300
	18.07	wage share between SEK 7,300 and SEK 54,750

Year	Fee, %	Levied on
	4.00	wage share exceeding SEK 54,750
1974	11.87	wage share up to SEK 8,100
	22.37	wage share between SEK 8,100 and SEK 60,750
	4.00	wage share exceeding SEK 60,750
1975	15.97	wage share up to SEK 9,000
	26.72	wage share between SEK 9,000 and SEK 67,500
	4.00	wage share exceeding SEK 67,500
1976	19.675	wage share up to SEK 9,700
	30.675	wage share between SEK 9,700 and SEK 72,750
	19.675	wage share exceeding SEK 72,750
1977	22.95	wage share up to SEK 10,700
	34.7	wage share between SEK 10,700 and SEK 80,250
	22.95	wage share exceeding SEK 80,250
1978	21.97	wage share up to SEK 11,800
	33.72	wage share between SEK 11,800 and SEK 88,500
	21.97	wage share exceeding SEK 88,500
1979	22.38	wage share up to SEK 13,100
	34.13	wage share between SEK 13,100 and SEK 98,250
	22.38	wage share exceeding SEK 98,250
1980	23.25	wage share up to SEK 13,900
	35.25	wage share between SEK 13,900 and SEK 104,250
	23.25	wage share exceeding SEK 104,250
1981	23.605	wage share up to SEK 16,100
	35.855	wage share between SEK 16,100 and SEK 120,750
	23.605	wage share exceeding SEK 120,750
1982	33.055	full wage
1983	36.255	full wage
1984	36.155	full wage
1985	36.455	full wage
1986	36.45	full wage
1987	37.076	full wage
1988	37.07	full wage
1989	37.97	full wage
1990	38.97	full wage
1991	38.03	full wage
1992	34.83	full wage
1993	31.00	full wage
1994	31.36	full wage
1995	32.86	full wage
1996	33.06	full wage
1997	32.92	full wage
1998	33.03	full wage
1999	33.06	full wage
2000	32.92	full wage
2001	32.82	full wage

Year	Fee, %	Levied on
2002	32.82	full wage
2003	32.82	full wage
2004	32.70	full wage
2005	32.46	full wage
2006	32.28	full wage
2007	32.42	full wage
2008	32.42	full wage
2009	31.42	full wage
2010	31.42	full wage
2011	31.42	full wage
2012	31.42	full wage
2013	31.42	full wage

Note: Including the unspecified payroll tax (*allmän arbetsgivaravgift*).

Source: 1955–1996: Söderberg (1996, 117–119); 1997–2013: Skatteverket (2013, Table 7.32).

References

- Agell, Jonas, Peter Englund, and Jan Södersten. 1995. "Svensk skattepolitik i teori och praktik. 1991 års skattereform." In *Ekonomiska Rådets rapport till kommittén för utvärdering av skattereformen*, bilaga 1, SOU 1995:104. Stockholm: Fritzes.
- Agell, Jonas, Peter Englund, and Jan Södersten. 1998. *Incentives and Redistribution in the Welfare State: The Swedish Tax Reform*. London: Macmillan.
- Aidt, Toke S. and Peter S. Jensen. 2009. "Tax Structure, Size of Government, and the Extension of the Voting Franchise in Western Europe, 1860–1938." *International Tax and Public Finance* 16(3), 362–394.
- Barro, Robert J. and Chaipat Sahasakul. 1986. "Average Marginal Tax Rates from Social Security and the Individual Income Tax." *Journal of Business* 59(4), 555–566.
- Bassanini, Andrea and Duval Romain. 2006. "Employment Patterns in OECD Countries: Reassessing the Role of Policies and Institutions." OECD Economics Department Working Paper 486. Paris: OECD.
- Bentzel, Ragnar. 1952. *Inkomstfördelningen i Sverige*. Stockholm: Industriens Utredningsinstitut.
- Bergh, Andreas. 2014. "What Are the Policy Lessons from Sweden? On the Rise, Fall and Revival of a Capitalist Welfare State." *New Political Economy* 19(5), 662–694.
- Birkinshaw Julian, Pontus Braunerhjelm, Ulv Holm, and Siri A. Terjeseni. 2006. "Why Do Some Corporations Relocate their Headquarters Overseas?" *Strategic Management Journal* 27(7), 681–700.
- Braunerhjelm, Pontus. 2004. "Heading for Headquarters? Why and How the Location of Headquarters Matter among the EU-Countries." In *European Union and the Race for Foreign Direct Investment in Europe*, edited by Lars Oxelheim and Pervez N. Ghauri, 123–148. Amsterdam and Boston: Elsevier.
- Confederation of Swedish Enterprise. 2014. *Fakta om löner och arbetstider 2014*. Stockholm: Svenskt Näringsliv.
- Corneo, Giacomo. 2005. "The Rise and Likely Fall of the German Income Tax, 1958–2005." *CESifo Economic Studies* 51(1), 159–186.
- Dahlgren, Stellan and Kekke Stadin, eds. 1990. *Från feodalism till kapitalism: skatternas roll i det svenska samhällets omvandling 1720–1910*. Uppsala: Department of History, Uppsala University.

- Daveri, Francesco and Guido Tabellini. 2000. "Unemployment, Growth and Taxation in Industrial Countries." *Economic Policy* 15(30), 49–104.
- de Haan, Jacob, Jan-Egbert Sturm, and Björn Volkerink. 2004. "How to Measure the Tax Burden on Labor at the Macro Level?" In *Measuring the Tax Burden on Capital and Labor*, edited by Peter Birch Sørensen, 289–318. Cambridge, MA: MIT Press.
- Disney, Richard. 2006. "Household Saving Rates and the Design of Public Pension Programmes: Cross-Country Evidence." *National Institute Economic Review* 198(1), 61–74.
- Disney, Richard, Tito Boeri, and Tullio Jappelli. 2004. "Are Contributions to Public Pension Programmes a Tax on Employment?" *Economic Policy* 19(39), 267–311.
- Du Rietz, Gunnar. 1994. *Välfärdsstatens finansiering*. Stockholm: City University Press.
- Du Rietz, Gunnar and Magnus Henrekson. 2015. "Swedish Wealth Taxation (1911–2007)." IFN Working Paper nr 1000, published as chapter 6, pp.267–302 in *Swedish Taxation: Developments since 1862*, edited by Magnus Henrekson and Mikael Stenkula, 267–302. New York: Palgrave Macmillan.
- Eberstein, Gösta. 1929. *Om skatt till stat och kommun enligt svensk rätt: Förra delen*. Stockholm: Norstedts.
- Eberstein, Gösta. 1937. *Om skatt till stat och kommun enligt svensk rätt: Senare delen*. Stockholm: Norstedts.
- Edvinsson, Rodney. 2005. "Growth, Accumulation, Crises: With New Macroeconomic Data for Sweden." PhD diss., Stockholm University.
- Elmér, Åke. 1960. "Folkpensioneringen i Sverige med särskild hänsyn till ålderspensioneringen." PhD diss., Lund University.
- Elvander, Nils. 1972. *Svensk skattepolitik 1945–1970: En studie i partiets och organisationers funktioner*. Stockholm: Rabén & Sjögren.
- Esping-Andersen, Gösta. 1990. *The Three Worlds of Welfare Capitalism*. Princeton, NJ: Princeton University Press.
- Ekonomistyrningsverket. 2010. *Tidsserier, Statsbudgeten m.m. 2009*. ESV 2010:20. Stockholm: Ekonomistyrningsverket [Swedish National Financial Management Authority].
- Ekonomistyrningsverket. 2011. *Tidsserier, Statsbudgeten m.m. 2010*. ESV 2011:21. Stockholm: Ekonomistyrningsverket [Swedish National Financial Management Authority].

- Ekonomistyrningsverket. 2012. *Tidsserier, Statsbudgeten m.m. 2011*. ESV 2012:28. Stockholm: Ekonomistyrningsverket [Swedish National Financial Management Authority].
- Ekonomistyrningsverket. 2013. *Tidsserier, Statsbudgeten m.m. 2012*. ESV 2013:38. Stockholm: Ekonomistyrningsverket [Swedish National Financial Management Authority].
- Ekonomistyrningsverket. 2014. *Tidsserier, Statsbudgeten m.m. 2013*. ESV 2014:41. Stockholm: Ekonomistyrningsverket [Swedish National Financial Management Authority].
- Feldt, Kjell-Olof. 1991. *Alla dessa dagar: i regeringen 1982–1990*. Stockholm: Norstedts.
- Gårestad, Peter. 1987. "Industrialisering och beskattning i Sverige 1861–1914." PhD diss., Uppsala University.
- Genberg, Torsten. 1942. *Skatteutvecklingen sedan sekelskiftet*. Stockholm: Skattebetalarnas förening [Swedish Taxpayers' Association].
- Gustafsson, Siv. 1992. "Separate Taxation and Married Women's Labor Supply. A Comparison of West Germany and Sweden." *Journal of Population Economics* 5(1), 61–85.
- Hansson, Åsa. 2000. "Limits of Tax Policy." PhD diss., Lund University.
- Heady, Christopher. 2004. "The 'Taxing Wages' Approach to Measuring the Tax Burden on Labor." In *Measuring the Tax Burden on Capital and Labor*, edited by Peter Birch Sørensen, 263–287. Cambridge, MA: MIT Press.
- Hedlund-Nyström, Torun. 1972. "The Finance Act of 1862 and its Effect on the Economy." *Economy and History* 15(1), 58–82.
- Henrekson, Magnus. 1993. "The Peacock-Wiseman Hypothesis." In *The Growth of the Public Sector, Theories and International Evidence*, edited by Norman Gemmill, 53–71. Cheltenham, UK and Northampton, MA: Edward Elgar Publishing.
- Henrekson, Magnus. 1996. "Sweden's Relative Economic Performance: Lagging Behind or Staying on Top?" *Economic Journal* 106(439), 1747–1759.
- Henrekson, Magnus and Nathan Rosenberg. 2001. "Designing Efficient Institutions for Science-Based Entrepreneurship: Lessons from the US and Sweden." *Journal of Technology Transfer* 26(3), 207–231.
- Higgs, Robert. 1987. *Crisis and Leviathan: Critical Episodes in the Growth of American Government*. New York: Oxford University Press.

- Immervoll, Herwig. 2004. "Average and Marginal Effective Tax Rates Facing Workers in the EU: A Micro-Level Analysis of Levels, Distributions and Driving Factors." OECD Social, Employment and Migration Working Paper No. 19. Paris: OECD.
- Jaimovich, Nir and Sergio Rebelo. 2012. "Non-Linear Effects of Taxation on Growth." NBER Working Paper No. 18473. Cambridge, MA: National Bureau of Economic Research.
- Jakobsson, Ulf and Göran Normann. 1972. *Inkomstbeskattningen i den ekonomiska politiken*. Stockholm: Industriens Utredningsinstitut and Almqvist & Wiksell.
- Johansson, Dan. 2004. "Skatternas utveckling, omfattning och fördelning." In *Skatter och värdighet*, edited by Dan Johansson, Nils Karlson, and Richard Johnsson, 66–94. Stockholm: Ratio.
- Jungenfelt, Karl G. 1966. *Löneandelen och den ekonomiska utvecklingen*. Stockholm: Industriens Utredningsinstitut and Almqvist & Wiksell.
- Lewin, Bengt. 2009. *Efter skattereformen. En genomgång av svensk skattepolitik 1992–2009*. Stockholm: Riksrevisionen.
- Lindbeck, Assar. 1997. "The Swedish Experiment." *Journal of Economic Literature* 35(3), 1273–1319.
- Lindbeck, Assar. 2012. *Ekonomi är att välja*. Stockholm: Albert Bonniers Förlag.
- Lodin, Sven-Olof. 2011. *The Making of Tax Law*. Uppsala and Amsterdam: Justus Förlag and International Bureau of Fiscal Documentation (IBFD).
- Löwnertz, Susanne. 2003. *De svenska skatternas historia*. Stockholm: Riksskatteverket.
- Madrick, Jeff. 2009. *The Case for Big Government*. Princeton, NJ: Princeton University Press.
- McKee, Michael, Jacob Visser, and Peter Saunders. 1986. "Marginal Tax Rates on the Use of Labor and Capital in OECD Countries." *OECD Economic Studies* 7, 45–101.
- Ministry of Finance. 2006–2012. *Beräkningskonventioner*. Stockholm: Finansdepartementet.
- OECD. 2006. "Special Feature: Broadening the Definition of the Average Worker." In *Taxing Wages 2004*. Paris: OECD.
- OECD. 2009. "Special Feature: Consumption Taxation as an Additional Burden on Labor Income." In *Taxing Wages 2008*. Paris: OECD.
- OECD. 2010. *Taxing Wages 2008–2009*. Paris: OECD.
- OECD. 2011. *Taxing Wages 2010*. Paris: OECD.
- Orhniel, A. J. H. and Lucien Foldes. 1975. "Estimates of Marginal Tax Rates for Dividends and Bond Interest in the United Kingdom 1919–1970." *Economica* 42(165), 79–91.

- Peacock, Alan T. and Jack Wiseman. 1961. *The Growth of Public Expenditure in the United Kingdom*. Princeton, NJ: Princeton University Press.
- Poterba, James M.. 2004. "Taxation and Corporate Payout Policy." *American Economic Review* 94(2), 171–175.
- Prado, Svante. 2010. "Nominal and Real Wages of Manufacturing Workers, 1860–2007." In *Historical Monetary and Financial Statistics for Sweden, Vol. 1, Exchange Rates, Prices and Wages, 1277–2008*, edited by Rodney Edvinsson, Tor Jacobson, and Daniel Waldenström, 479–572. Stockholm: Ekerlids Förlag.
- Rodriguez, Enrique. 1980. *Offentlig inkomstexpansion: en analys av drivkrafterna bakom de offentliga inkomsternas utveckling i Sverige under 1900-talet*. Lund: Liber Läromedel.
- Rodriguez, Enrique. 1981. *Den svenska skattehistorien*. Lund: Liber Läromedel.
- Roine, Jesper, Jonas Vlachos, and Daniel Waldenström. 2009. "The Long-Run Determinants of Inequality: What Can we Learn from Top Income Data?" *Journal of Public Economics* 93(7–8), 974–988.
- Roine, Jesper and Daniel Waldenström. 2008. "The Evolution of Top Incomes in an Egalitarian Society: Sweden, 1903–2004." *Journal of Public Economics* 92(1–2), 366–387.
- Rydqvist, Kristian, Joshua D. Spizman, and Ilya A. Strebulaev. 2014. "Government Policy and Ownership of Equity Securities." *Journal of Financial Economics* 111(1), 70–85.
- Saez, Emmanuel. 2004. "Reported Incomes and Marginal Tax Rates, 1960–2000: Evidence and Policy Implications." In *Tax Policy and the Economy*, edited by James M. Poterba, 113–173. Cambridge, MA: MIT Press.
- SFS 1861:34. Bewillningsförordning 1862.
- SFS 1871:30. Kongl. Maj:ts nådiga förordning, angående utgörande af en särskild tilläggsbevillning för år 1893.
- SFS 1879:25. Kongl. Maj:ts nådiga kungörelse, angående särskild tilläggsbevillning för år 1879 och 1880.
- SFS 1880:46. Kongl. Maj:ts nådiga kungörelse, angående särskild tilläggsbevillning för år 1881.
- SFS 1881:29. Kongl. Maj:ts nådiga kungörelse, angående särskild tilläggsbevillning för år 1882.
- SFS 1883:51. Kongl. Maj:ts nådiga förordning angående bevillning af fast egendom samt af inkomst.

SFS 1892:44. Kongl. Maj:ts nådiga förordning angående bevillning af fast egendom samt af inkomst.

SFS 1892:111. Kongl. Maj:ts nådiga förordning, angående särskild tilläggsbevillning för år 1893.

SFS 1893:34. Kongl. Maj:ts nådiga förordning, angående särskild tilläggsbevillning för år 1894.

SFS 1894:76. Kongl. Maj:ts nådiga kungörelse angående den vid 1894 års riksdag åtagna bevillning af fast egendom samt af inkomst.

SFS 1895:62. Kongl. Maj:ts nådiga kungörelse angående den vid 1895 års riksdag åtagna bevillning af fast egendom samt af inkomst och angående särskild tilläggsbevillning för år 1896.

SFS 1897:111. Kongl. Maj:ts nådiga förordning angående bevillning af fast egendom samt af inkomst.

SFS 1901:31. Kongl. Maj:ts nådiga kungörelse angående den vid 1901 års riksdag åtagna bevillning af fast egendom samt af inkomst.

SFS 1901:34. Kongl. Maj:ts nådiga förordning angående särskild tilläggsbevillning för år 1901.

SFS 1902:50. Kongl. Maj:ts nådiga kungörelse angående den vid 1902 års riksdag åtagna bevillning af fast egendom samt af inkomst.

SFS 1902:84. Kongl. Maj:ts nådiga förordning om inkomstsskatt.

SFS 1910:115. Kongl. Maj:ts nådiga förordning om inkomst- och förmögenhetsskatt.

SFS 1910:116. Kongl. Maj:ts nådiga förordning angående bevillning af fast egendom samt af inkomst.

SFS 1917:513. Fastställelse av vissa till ledning vid uträknandet av extra inkomst- och förmögenhetsskatt för år 1918 erforderliga tabeller.

SFS 1918:512. Tilläggsskatt för år 1918 års inkomst och förmögenhet.

SFS 1918:513. Extra inkomst- och förmögenhetsskatt för år 1919.

SFS 1920:759. Kongl. Maj:ts förordning om ändring i vissa delar av förordningen den 28 oktober 1910 (n:r 116) angående bevillning av fast egendom samt av inkomst.

Skattebetalarnas förening. 1997. *Fakta för skattebetalare*. Stockholm: Skattebetalarnas förening [Swedish Taxpayers' Association].

Skatteverket. 1998–2013. *Tax Statistical Yearbook of Sweden 1998–2013*. Stockholm: Skatteverket [Swedish Tax Agency].

- Söderberg, Hans. 1996. *Inkomstskattens utveckling under 1900-talet. En vägvisare för skatteberäkningar åren 1921–1996*. Stockholm: Skattebetalarnas förening [Swedish Taxpayers' Association].
- Sørensen, Peter Birch, ed. 2004. *Measuring the Tax Burden on Capital and Labor*. Cambridge, MA: MIT Press.
- SOU 1989:33. *Reformerad inkomstbeskattning, del 1, skattereformens huvudlinjer*. Stockholm: Fritzes.
- Statistics Sweden. 1914–2011. *Statistical Yearbook of Sweden*. Stockholm: Statistics Sweden.
- Stenkula, Mikael. 2015. "Taxation of Goods and Services in Sweden (1862–2013)." IFN Working Paper nr 956, published as chapter 4, pp. 179–221 in *Swedish Taxation: Developments since 1862*, edited by Magnus Henrekson and Mikael Stenkula. New York: Palgrave Macmillan.