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Swedish Taxation in a 150-year Perspective*

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Abstract: This paper examines the development of taxation in Sweden from 1862 to 2010. The examination includes six key aspects of the Swedish tax system, namely the taxation of labor income, capital income, wealth, inheritances and gifts, consumption and real estate. The importance of these taxes varied greatly over time and Sweden increasingly relied on broad-based taxes (such as income taxes and general consumption taxes) and taxes that were less visible to the public (such as payroll taxes and social security contributions). The tax-to-GDP ratio was initially low and relatively stable, but from the 1930s, the ratio increased sharply for nearly 50 years. Towards the end of the period, the tax-to-GDP ratio declined significantly.

JEL-codes: H20; H71; N43; N44

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1. Introduction

Taxes have profound effects on economic behavior and affect the real economy by distorting choices. Therefore, the tax system is one of society's most fundamental institutions, as it influences many economic

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decisions, such as labor supply, the amount of savings and entrepreneurial activities.[1] Detailed knowledge on the structure and evolution of taxation is therefore needed to better understand the choices made by individuals and firms and the effects of these choices on the performance of the overall economy.

Although the effects of the tax system have been extensively studied, the results tend to be complex and ambiguous. Empirically, the effects of taxation should be assessed over long time spans, as it takes substantial time before the full effects of institutional changes on economic behavior are played out. Moreover, each tax has its own distinct effect on economic behavior and the economy. A tax on labor income may, for instance, distort the choice between work and leisure, whereas a tax on capital income may distort the choice between consumption and saving. Certain taxes, such as a real estate tax, are less distortionary and are associated with a lower excess burden. Both the tax level and the tax structure affect economic development. Thus, there is a need for research to produce long, homogenous time series on the evolution of different types of taxes. However, long-term, in-depth studies on the development of national tax systems have not been done in any country (to my knowledge).[2]

The purpose of this article is to describe and analyze the evolution of the Swedish tax system from a long-term perspective. The description includes a general evolution of the tax system but also a more detailed analysis of six key aspects of the Swedish tax system, namely the taxation of labor income, capital income, wealth, inheritances and gifts, consumption and real estate. The analysis includes both a general description of the evolution of the specific taxes and an illustration of how these taxes could affect firms, investments or individuals.[3]

1 See, for instance, Vermeend et al. (2008) for a review.

2 Historical studies are, of course, not completely absent in the literature. Steinmo (1993) and Weber and Wildavsky (1986) are examples of studies discussing the long-term evolution of taxation in the West, but they are far from as detailed in their presentation and analyses as the studies described here. Steinmo (1993) examines the evolution of taxation during the 19th and 20th centuries, whereas Weber and Wildavsky (1986) study the evolution of taxation as far back as ancient Greece. Scheve and Stasavage (2012) examine the evolution of the top marginal inheritance tax rate in 19 countries between 1816 and 2000.

3 Each of these key aspects has been more thoroughly analyzed in distinct separate studies. The results from these studies are based on a project at the Research Institute of Industrial Economics (IFN) intended to analyze the long-term evolution of the Swedish tax system. The studies on the taxation of wealth and of inheritances and gifts have an entrepreneurial perspective and analyze how a small, a medium-sized and a large firm are affected. The studies on labor income, capital income, wealth and inheritance and gift taxation

The article covers the period from 1862 to 2010. The tax system in the West experienced dramatic changes during this period. The industrialization, democratization and monetization of the economy have had a profound impact on the evolution of taxation. Over the long run, governments tend to become larger when their ability to tax increases, and the level of taxation increased rapidly during the 1900s. The level of taxation has now stabilized in Western countries. Although the evolution of taxation in Sweden follows the general pattern exhibited by other Western countries, developments in Sweden are unique in several respects, making it an interesting country to study. In 1862, a new Swedish income tax act was implemented. Sweden was then a poor, underdeveloped and rural economy. Beginning in the 1840s, the Swedish economy was extensively deregulated, industrialization began and the growth rate increased substantially. At this time, Swedish tax revenues were well below 10 per cent of GDP. From the 1930s, the tax level began to increase continuously, and at the end of the 1980s, the level was well above 50 per cent (see Section 2). Compared to other countries this increase was exceptional. As a result, Sweden had the highest tax-to-GDP ratio in the world until the beginning of the 2000s, with the exception of some odd years in which Denmark had the highest ratio. However, it was not until the 1960s that the Swedish tax-to-GDP ratio came to exceed the ratio in most other Western countries.

As the presentation covers six types of taxes in detail, the analysis provides both a unique length and breadth of the development of a tax system. Political ideas, social forces and technological advances in combination with the often contradictory motivations for different elements of the tax system have pushed and pulled the modern tax system along the path that we observe. Occasionally, major tax reforms are implemented, but typically, the tax system evolves gradually, and tax provisions have been continually added or removed.

This examination not only provides new insights regarding the long-term evolution of taxation in Sweden, it also provides a platform for new and interesting research. For instance, analyses of the effect of taxation in the very long run overall and of a specific type of tax. The results can also be used to examine whether there has existed distinct tax regimes separated by shifts in economic policy. Hopefully this examination will inspire researchers in other countries to conduct simi-

also contain extensive appendices, including all relevant tax schedules for the examined period, making it possible for the reader to perform his or her own calculation or analysis. These data are unique in their consistency, thoroughness, breadth and timespan covered.

lar mappings of the tax system in their countries, which would allow long-term comparative analyses between countries.

The paper is organized as follows. In the next section, the general evolution of the tax system in Sweden is discussed. In Section 3, the results from the six key aspects of the Swedish tax system are presented. Section 4 concludes.

2. The Tax-to-GDP Ratio and the General Tax Structure in Sweden

Figure 1 depicts the evolution of the tax-to-GDP ratio in Sweden.[4] During the first 50 years of our study, i.e., until World War I, the tax-to-GDP ratio was stable, oscillating slightly but consistently remaining below 10 per cent of GDP. During World War I and the early 1920s, the ratio increased; however, while it decreased after this period, it did not return to the pre-war level. Thus, there was a small displacement effect due to World War I.[5] The ratio remained at approximately 10 per cent during the 1920s. From 1930, the ratio increased continuously for nearly 50 years reaching approximately 47 per cent in 1978. The rapidly increasing ratio following World War II almost totally eclipsed any sign of displacement effects due to the war. The tax-to-GDP ratio remained slightly below 50 per cent until the mid-1980s, when it increased above this level. During the rest of the 1980s and 1990s, the ratio fluctuated at approximately 50 per cent of GDP, with a clear decline in the early 1990s due to the economic crisis. The tax ratio peaked at about 51.5 per cent in 1987.[6] Towards the end of the period, the tax level declined significantly. By 2012 it had fallen below 45 per cent.

4 The results are based on the new updated GDP data presented in Edvinsson et al. (2014).

5 The so-called displacement effect was introduced by Peacock and Wiseman (1961), who argued that the tolerable burden of taxation increases during crises and the acceptance of the higher tax level persists thereafter, giving rise to a stepwise increasing function of tax rates and government expenditures with plateaus and peaks. See Durevall and Henrekson (2011) or Henrekson (1993) for a further discussion.

6 It was at about the same level in 1990 and 2000 as well.

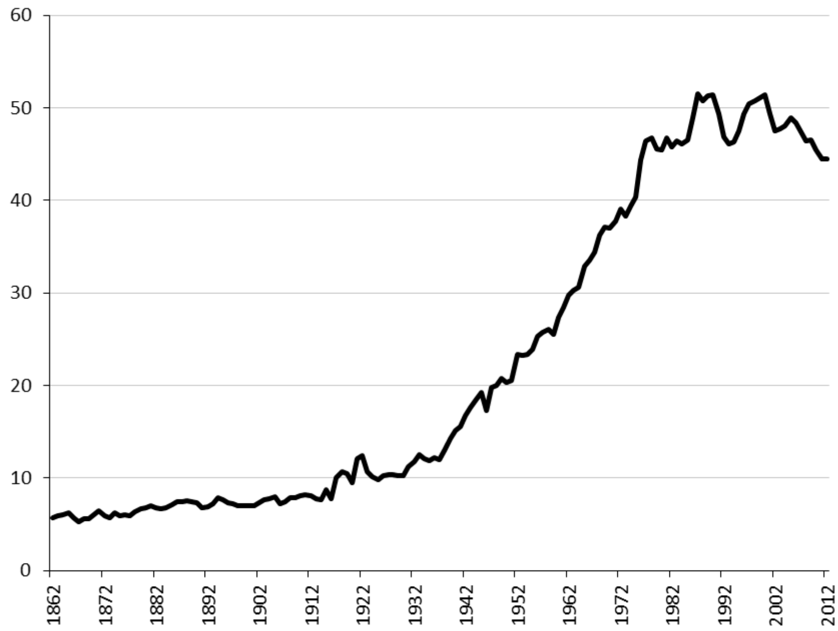

Figure 1. The tax-to-GDP ratio, 1862–2012 (%).

Source: Gårestad (1987), Rodriguez (1981), Edvinsson et al. (2014), *OECD Tax Revenue Statistics* and Statistics Sweden.

Figure 2 decomposes total tax revenues into those from income taxes, consumption taxes, social security contributions and other taxes. It is not obvious how to depict the evolution of the tax structure over time. There is no single source that reports the evolution of the tax structure in a consistent manner over time. This cannot be done, because taxes have not been consistently categorized and aggregated over time. For instance, the wealth tax was an integral component of the ordinary income tax between 1911 and 1947. In the same way, the real estate tax was an integral component of the income tax until the 1990–1991 tax reform.

Income taxes constitute a broad category that includes all taxes on income (personal and corporate, capital and labor) and the wealth and real estate taxes when they were integrated with the income tax. Temporary income taxes are also included. Consumption taxes include general consumption taxes (such as sales taxes and value added taxes), specific consumption taxes (excise duties) and customs duties. Social security contributions include contributions paid by employers and employees and payroll taxes.[7] The category "other" is a residual (discussed further below).

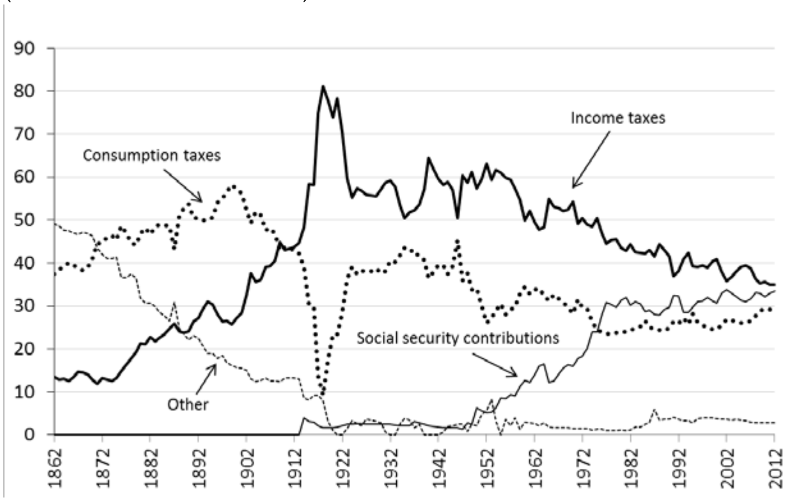

Figure 2. The composition of total tax revenues, 1862–2012 (%).

Note: Before 1875, no data on income taxes at the local level are available. As the total tax level was stable at this time, it is assumed that local income tax revenues were unchanged as a share of GDP during these years.
Source: Gårestad (1987), Rodriguez (1980), *Statistisk årsbok* (various issues) and *OECD Tax Revenue Statistics*.

In the same way that technological development and democratization may explain part of the increase in the tax-to-GDP ratio, they may explain changes in the tax structure. During the 1900s, technology offered new opportunities to extract resources, thereby enhancing the government's ability to collect taxes. Changes in production technologies increased the proportion of income subject to taxation and reduced the cost of collecting tax revenues. New revenue sources and new principles of taxation were introduced. For example, 150 years ago the dominant perspective held that tax revenues should be used to cover – chiefly military – expenses, and budget surpluses or deficits should be avoided. At present, the tax system is used not only to raise needed revenues to finance government expenditures but also to alter the income distribution, stabilize the business cycle and improve the allocation of resources in the economy.

7 The most common approach—also used by the OECD—is to treat social security contributions as taxes, as they supplement other taxes in financing social security expenditures (see Vermeend et al. 2008, p. 63 for a further discussion).

Consumption taxes were very important during the second half of the 1800s. Their share also increased during this period and represented well above 50 per cent of total tax revenues at the turn of the last century. Customs duties were the most important consumption tax at this time. The share represented by these taxes decreased sharply during World War I. There were several reasons for this sharp decline, including international trade restrictions and rationing. The share of tax revenues from consumption taxes did not return to its original pre-war level. The share continued to decrease somewhat after World War II. The most important innovation during the post-war period was the introduction of a permanent sales tax in 1960, which was transformed into a value added tax (VAT) in 1969. These taxes were introduced due to the perceived difficulty in further increasing income taxes.[8]

Income taxes were surprisingly unimportant at the beginning of the period, although their share began to increase in the last quarter of the 19th century. Due to economic growth, increased income, urbanization and improved education, politicians were able to increasingly rely on income taxation. The increased capacity to collect taxes, including the adaption of modern book keeping, decreased monitoring and collecting costs, which made income taxes a more feasible tax source.[9] In 1903, a new state income tax reform was implemented, and all taxpayers were required to file an income tax return. Within a few years after this reform income taxes became more important than consumption taxes. The importance of income taxation increased sharply during World War I, when temporary defense taxes (*värnskatter*) were introduced. The income tax increases were purportedly temporary, but many of the tax increases were made permanent after the war. Their share continued to be high, although not as high as during the war. Their share declined slowly during the post-war period, when the importance of other, primarily indirect, taxes increased. From 1947, tax collection at the source (*källskattesystemet*) was introduced, which made employers responsible for withholding taxes before paying wages and salaries.

S*ocial security contributions* were of minor importance before World War II. Beginning in the 1950s, their share started to increase sharply. While the shares of income and consumption taxes have declined since World War II, the share of social security contributions has increased dramatically. They became more important than consumption taxes in the mid-1970s. During this period, the so-called ”Haga poli-

8 Elvander (1972) and Rodriguez (1980).

9 See, for instance, the discussion in Aidt and Jensen (2009), Alt (1983) or Ward (1982).

cy« was implemented, a major component of which was a large raise of social security contributions in order to finance lower income taxes.[10] From the 1980s, the increase in social security contributions slowed considerably. While the importance of social security contributions has continued to increase slightly, in recent decades, income taxes still generate the largest tax revenues.

The category *other* is a residual that includes several taxes. The share is highest during the 1800s, and at the beginning of our period these other taxes are extremely important, constituting half of total tax revenue. At the time, there were many other important taxes that are difficult to classify such as *grundskatter, mantalspenning* and stamp duties.[11] Economic and social progress implied that the authorities had to rely on these taxes, as most taxpayers were small farmers, making it difficult to assess actual income. The share of "other" taxes decreased rapidly during the 1800s and early 1900s, and by the end of World War I their share was insignificant. This category also includes inheritance and gift taxes as well as wealth and real estate taxes when they were distinct taxes not integrated with the ordinary income tax system.

Thus, the tax-to-GDP ratio and tax structure have changed profoundly over time. Initially, indirect taxes, such as customs duties, were highly important. Direct income taxes grew rapidly in importance until World War II. During the post-war period, the rise of the VAT and social security contributions as important sources of revenue implied that indirect taxes regained their importance. Currently, consumption taxes, social security contributions and income taxes each account for approximately one third of tax revenues. The remainder is primarily attributable to property taxes.

10 This policy has been called the "Haga policy" after the negotiations conducted at the Haga Mansion among the government, the opposition parties and labor market organizations.

11 The grundskatter ("basic tax") was primarily a fixed, lump-sum state tax that was often paid in kind. It was based on land that was not tax exempt. The mantalspenning was a poll tax, which was a lump-sum tax paid by every person. The stamp duty referred to taxes based on specific transactions. Formerly, certain transactions had to be written on specific documents, or "stamps" had to be attached to legal documents to be valid. At present, the stamp duty is generally payable when one purchases real estate or acquires a mortgage.

3. The Evolution of the Tax System by Type of Taxation

This section discuss and examine in detail the taxation of labor income, capital income, wealth, inheritances and gifts, consumption and real estate. As shown in the previous section, the importance of these taxes has varied greatly over time. The presentation below is based on six separate studies, each addressing a key aspect of the Swedish tax system.

3.1 Taxation of Labor Income

Du Rietz et al. (2013) study the taxation of labor income.[12] Major state income tax reforms were implemented in 1862, 1903, 1911, 1920, 1939, 1948, 1971, 1983–1985 and 1990–1991. The 1903 tax reform introduced a completely new state income tax system, considered the predecessor of the current »modern« tax system. The income tax has, in principal, been progressive since 1903, albeit very modestly so until the 1920 reform. In the interwar period the tax became more progressive, but the first tax bracket was very broad (the upper limit corresponded to more than three times the wage of an average production worker in 1920). Parallel to the ordinary state tax system, temporary taxes were often in place during and between the world wars. The ordinary tax system was often sharpened when temporary taxes were abolished, i.e., the temporary tax increases were made permanent. The marginal tax rates and the progressivity of the tax system continued to rise until the 1980s. Tax rates began to decrease in response to the 1983–1985 tax reform and in particular as a result of the 1990–1991 tax reform.

A local income tax has been in place in parallel to the state income tax system. A major reform was introduced in 1928. This reform still constitutes the foundation of the local tax system. The local tax rate was proportional, although a temporary progressive income tax existed between the wars. The local tax rate slowly increased to approximately 30 per cent in the 1980s. In 1980, an explicit marginal tax cap was introduced to avoid excessive marginal income tax rates. Initially, the tax cap restricted the total marginal income tax rate to at most 80 and 85 per cent in the two highest tax brackets.

To illustrate the evolution of labor income taxation, Du Rietz et al. (2013) calculate marginal tax rates for a low-, average- and high-income earner, defined as a taxpayer earning 67 per cent, 100 per cent and 167 per cent of the wage of an average production worker (APW),

12 A condensed version is published as Stenkula et al. (2014).

respectively. This conforms to the way OECD analyzes labor income taxation in their "taxing wages" comparisons.[13] These income levels are partly used to illustrate capital income and wealth taxation in the other studies. Furthermore, Du Rietz et al. (2013) compute the top marginal tax rate and the income (in terms of APWs) at which the top marginal tax rate starts to apply.

The marginal tax rates are depicted in Figure 3. The analysis reveals that marginal tax rates were low and approximately identical for a low-, average- and high-income worker until the 1939 tax reform, although some progressivity had already been introduced in the 1903 tax reform. The rates were raised substantially by temporary defense taxes during World War II, which were made permanent by the 1948 tax reform. The marginal tax rates for the three income groups continued to increase thereafter, primarily due to increased local government taxes and bracket creep, i.e., as a result of inflation, which in combination with a progressive tax schedule, pushes taxpayers into tax brackets with higher marginal tax rates. In 1971, a new tax reform was implemented and the progressivity of the tax system was increased. Parallel to this development, inflation accelerated during the 1970s, increasing bracket creep. As a result, the marginal tax rate continued to increase for the high-income earner while it fluctuated for the low- and average-income earner.

The 1983–85 tax reform reduced the marginal tax rate for all three income groups by approximately 5–15 per centage points, whereas it fluctuated both up and down during the rest of the 1980s. The 1990–1991 tax reform decreased marginal tax rates by approximately 15–20 per centage points. At the end of the period examined, the marginal tax rate was approximately 28 per cent for the low- and average-income earner and approximately 51 per cent for the high-income earner.

The top marginal tax rate increased considerably during World War I and increased further during the Depression of the 1930s. However, during this period, an income corresponding to several hundred times the wages of an APW was required to make a taxpayer subject to the top marginal tax rate. The top marginal tax rate continued to increase after the Depression to more than 70 per cent during World War II. This level was maintained after the war and throughout the coming decades. The income level at which the top marginal tax wedge began to apply decreased sharply during and after World War II. It required

13 See, for instance, OECD (2011).

approximately 400 times the wage of an APW to pay the top marginal tax rate in 1938, approximately seven times in 1970 and 1.6 times by the end of the 1980s. The top marginal tax rate peaked at the end of the 1970s at approximately 87 per cent.

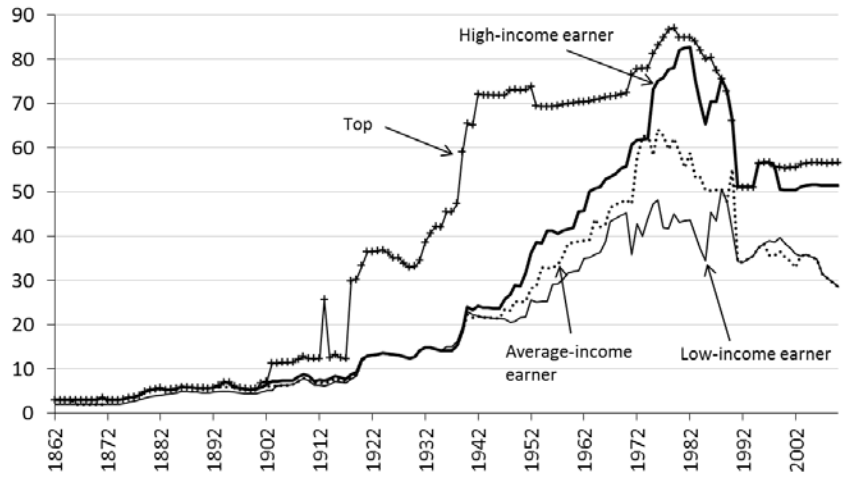

Figure 3. The marginal tax rates, 1862–2010 (%).

Note: A low-, average- and high-income earner refers to 67, 100 and 167 per cent of the wage of the average production worker (APW), respectively.
Source: Stenkula et al. (2014).

Rather than examining the marginal tax rate on labor, one can also examine a broader measure such as the marginal tax wedge on labor. The marginal tax wedge on labor incorporates marginal income taxes, marginal social security contributions and marginal payroll taxes. In some instances, consumption taxes are also included, and social security contributions can be adjusted to only include the fiscal component. Thus, Du Rietz et al. (2013) also include an analysis of the evolution of the marginal tax wedge.

Social security contributions (SSCs) paid by employees were introduced on a small scale in 1913 and have never been important in the Swedish context. Social security contributions paid by employers were introduced in 1955 and have increased profoundly since then. The top marginal SSCs paid by employers and the marginal SSCs paid by employers for the three income groups can be seen in Figure 4. The top marginal SSCs and the SSC for the low- and average-income earners coincide. The SSCs began to increase sharply during the 1960s and

1970s and then declined slightly during the crisis at the beginning of the 1990s. During the 1970s, the marginal SSCs were much lower for the high-income earner due to income caps, and the high-income earner only paid some of the SSCs on marginal income increases. However, the marginal SSCs increased sharply in 1976 and 1982 due to the removal of the income caps.

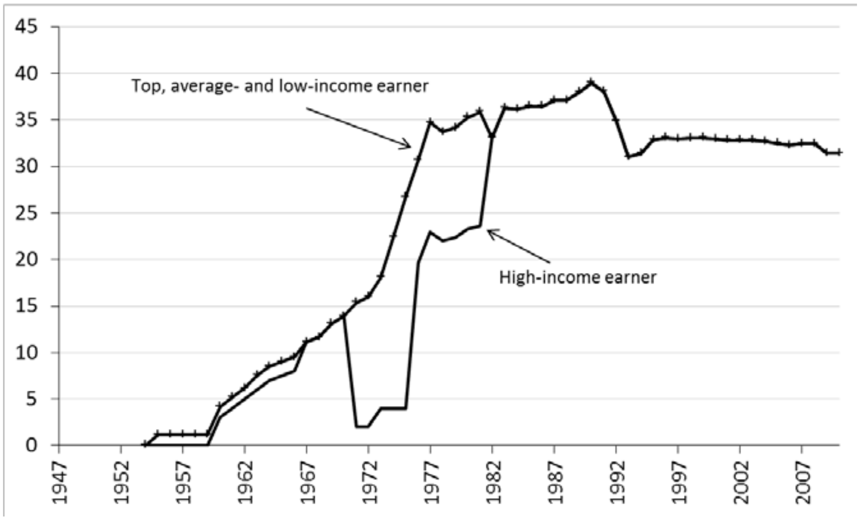

Figure 4. The marginal SSCs paid by employers, 1955–2010 (%).

Note: A low-, average- and high-income earner refers to 67, 100 and 167 per cent of the wage of the average production worker, respectively.
Source: Stenkula et al. (2013).

Figure 5 depicts the marginal tax wedges. They broadly follow the same evolution as the marginal tax rates. During the 1960s and 1970s, they increased more sharply than the marginal tax rates due to substantial increases in SSCs. The top wedge peaked around 1980 at approximately 90 per cent.

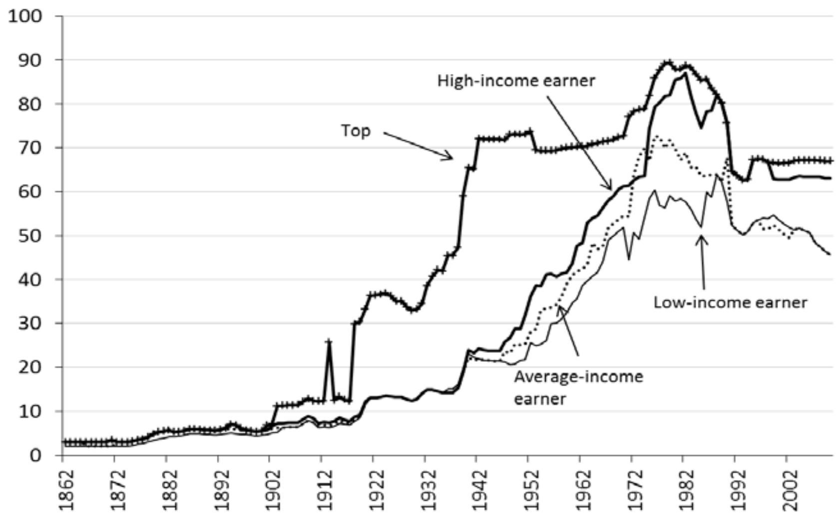

Figure 5. The marginal tax wedges, 1862–2010 (%).

Note: A low-, average- and high-income earner refers to 67, 100 and 167 per cent of the wage of the average production worker (APW), respectively.
Source: Stenkula et al. (2014).

3.2 Taxation of Capital Income

Du Rietz et al. (2014) analyze the taxation of capital income, including the taxation of corporate income, dividends, interest, capital gains and wealth.

The same tax schedule initially applied to both corporate and personal income, i.e., the tax rates were low, and a progressive income tax system was implemented in 1903. In 1903, dividends paid to individuals became subject to taxation. To compensate for this, corporations were allowed to deduct dividends paid, but only up to six per cent of the booked value of equity. This option was abolished with the 1911 tax reform. Under this reform, personal and corporate income taxes were also separated. The progressivity of the corporate income tax system was sharply increased in the 1920 tax reform. In 1939, a proportional tax system was implemented. The total statutory corporate tax rate increased and was approximately 40 per cent, and this level of taxation continued after the war. However, in 1939, the opportunities to reduce corporate taxes through different forms of allowances were expanded. The corporate tax rate increased temporarily, and temporary investment taxes were introduced during the 1950s to contract an overheated economy. The statutory corporate tax rate continued to increase during the post-war period and remained high at approximately 50 to 60 per cent until the 1990–1991 tax reform.[14] The local corporate tax was abolished in 1985.

The 1990–1991 tax reform greatly reduced the scope for lowering the effective corporate tax rate below the statutory rate. The reform included substantial reductions in statutory tax rates and a broadening of the tax base, through the removal of numerous tax deferrals. The statutory tax rate was reduced to 40 per cent in 1990 and 30 per cent in 1991. It was further reduced to 28 per cent in 1994, 26.3 per cent in 2009 and 22 per cent in 2013.

As capital income at the personal level was taxed jointly with labor income, the personal taxation of dividends and interest income followed the same trend as the taxation of labor income. Thus, the marginal tax rate was low, and most savers did not face markedly increased marginal tax rates on interest income and dividends before World War II. Dividends were also tax exempt before 1903.

Formal capital gains taxation was introduced in 1911. It was launched after a long boom period in the stock market. Before 1911, only so-called "speculative" capital gains were taxable. In 1911, capital gains on stocks held for more than five years were tax exempt, whereas short-term capital gains were fully taxed. As with dividends, the taxable share of the capital gains was taxed jointly with other personal income until the 1990–1991 tax reform.

The rules concerning the tax exempt share have changed several times. In 1951, the system was made less stringent by exempting a portion of the capital gains of shares owned between two and five years. In 1966, shares owned more than five years were taxed for the first time. In 1976, the rules were changed so that gains on shares held for less than two years were fully taxed and 40 per cent of gains on shares held for two years or more were taxed. The 1990–1991 tax reform made all capital gains fully taxable, independent of the holding period, at a flat rate of 30 per cent.

Wealth taxation has been in place since 1911, although originally at low rates. It was highest during the 1970s and 1980s. The wealth tax

14 Between 1984 and 1990, a specific "profit sharing tax" on corporations was levied to finance the so-called wage-earner funds (*löntagarfonder*). This tax cannot be easily expressed as a single statutory tax rate, but it has been estimated that this tax increased the statutory corporate tax rate by five per centage points (Agell et al. 1995; Davis and Henrekson 1997). The funds eventually introduced were a considerably watered-down version of the original proposal, which can be regarded as an instrument to realize the vision of leading Social Democrats to convert large corporations into "social enterprises without owners" (Henrekson and Jakobsson 2001, pp. 352–354; Lindbeck 1997).

was abolished for unlisted firms in 1991 and completely abolished in 2007.

To illustrate the evolution and analyze how the taxation of capital income affects taxes on investment, Du Rietz et al. (2014) calculate the marginal effective tax rate on capital income (METR) for an investment in machinery financed with new share issues, retained earnings or debt. The METR is defined as the ratio of the marginal tax wedge to the pretax real rate of return on a marginal investment. The marginal tax wedge is defined as the difference between the pretax real rate of return on a marginal investment and the posttax real rate of return to the investor. The METR is an established tax measure used to compare tax rates between countries and investment projects, originally based on the work of King and Fullerton (1984).

The results are depicted in Figure 6. The METR was low until World War I, below five per cent, and the impact of the source of finance on the METR was negligible. At the outbreak of World War I, the METR began to fluctuate upward somewhat and differed depending on the source of finance. The difference between sources increased and was relatively high until the 1990–1991 tax reform, when the differences decreased again.

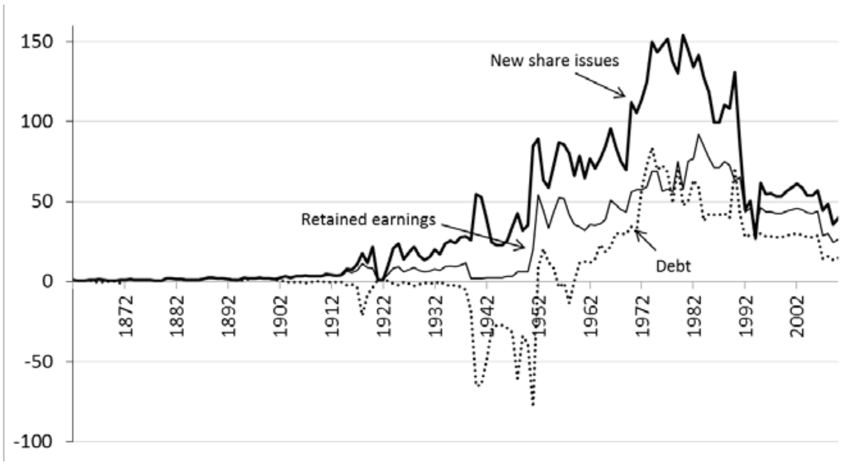

Figure 6. The marginal effective tax rate on capital income (METR) for an investment financed with new share issues, retained earnings and debt, 1862–2010 (%).

Note: The calculations are based on an investor with a marginal tax rate corresponding to that of the average production worker.
Source: Du Rietz et al. (2014).

In the case of retained earnings, the METR hovered at approximately 10 per cent during the interwar years. Between 1939 and 1951, immediate write-offs ("free depreciation") were used, and the METR was reduced to approximately zero despite strongly increasing statutory corporate tax rates. During the 1950s, the METR increased sharply and occasionally exceeded 50 per cent due to the abolishment of immediate write-offs and temporary investment taxes. The METR was somewhat lower during the early 1960s, when the temporary increase in the corporate tax was discontinued and the investment tax had been abolished. Between 1960 and the 1980s, the METR increased due to increased corporate, personal and wealth taxes. Long-term capital gains have been taxable since 1966. At the beginning of the 1980s, the METR was nearly 100 per cent. The METR began to decline in the second half of the 1980s.

In the case of new share issues, the METR peaked at close to 20 per cent during World War I and hovered at approximately this level during the interwar years. Until the early 1950s, the tax rate increased, with temporary spikes caused by extra defense taxes during World War II and higher inflation. The effect of immediate write-offs was counteracted by increased income taxes and higher inflation rates. The METR increased sharply to nearly 90 per cent in the early 1950s because of the abolishment of immediate write-offs, temporary investment taxes and high inflation. During the 1950s and 1960s, the METR fluctuated between 65 and nearly 100 per cent. The progressivity was increased with the tax reform implemented in 1971, and in combination with high inflation, the METR increased above 100 per cent during the 1970s and did not decrease below this level until the 1990–1991 tax reform. The highest level was reached in 1980, at approximately 150 per cent.

In the case of debt, the METR was close to zero until 1939, when immediate write-offs were introduced. Between 1939 and 1951, the METR was markedly negative. The largest negative numbers appeared when inflation peaked. Debt-financed investment under a system of immediate write-offs implied a subsidy. When immediate write-offs were abolished, the METR increased and became positive, and it continued to increase during the 1960s and 1970s to a peak of approximately 80 per cent. It began to decrease during the 1980s and particularly after the 1990–1991 tax reform.

In all three cases, the METR peaked during the 1970s and 1980s. After the 1990–1991 tax reform, the METR decreased sharply because of a combination of lower tax rates (including the abolishment of the wealth tax on unlisted stock) and lower inflation. At the end of the examined period, the METR was typically 30 to 40 per cent for investments financed with retained earnings and new share issues and approximately 15 per cent for debt-financed investments.

The calculations above are based on an investor with a marginal tax rate corresponding to that of an average production worker. This assumption is of less importance before World War II due to the low tax rates. It is of no importance after the 1990–1991 tax reform, as capital income is taxed separately from labor income at a flat rate. For the period beginning with World War II and ending with the 1990–1991 tax reform, the marginal income tax rate had a significant impact on the magnitude and variation of the METR. The impact is most pronounced during the 1970s and 1980s. If the top marginal income tax is considered instead, the METR often exceeded 150 per cent and peaked above 200 per cent during this period if the investment was financed with new share issues.

3.3 Wealth Taxation

Du Rietz and Henrekson (2014) provide a detailed analysis of the evolution of Swedish wealth taxation. Modern wealth taxation was introduced in Sweden in 1911, when a combined income and wealth tax was implemented.[15] A share of a taxpayer's net wealth was added to global (labor + capital) income. The share of wealth added to the income tax base varied over time. It was 1/60th from 1911 through 1938 and one per cent from 1939 through 1947, but was temporarily raised to 10 per cent through the 1913 defense tax. This system was abolished in 1947.

A separate wealth tax was introduced in 1934, alongside the income wealth tax, and applied until 2007.[16] This wealth tax directly levied specific marginal wealth tax rates in different brackets on net wealth. Initially, the exemption was high, and the tax rates varied between 0.1 and 0.5 per cent. The exemption was subsequently reduced, and the tax rates increased to at most 0.6 per cent (1939) and 1.8 per cent (1948). The changes in 1939 and 1948 were combined with a reduction, in 1939, and abolishment, in 1948, of the share of wealth that was included in the ordinary income tax on labor, as described above.

Certain reduction rules were enacted to mitigate the effect of the wealth tax, limiting taxable wealth to at most 25 (subsequently 30) times taxable income or limiting the sum of local plus state income taxes and the wealth tax for individuals to, initially, a maximum of 80 per cent. To prevent the tax caps from becoming overly generous, a minimum tax floor was also implemented, initially stipulating that the wealth tax could never be reduced below the tax due on half of taxable wealth.

15 Various types of, often temporary, wealth taxes had occasionally existed earlier.

16 For a discussion of why the wealth tax was abolished and why the inheritance tax was abolished before the wealth tax, see Henrekson and Du Rietz (2014).

In the 1950s and 1960s, wealth tax rates continuously increased through bracket creep. This occurred despite that the top marginal tax rate remained at 1.8 per cent until 1970, when it was temporarily raised to 2.5 per cent. A final, temporary, wealth tax increase was implemented in 1983. In 1984, the top marginal tax rate was reduced from four to three per cent, and further to 2.5 and 1.5 per cent in 1991 and 1992, respectively. The wealth tax was abolished in 2007.

Valuation relief for unlisted businesses was first introduced in 1971. The purpose of reducing the wealth tax on business assets was to facilitate the transfer of ownership to the next generation of the family. In 1974, tax relief was modified and extended, and in 1978, the valuation relief for unlisted businesses became more generous. Unlisted firms were valued at 30 per cent of booked net equity value (assets less liabilities). This valuation rule was in force until the wealth tax for unlisted corporate equity was repealed in 1991.

As the taxation of wealth before 1948 was a complex combination of wealth and income taxation, it is impossible to fully identify its aggregate importance. The wealth tax was not particularly important as a source of revenue for the central government, at least not from 1948 onwards. From the 1930s, taxes on wealth were largely motivated by redistributional concerns.

To illustrate the effect of wealth taxation, average wealth tax rates for a number of differently endowed owners of family firms and individual fortunes are calculated. The tax rates are calculated given a net wealth of 10, 100 and 1,000 times the income of an average production worker. When calculating the wealth tax rate, one important aspect is how the owners of firms are able to finance the wealth tax payment. Additional dividends served as a readily available and commonly employed option for owners to finance wealth tax payments. Thus, in addition to the direct wealth tax, owners potentially faced high indirect wealth-related taxes. The analysis also accounts for such additional indirect dividend taxes for the three standard firms.

By jointly examining the wealth tax rates of all three firm types, clear similarities and differences become apparent. First, the tax rates for all three firm types broadly followed a similar trend, beginning at a relatively low level in the years before World War II. After the war, tax rates increased sharply until 1973. In 1974, the effective tax rate declined due to the substantial valuation reductions. In terms of tax levels, the experiences of the three differently sized family firms diverged significantly. Comparing the large (1,000 APW) and the medium-sized (100 APW) firm, the effective total tax rate of the large firm owner (including extra dividend tax) was approximately twice that for the owner of the medium-sized firm. In contrast, for the small-firm owner, the direct wealth tax rate for most years was relatively low.

Figure 7 depicts the long-run evolution of the direct wealth tax rate incurred by the owner of a large family firm with equity of 1,000 APW (SEK 261 million in 2006). The figure depicts both the unreduced direct wealth tax and the reduced rate given the reduction rules mentioned above. The assessed direct tax rate has varied substantially over time, increasing in the post-war era and peaking in the early 1970s, and then falling to zero from 1991 onwards. There were three major tax increases in 1934, 1948 and 1971 and a sharp, albeit temporary, increase in 1913 due to the defense tax. The owners of large firms, however, by exploiting the rule that reduced taxable wealth tax, avoided wealth tax increases until 1940, and the reduced tax rate was generally less than half the level of the full tax rate until the wealth tax was abolished.

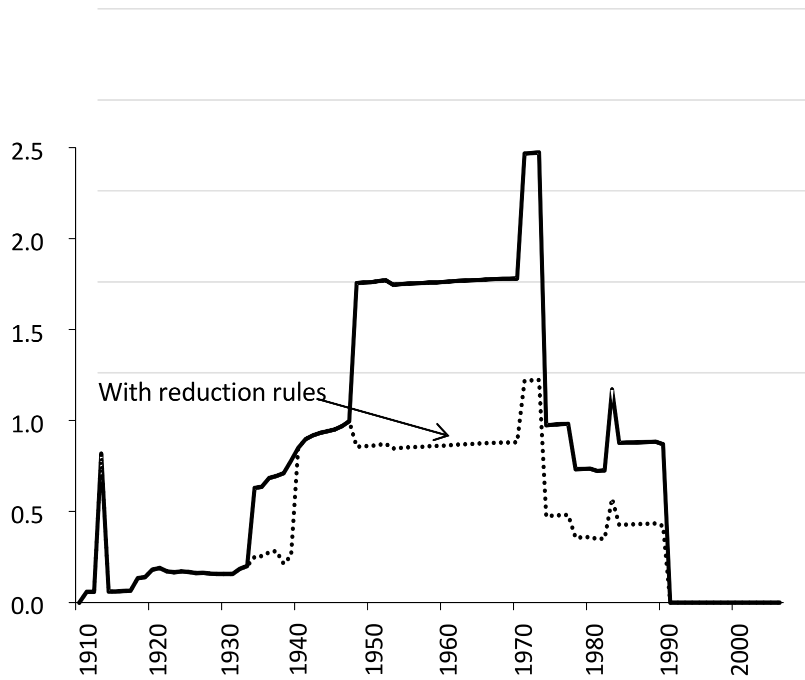

Figure 7. Direct wealth tax rate for an owner of a large firm, 1911–2006 (% of firm equity).

Note: The net worth of the large firm is 1,000 APWs (corresponding to SEK 261 million in 2006).
Source: Du Rietz and Henrekson (2014).

The total effective wealth tax, including the indirect effect of dividend taxation, could be much higher than the direct wealth tax. As additional dividends could be taxed at a very high marginal tax rate, the wealth tax imposed a much higher total tax burden than indicated by the wealth tax rate *per se*. During the 1970s and 1980s, when the marginal dividend tax rate was 70 per cent or above, and as much as 85 per cent in the 1977–1981 period, these indirect taxes were almost prohibitive. This significantly increased the tax associated with wealth (although it was formally an additional dividend tax). Because owners were forced to withdraw funds from their firms to pay the wealth tax (unless they were willing to sell part of the firm to pay the tax), operating large family firms became extremely unfavorable from the 1960s through the 1980s.

Concerning the wealth tax paid on individual fortunes, the direct effect was the same until 1974, when valuation relief for unlisted net business equity was introduced. As a result of these forms of relief, wealthy individuals paid between two and nearly three times more than the owners of medium-sized or large firms. The difference was even greater for small wealth holders. However, including the indirect effect and assuming that the wealthy individuals could avoid paying additional dividend taxes, firm owners paid a higher total wealth tax.

3.4 Inheritance and Gift Taxation

Du Rietz et al. (2012) study inheritance and gift taxation. A modern form of inheritance taxation was introduced in 1885 and abolished in 2004.[17] Formal gift tax was introduced in 1910 and abolished simultaneously with the inheritance tax. The inheritance tax was integrated with the gift tax in 1914.

Initially, the inheritance tax was a single tax with two inheritance classes (direct heirs and other heirs) using the estate report as the tax base. In 1895, the tax system was modified and included a progressive tax schedule and three tax classes. Class I, which was subject to the lowest tax rates, included the surviving spouse, cohabiters, children and descendants. Class III consisted of juridical persons such as public utilities, private non-profit foundations and associations, of which some (for instance, public institutions and religious communities) were tax exempt. Class II encompassed all other heirs, i.e., those not belonging to classes I and III. In practice, this meant parents, brothers and sisters. The progressivity of the tax schedule was increased in 1910.

17 Various kinds of duties and fees on estates, inheritances and wills had existed earlier, but only for small and specific parts of the tax base and population strata.

After 1911, sizeable tax increases were implemented on two occasions. The first substantial tax increase took place in 1934, when the maximum rate for children and spouses was raised from four to 20 per cent and the maximum rate for others from 18 to 35 per cent. The 1934 tax schedules were also much more progressive. The second drastic tax increase occurred in 1948, when an estate tax—a tax on the wealth of the deceased—was imposed in combination with the earlier taxes on inheritance lots and gifts. The maximum marginal tax rate (the net sum of inheritance and estate taxes) for descendants and spouses (Class I) was increased from 20 to 60 per cent and from 35 to 67.5 per cent for others. The estate tax was abolished 10 years later. To prevent a reduction in the effective tax rate on inheritances from removing the estate tax, inheritance tax rates were sharply increased at the same time. The marginal inheritance tax was also slightly raised in 1971 and in 1983, and the tax brackets were adjusted upwards in 1981. In 1987, the number of inheritance tax brackets was reduced and tax rates were adjusted downwards. The downward adjustments continued during the 1990s. The inheritance tax was removed for bequests to spouses in 2003, and the inheritance and gift tax was completely abolished in 2004. Valuation relief for unlisted businesses was instituted in 1971 (see the above section on wealth taxation).

Inheritance and gift tax revenues were never particularly important as a source of revenue for the central government; with few exceptions, less than two per cent of total tax revenue was raised this way, and in the last 40 years before abolishment, the share was approximately one tenth of that level. Instead, these taxes were primarily motivated by distributional concerns, relating to a desire to reduce the unequal opportunities resulting from inherited wealth at the top of the wealth distribution.

To illustrate the evolution, the same approach is used as in the study of wealth taxation, i.e., the tax is calculated for differently endowed owners of family firms and individual fortunes corresponding to 10, 100 and 1,000 times the APW. In the analysis, it is assumed that there are two children who each inherit half of the estate and there is no surviving spouse. Indirect effects are also included, and it is assumed that the family firm's heirs sell shares to pay for the inheritance tax and are then subject to the capital gains tax. Before 1966, the capital gains tax was zero in the calculations, as Du Rietz et al. (2012) assume a holding period of the shares of at least five years.

By jointly examining the inheritance tax rates of all three firm types, clear similarities and differences become apparent, as in the case of wealth taxation. First, the tax rates broadly followed the same trend, beginning from a relatively low level in the period before World War II. After the war, tax rates increased sharply until the 1970s, when the levels declined due to the comprehensive valuation relief described above. In terms of tax levels, the conditions faced by the three different sizes of family firms diverged significantly. Comparing the small and the large firm, the inheritance tax rate paid by heirs to the large firm was approximately four times larger than that paid by heirs to the small firm.

The heirs of wealthy individuals faced the same tax rates as heirs of family firms in all years prior to the 1960s, but tax rates began to diverge significantly thereafter. The first divergence occurred in 1966 because of the capital gains that family firm heirs were required to pay when realizing accrued holding gains on business equity. The second divergence occurred in 1976, when the capital gains tax was increased. The third, and highly significant, divergence occurred in 1974 after a large valuation discount for family business equity was introduced into the tax code. The beneficial treatment of family firm stock was reinforced through the tax rules introduced in 1978. No such beneficial treatment existed for inherited non-corporate assets and therefore the heirs to such wealth paid between two and nearly three times the inheritance tax rates as heirs to similarly sized family firms. For inherited non-corporate assets, tax rates were first decreased in 1987 and then significantly reduced in 1991–1992.

Figure 8 depicts the long-run evolution of the direct inheritance tax incurred by the owner of a large family firm with equity of 1,000 APW (SEK 262 million in 2004). The figure also includes the capital gains tax. As seen in the figure, sharp increases in the tax burden occurred in 1934 and 1948. In 1974, the inheritance tax declined sharply due to the comprehensive valuation reductions.

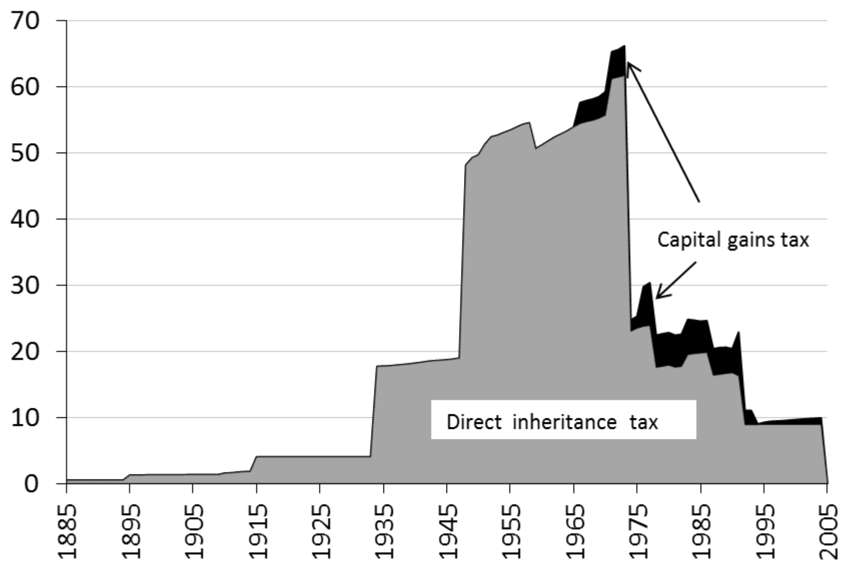

Figure 8. Direct and total inheritance tax: large firm (% of firm equity).

Note: The net worth of the large firm is 1,000 APWs (corresponding to SEK 262 million in 2004).
Source: Du Rietz et al. (2012).

3.5 Consumption Taxation

Stenkula (2013) discusses consumption taxation in greater detail. As described above, the importance of this form of taxation was high and increasing at the end of the 1800s, whereas its relative importance has declined since. However, consumption taxes still constitute an important source of income tax revenue. The shares of revenues from customs duties and general and specific consumption taxes are depicted in Figure 9.

Customs duties were the most important component before World War I. Specific consumption taxes became most important just prior to World War I, whereas general consumption taxes have been the most important component from the 1970s onwards. Customs duties were initially used both as a fiscal device (to raise revenues) and a protectionist device (to protect vital and infant industries). Their importance increased at the end of the 1800s due to additional protectionist requirements from industry and the general population. They decreased sharply during the world wars but remained an important source of revenues between the wars. After World War II, their importance dropped sharply and they were no longer regarded as serving a fiscal purpose.

Together with customs duties, specific consumption taxes was the most important tax category during the 19th century. Alcohol-related tax was the most important specific consumption tax until World War I. Further, a specific sugar tax was also in place. As with the customs duties, the share of specific consumption taxes decreased profoundly during World War I, but the share increased again after the war. In the mid-1930s, the tax share from specific consumption taxes was the highest relative to the entire period examined. Two other specific taxes now contributed an important share of the government budget: tobacco and vehicle taxes. The changing economic structure and increasing use of automobiles made vehicles an important tax base. This tax was intended to affect high-income earners disproportionally and was therefore more acceptable to the population and politicians. Alcohol and tobacco taxes could also be motivated from a socio-political perspective. During World War II, the importance of specific taxes decreased temporarily, and from 1960 until 2010 the share fell from approximately two-thirds to one-quarter of consumption tax revenue. The composition of this form of taxation also changed, and at the end of the period, environmental and energy taxes dominated.

General consumption taxes were introduced into the Swedish system relatively late compared to the other tax components. An important objection to general consumption taxes was that the tax was presumed to be regressive, affecting low-income individuals to a greater extent. General consumption taxes were first introduced temporarily during World War II as a sales tax. The tax rate was five per cent. After an intense debate, the sales tax was reintroduced in 1960. Initially, the tax rate was four per cent. In 1969, the sales tax was transformed into a value added tax (VAT). The tax rate increased sharply to approximately 20 per cent. After the 1990–1991 tax reform, the base was broadened with tax exemptions for only a handful of services. Subsequently, the VAT was differentiated with a decreased tax rate on items such as food, hotels, passenger transport and books.

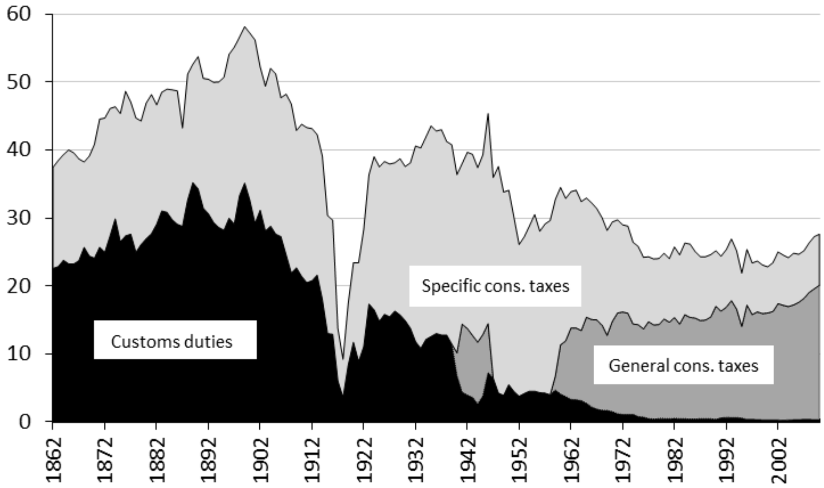

Figure 9. The composition of consumption taxes, per centage of total tax revenues, 1862–2010 (%).

Source: Stenkula (2013).

3.6 Real Estate Taxation

Stenkula (2014) examines real estate taxation. It is difficult to analyze the importance of the real estate tax, due to the limited data available in the historical record and the sheer complexity of the system. An imputed income based on property value was added to taxable income at the state and local levels until 1910 and 1920, respectively. Though this tax was not the most important tax component, it was more important at the local than the state level and more important in rural than in urban municipalities. In addition to this combined income and real estate taxation, some urban municipalities employed a separate local tax on real estate to finance, for instance, street maintenance and cleaning and garbage collection that were necessary in emerging and growing cities. Though small, the tax rate varied over time and across municipalities. However, its importance for municipalities declined and was used by fewer and fewer municipalities over time.

In 1920, the tax system was reformed and a complex "guarantee" tax system providing the municipalities with a stable tax base was introduced. It was argued that it would not be possible to introduce a (much simpler) conventional system without any "guaranteed" level, as many municipalities would garner insufficient tax revenue to cover their expenses and the difference between municipalities would be unacceptably large. The tax system implied that municipalities consistently received tax revenues up to the "guaranteed" level. Overall, this system made the local tax base more stable. The real estate tax was an important component of this new system, particularly during downturns and depressions. Estimations reveal that the real estate tax could still significantly influence the tax base, but its importance declined substantially after World War II.

There was considerable debate during the 1950s regarding the construction of the real estate tax, including the radical option of abolishing it altogether. In 1953, the construction of the local guarantee system was altered, but the principles of the system remained unchanged. For owner-occupied houses, the 1953 reform entailed further important changes that affected both state and local taxation. Prior to the reform, the true income from real estate was subject to taxation. At the local level, this was combined with a guarantee system that ensured tax income for local authorities, even when little or no income was associated with a property. Many taxpayers, of course, had no income flows associated with their owner-occupied houses.[18] Following the reform, formal rules for an imputed income were introduced on these houses (*villaschablon*). Only interest payments associated with the property were deductible from this imputed income, but no other costs were. The imputed rates and brackets were changed several times, often in response to changes in assessed value. From 1967, the imputed rate of income was dependent on the assessed value of the property, and the system was thus inherently progressive.

During the 1980s, real estate taxation underwent substantial changes. A separate state tax on real estate was implemented in addition to existing real estate taxation. This tax originated with a state fee on old apartment houses, introduced in 1983. This fee was motivated by changes in the state subsidy system for new apartment houses, which would unjustly benefit old apartment houses. In 1985, this fee was transformed into a more general state tax on real estate, even including owner-occupied houses. The reasons for the tax were fiscal, but it was also justified as a means of making the tax system more equitable and neutral.

With the 1990–1991 tax reform, the construction of this tax was simplified and all other forms of real estate taxation were abolished. The tax rate changed several times, and in 1996, the tax was broadened. There were also many exceptions and forms of temporary relief. In 2008, part of the tax was transformed into a local fee. The amount raised occasionally exceeded one per cent of GDP. However, an as-

18 Local tax authorities often estimated a hypothetical rental income before this tax reform, but there were no formal rules that stipulated how this estimation should be performed.

sessment of the importance of real estate taxation should also consider that interest expenses on household mortgages are tax deductible. Including this effect of deductible interest expenses, the state did not generate any significant tax revenues from owner-occupied houses.

4. Summary and Conclusions

In this article I have presented the evolution of Swedish taxation over a 150-year period and examined six key aspects of the Swedish tax system from 1862 to 2010. The Swedish tax system has experienced several changes since 1862. At present, Sweden primarily relies on personal income taxes, a general consumption tax (VAT) and social security contributions to generate the bulk of tax revenues. A general consumption tax and social security contributions did not exist 150 years ago, and the major taxes at the end of the 1800s have either been totally phased out or are of minor importance. The general evolution—not only in Sweden—reveals that countries increasingly rely on broad-based taxes (such as income taxes and general consumption taxes) and taxes that are less visible to the public (such as payroll taxes and social security contributions).

The tax-to-GDP ratio also changed dramatically. The ratio of 150 years ago amounted to less than 10 per cent. With the exception of World War I, the tax-to-GDP ratio was at most 10 per cent until the 1930s. From the 1930s, the ratio increased sharply for nearly 50 years. The tax ratio peaked at about 51.5 per cent in 1987. Since then the tax-to-GDP ratio has declined and in 2012 it was below 45 per cent. The economic effect of taxation not only depends on the tax level but also on the tax structure. Some taxes are more harmful than others.

Ignoring World War I, both labor and capital income taxes were low and stable until the interwar period. The importance of income taxation as a source of revenue was also initially low but increased rapidly until World War II. Inheritance taxation was implemented in 1885 (at very low tax rates), and wealth taxation was implemented in 1911 as an integrated component of the ordinary income tax system.

From the interwar period until the early 1980s, labor and capital income taxes increased rapidly. However, the opportunities to reduce corporate taxes through different forms of allowances were expanded. Marginal tax rates peaked during the 1970s and 1980s, and these marginal rates hit at moderate annual incomes. The period following World War II also witnessed increased reliance on social security contributions paid by employers. Concerning wealth and inheritance and gift taxation, rates increased sharply after World War II and the highest statutory tax rates were in place during the 1970s and 1980s. However, valuation relief for unlisted businesses has been in place since 1971 to mitigate the effect of these taxes. Neither the wealth tax (at least from 1948) nor the taxation of inheritances and gifts was a particularly important source of revenues for the central government. These taxes were primarily motivated by distributional concerns.

Consumption taxation was important throughout the period examined, but the distribution among customs duties, general and specific consumption taxes changed considerably. During the 1800s, customs duties were the most important component but their importance decreased sharply during World War I. Following the introduction of a permanent general consumption tax (initially a sales tax but subsequently a VAT) in 1960, its importance increased rapidly. The importance of real estate taxation is difficult to analyze due to the construction of the system and its integration with the income tax system. The separate state tax on real estate implemented in 1983 is of minor importance as a source of revenue.

Labor and capital income taxes have decreased since the 1990–1991 tax reform. The wealth and inheritance and gift taxes were abolished in 2007 and 2004, respectively, while the wealth tax on unlisted firms was abolished in 1991. Social security contributions have only decreased marginally, and the 1990–1991 tax reform increased the VAT and broadened its base, with tax exemptions for only a limited number of services. Subsequently, the VAT was differentiated.

Income taxation is typically based on nominal income, and our examination has revealed that inflation has a substantial impact on the effect of taxation. A central explanation for the increasing marginal tax rates facing taxpayers during the post-war period was bracket creep. The marginal effective tax rate on capital income (METR) is also substantially influenced by the fact that taxation is nominal. With high inflation, the effective tax rate can be well above 100 per cent on equity-financed marginal investments. The effect of the income tax system was also more unpredictable during the 1970s and 1980s, as tax rates and brackets changed almost on an annual basis.

At an aggregate level, one can discern at least three major historical stages of tax development. During the first 70 years considered, the tax-to-GDP ratio was low and stable or slightly increasing. Income taxation was low and consumption taxation important. From the interwar period until the 1990–1991 tax reform, the tax-to-GDP ratio increased sharply and stabilized at approximately 50 per cent of GDP. Income taxes were an important source of revenue. New taxes such as the VAT and social security contributions paid by employers were introduced, and their importance increased rapidly. After the 1990–1991 tax reform, income taxes decreased and wealth and inheritance and gift taxation were abolished. The tax-to-GDP ratio also began to decrease.

A closer examination of specific taxes can highlight more important turning points. Concerning the taxation of labor income, the tax reforms of 1903, 1948 and 1971 are essential. In 1903, it became mandatory for all taxpayers to file an income tax return and it became possible to increase income taxes in a more consistent and reliable way. From 1947, tax collection at the source was introduced and with the 1948 tax reform, the temporary increase in income taxes implemented during World War II was made permanent. The income tax had a distinctly progressive character, and in addition to financing expenditures, it had an explicit distributional purpose. These traits were sharpened with the 1971 tax reform. The 1970s and the 1980s were also characterized by a debate on and the introduction of wage-earner funds. Concerning the taxation of capital income, 1939 is noteworthy for the introduction of a proportional corporate income tax system and the increased opportunities to reduce the effective corporate tax rate.

Regarding wealth, inheritance and gift taxation, there were three tax hikes in 1934, 1948 and 1971, but valuation relief for certain assets was also provided in 1971 and strengthened in 1974 and in 1978. The evolution of these taxes depended on taxpayer characteristics, for instance, whether the wealth or inheritance included business assets or the reduction rules for wealth taxation were binding. In general, these tax rates were relatively low before World War II and increasing after the war until the 1970s, if valuation relief was applicable. The abolition of these taxes in 1991/2007 and 2004 can also be considered important turning points.

Concerning the complex taxation of real estate, one can highlight the introduction of the local »guarantee tax« system in 1920, the introduction of formal rules for an imputed income on private houses in 1953 and the introduction of a separate state tax on real estate in 1983. The importance of consumption taxation fell dramatically during World War I, and the composition changed in 1960, when a permanent sales tax (subsequently a VAT) was implemented.

The results above are based on a research project at the Research Institute of Industrial Economics (IFN) intended to describe and analyze the development of the Swedish tax system and its components in detail. The data generated within this project are unique in their consistency, thoroughness, breadth and period covered.

The results from this research render it possible to make analyses of the impact of taxation on economic key variables such as firm formation, firm growth and industry structure in a very long-term perspective or based on a specific type of tax.[19] A tax system's effect on economic performance not only depends on the aggregate tax level but also on the tax structure.[20] Taxation impacts the use of the factors of production and, consequently, on employment, investment and economic development.

It is also possible to analyze different explanations for the expanding government sector and the associated increase in the tax-to-GDP ratio. What extent of the growth may be explained by, for instance, increased scope for and lower costs of taxation? Several studies have analyzed this question, but they focus on total tax revenues or total government spending and, hence, the combined effect of all taxes.[21] The ability to tax may differ substantially both over time and across types of taxes. No study has analyzed conditions in Sweden during the 1800s.

19 See, for instance, Agell et al. (1997), Cashin (1995), Fölster and Henrekson (2001) or Kneller et al. (1999), who analyze the effect of tax-to-GDP on economic performance using cross-country data or panel data generally covering approximately 25 years. Romer and Romer (2010) analyze the post-war period in the U.S., and their study was replicated using German data in Hayo and Uhl (2014). Hansson (2010) analyzes the effect of wealth taxes on growth in a panel covering 20 years.

20 Lee and Gordon (2005) and Widmalm (2001) are examples of studies analyzing the effect of the tax structure using panel data covering approximately 30 years.

21 See, for instance, Ferris and West (1996, 1999) or Kau and Rubin (1981, 2002). These studies do not analyze the situation before the 1930s.

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