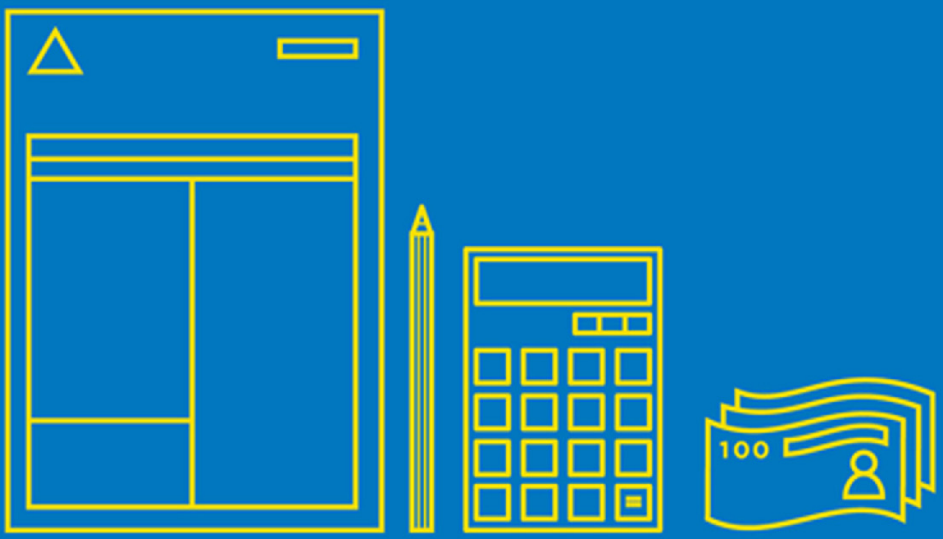
SWEDISH TAXATION

DEVELOPMENTS SINCE 1862



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Magnus Henrekson
and
Mikael Stenkula

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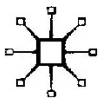

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Foreword

The results presented in this volume are based on a project conducted at the Research Institute of Industrial Economics (IFN), intended to analyze the long-term evolution of the Swedish tax system. Over the last five years, we, the editors of this volume, have directed and coordinated this comprehensive project. The project has a long history. It began on a small scale in 2002 at the Ratio Institute in Stockholm, and was originally initiated by one of the coauthors of two of the studies in this volume—Dan Johansson (at that time, Vice-President of the Ratio Institute, currently professor of economics at Örebro University School of Business).

The project expanded in scope and ambition over time. The initial idea—to describe the post-war evolution of statutory labor income tax rates for three income categories—was soon abandoned to provide a more thorough and complete analysis of the labor income tax system and to go as far back in time as deemed reasonable and possible. While analyzing labor income taxation, the evolution of capital income taxation caught our attention as complementary to the analyses of the evolution of the income tax system. Additionally, to trace the evolution of capital income taxation, an analysis of wealth taxation was required. At this point, the original project had grown so much that it seemed feasible and worthwhile to describe the entire Swedish tax system from 1862 to the present. However, this endeavor became far more difficult, exacting, and time consuming than we imagined. As the level of ambition increased, we continually encountered new difficulties and detected previously overlooked details.

The completed volume is based on extensive archival and published documentation. We hope that the reader finds that this documentation has been complemented by clearly presented, skillful analyses in the seven chapters constituting this volume. We have not documented *every* detail of the tax system, which would be practically impossible. Moreover, including every element would be counterproductive because the documentation would be burdened with so much detail that it would be difficult for other scholars to use. In fact, one important aspect of the documentation and analysis presented here is that the records are restricted to details that are substantively most important. We currently have far more detail than ever before concerning the annual basis of tax rates and the definitions of the relevant tax bases for a uniquely long period of time—152 years—in a single country.

This volume comprises six studies that examine the development of taxation in Sweden from 1862 to 2013. This examination includes the following six key aspects of the Swedish tax system: the taxation of labor income, capital income, consumption, inheritance and gifts, wealth, and real estate. Each aspect has been thoroughly

analyzed in separate chapters. The chapters regarding the taxation of inheritance and gifts and wealth have an entrepreneurial perspective, and analyze how small, medium, and large firms were affected. The chapters concerning labor income, capital income, goods and services, and inheritance and gifts, also contain extensive appendices that include all relevant tax schedules for the period examined, making it possible for the reader to perform his or her own calculation and analysis. This data is unique in its consistency, thoroughness, breadth, and the timespan covered. The data in all tables and figures can be downloaded at www.ifn.se/swedishtaxsystem.

The importance of different types of taxes varied greatly over time, and Sweden increasingly relied on broad-based taxes (such as income 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 beginning in the 1930s, the ratio increased sharply for half a century. Near the end of this period, the tax-to-GDP ratio declined significantly.

This project would not have been possible without the help of Gunnar Du Rietz, coauthor of four of the six studies. After receiving his PhD in 1979, Gunnar Du Rietz worked as a tax expert for more than 20 years at SAF (*Svenska Arbetsgivareföreningen*, the predecessor of the Confederation of Swedish Enterprise). Gunnar Du Rietz's detailed knowledge regarding the historical tax system has been valuable. We must also mention Lars-Olof Jacobsson, who assisted Gunnar Du Rietz with several painstaking calculations.

We are grateful for the useful comments and suggestions from Krister Andersson, Stig von Bahr, Niclas Berggren, Karin Edmark, Anders Gustafsson, Gunnar Johansson, Hans-Peter Larsson, Hans Lind, Henrik Lindberg, Sven-Olof Lodin, Stellan Lundström, Erik Norrman, Enrique Rodriguez, Hans Sjögren, Jan Södersten, Niclas Virin, and Hans Westerberg.

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STOCKHOLM, April 2015
MAGNUS HENREKSON AND MIKAEL STENKULA

About the Authors

Editors

Magnus Henrekson is a professor of economics and President of the Research Institute of Industrial Economics, IFN, in Stockholm, Sweden. Until 2009, he was Jacob Wallenberg Professor at the Department of Economics, Stockholm School of Economics.

Magnus Henrekson's research is empirically oriented. Since the end of the 1990s, he has mostly conducted research in the area of entrepreneurship economics, notably, the institutional determinants of the business climate. Magnus Henrekson has published extensively both in international scientific journals and in Sweden in the form of books, government-commissioned reports, and essays.

Mikael Stenkula is a research fellow at the Research Institute of Industrial Economics, IFN, in Stockholm, Sweden. He received a PhD in economics from Lund University. Mikael Stenkula's research is focused on entrepreneurship, business structures, and taxation. He has published numerous articles and contributions to collective volumes. Mikael Stenkula has also co-authored a textbook on entrepreneurship economics with Magnus Henrekson.

Contributors

Gunnar Du Rietz is a research affiliate at the Research Institute of Industrial Economics, IFN, in Stockholm, Sweden. He received a PhD in Economics in 1979 from the Stockholm School of Economics. Gunnar Du Rietz's main areas of research are taxation and entrepreneurship in Swedish industry. For more than two decades, he was head of tax analysis at the Confederation of Swedish Enterprise.

Dan Johansson is a professor of economics at Örebro University School of Business, Örebro, Sweden and a research fellow at HUI Research, Stockholm, Sweden.

His research concerns entrepreneurship, institutions, and firm growth. Dan Johansson has a particular interest in how the economic function of the entrepreneur is defined in different theoretical traditions and the policy implications that follow from these definitions. He also studies whether some firms—for example,

new, small, or family firms—are more important for generating employment and economic growth and what national institutions promote entrepreneurship, innovation, and competitive firms. Dan Johansson has published extensively both in international scientific journals and in Sweden in the form of books and reports.

Daniel Waldenström is a professor of economics at the Department of Economics, Uppsala University, in Uppsala, Sweden. He is also affiliated to the Research Institute of Industrial Economics, IFN. He received a PhD in economics from the Stockholm School of Economics and a PhD in economic history from Lund University. Daniel Waldenström's main research interests concern income and wealth inequality, intergenerational mobility, and long-term trends in inequality and taxation.

Chapter 1

Swedish Taxation since 1862: An Introduction and Overview

Magnus Henrekson and Mikael Stenkula

1. Introduction

Rulers, whether they are contemporary democratically elected governments or ancient despotic dictators, never lack objectives on which to spend money. However, until recently in human history, raising revenue was both problematic and expensive. Direct taxes, if they existed, were levied on part of the production of the land, and the otherwise untaxable poor citizens paid taxes in the form of labor. Another source of taxation was external manifestations of wealth, such as houses, windows, fountains, and other signs of affluence.[1]

Historically, market transactions have been an important source of government revenue. Often, these taxes were imposed on goods that crossed some border, such as a national border or a city limit. Even the means of exchange has been the object of taxation through insidious debasement, or recoinage, where money holders were forced to hand in their coins and obtain new coins for a fee.[2]

The historical taxation of trade and of the means of exchange were serious impediments to economic development. Over time, more efficient, revenue-raising methods evolved, allowing a government to raise far more revenue—relative to the size of its economy—than ever before. However, taxes have profound effects on economic behavior and affect the real economy by distorting choices. Therefore, a tax system is one of society's most fundamental institutions because it influences many economic decisions—labor supply, the amount of savings, and entrepreneurial activities.[3] Detailed knowledge about the structure and evolution of taxation is thus 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 tax systems have been extensively studied, the results are complex and ambiguous. Empirically, the effects of taxation should be assessed over long time periods because it requires substantial time for the full effects of institutional changes on economic behavior to manifest themselves. Moreover, each tax has its own distinct effect on economic behavior and the economy. A tax on labor income, for example, may distort the choice between work and leisure, whereas a tax on capital income may distort the choice between consumption and savings. Certain taxes—such as a real estate tax—are less distortionary and therefore, 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, homogeneous time series on the evolution of different types of taxes. However, to our knowledge, long-term, in-depth studies on the development of national tax systems have not been conducted in any country.[4]

Over the last five years (2010–2014), we have directed a comprehensive research effort at the Research Institute of Industrial Economics (IFN) to describe and analyze the Swedish tax system from a long-term perspective. Six key aspects of the Swedish tax system were studied: the taxation of labor income, capital income, consumption, inheritance and gifts, wealth, and real estate. The results of each study are presented in chapters 2 to 7 of this volume.

The purpose of this introduction is to present the main results of the volume. Several chapters include both a general description of the evolution of the specific taxes and an illustration of how these taxes could affect firms, investments, or individuals. The chapters that address the taxation of inheritance and gifts and wealth have an entrepreneurial perspective and analyze how small, medium, and large firms are affected. The chapters on labor income, capital income, and inheritance and gifts, and wealth taxation also contain extensive appendices, including all relevant tax schedules for the period examined, making it possible for the reader to perform his or her own calculation or analysis. This data is unique in its consistency, thoroughness, breadth, and timespan covered. The data in all tables and figures can be downloaded at www.ifn.se/swedishtaxsystem.

The studies in this volume examine the development of taxation in Sweden from 1862 to 2013. 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 term, 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 at this time had a poor, underdeveloped, and rural economy. Beginning in the 1840s, the Swedish economy was extensively deregulated, industrialization had begun, and the growth rate had increased substantially. At this time, the Swedish tax revenue was well below 10 percent of GDP. In the 1930s, the tax level began to increase continuously, and at the end of the 1980s, the level exceeded 50 percent (see Section 5). Compared with 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 the occasional years when Denmark had the highest ratio. However, it was not until the 1960s that the Swedish tax-to-GDP ratio exceeded the ratio in most other Western countries.

Because this volume covers six types of taxes in detail, the analysis provides a unique overview of the development of a tax system. Political ideas, social forces, and technological advances combined with often-contradictory motivations for different elements of the tax system have pushed and pulled the modern tax system. Occasionally, major tax reforms have been implemented, but typically, the tax system has evolved gradually, and tax provisions have been continually added or removed.

The contributions in this volume provide new insights regarding the long-term evolution of taxation in Sweden and a platform for new and interesting research, such as analyses of the overall effect of taxation in the long term, and of a specific type of tax. The series can also be used to examine whether distinct tax regimes separated by shifts in economic policy have existed.

Taxation impacts the use of the factors of production and, consequently, employment, investment, and economic development. We hope that this volume will inspire researchers in other countries to conduct similar mappings of their tax systems, which would allow long-term comparative analyses among countries.

The chapter is organized as follows. In the next section, we trace government spending in Sweden from 1862 to 2013 and briefly discuss the four main functions of taxation. In Section 3, we emphasize the multidimensional effects of taxes on economic behavior and explain why taxes should be analyzed as a system. In Section 4, this analysis is illustrated by the case of high-growth firms. In Section 5, the general evolution of the tax system in Sweden is discussed. In Section 6, results from the six key aspects of the Swedish tax system are presented. Section 7 provides a summary and synthesis of the six studies and, in Section 8, we discuss the main implications of the studies and offer suggestions for future research.

2. Government Expenditure in Sweden and the Objectives of Taxation

The most fundamental function of taxes is to *raise revenue* to finance government expenditure. In Figure 1.1, government expenditure in Sweden from 1862 to 2013 is related to GDP at market prices.

A basic distinction in the analysis of government expenditure is between exhaustive and non-exhaustive expenditures. Exhaustive expenditure refers to government outlay on goods and services for purposes of consumption or investment. This spending absorbs output directly and is included in GDP when measured from the expenditure side. Non-exhaustive spending, in contrast, consists of transfers and subsidies and does not contribute to GDP. Thus, non-exhaustive spending does not divert real resources from private use, but it still requires financing, which affects the allocation of resources.

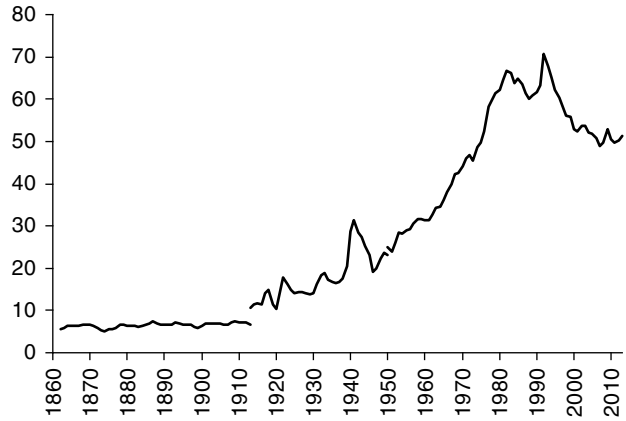

Figure 1.1 Government expenditure as a share of GDP, 1862–2013 (%).

Note: For the period 1862–1912, the spending data only covers government exhaustive expenditure (investment plus consumption). There is also a break in the data series in 1950.

Source: Durevall and Henrekson (2011) for 1862–1992 and National Institute of Economic Research for 1993–2013.

Prior to World War I, there is only data on exhaustive expenditures. The public spending ratio remained remarkably stable at approximately 6 percent of GDP, although we note a dip in the share around 1870. This dip coincides with a period of strong growth in the Swedish economy. The pattern was reversed in the mid-1870s, when Sweden entered a period of stagnation that lasted for approximately ten years.[5] This impression of a stable spending ratio would likely not have been altered even if transfer data had been available, because transfers held little importance before the interwar period.

Höök (1962) provided more disaggregated data on public spending since 1913. In the nonwar periods, military spending reached approximately 2 percent of GDP, whereas World War II, in particular, led to new record high levels for total government expenditures. The level peaked in 1941 at a ratio of nearly 32 percent (of which 14 percentage points comprised military spending). After an initial rise immediately following World War I, the expenditure ratio remained fairly stable during the 1920s. The onset of the Depression was associated with an abrupt increase in the expenditure ratio by approximately 4 percentage points. However, no further increase in nonmilitary government expenditure occurred after that in the 1930s, following a new, more active stabilization policy.

Excluding the expenditure increases attributable to the two World Wars, it seems that the expenditure ratio was established at a permanently higher level after World War I. However, this effect is not detectable after World War II. The most striking thing in the entire series is the exceptional increase of the expenditure ratio several years after the end of World War II. The 35 years following it were characterized by the virtually uninterrupted growth of the expenditure ratio, which went from

approximately 19 percent of GDP in 1947 to a peak of 67 percent in 1982. During the 1980s, the spending ratio declined before it rose sharply in connection with the deep economic crisis of the early 1990s. Since then, there has been a substantial decline in the spending share, and it has remained at approximately 50 percent in the last few years of the investigated period.

Mirrlees et al. (2011, 2–3) suggest that an effective way to design a tax system is to consider the desired revenue as a restriction and then structure the tax system as efficiently as possible. This method does not mean that one should design a tax system so that the desired revenue is raised with as few distortions as possible, because a tax system also has other functions. In addition to raising revenue, there are at least three more functions of taxation:

1. A *distributional* function, where taxes can be used to alter the post-tax distribution of income and wealth;
2. A *stabilization* function, where taxes are used to inhibit the business cycle; and
3. A function to *correct for externalities*, which can increase the tax rate on activities that are damaging to the environment or people's health (sometimes called sin taxes). Similarly, a lower tax rate may be imposed on activities or products with positive externalities. A prime example is spending on R&D, where the social rate of return is arguably higher than the private rate of return.

Because a tax system has several functions and taxes are used to attain various and often conflicting goals, there are tradeoffs that must be addressed.

3. Tax Distortions, Dead-Weight Losses, and the Systems View of Taxation

Virtually all taxes affect economic behavior. The only possible exception is a lump-sum tax, a fixed tax that must be paid by everyone, where the amount a person is taxed remains constant regardless of income or owned assets.

Some taxes improve efficiency—such as well-designed taxes on activities and products that are hazardous to the environment or people's health. A pure land value tax that avoids taxation of improvements could also have a positive externality because of productivity gains arising from efficient land use.

Nearly all other taxes, however, cause distortions of choice by individuals and firms, by altering the relative prices of factor inputs and goods and services. A tax system may thus distort a number of choices, such as the following:[6]

- Work and leisure, in not only the number of hours worked but also the level of effort.
- Paid work in the professional sector compared with unpaid work in the do-it-yourself sector and paid work in the black market sector.

- The mix in remuneration between taxable cash wages, untaxed fringe benefits, and on-the-job consumption.
- Formal and informal investment in human capital and valuable skills.
- Consumption of tax-favored goods relative to other goods.
- Consumption compared with savings.
- The propensity to leave a bequest and make charitable donations.
- Domestic compared with foreign investments.
- The sources of finance and the structure of ownership of firms.
- The choice of the legal form of firms (incorporated business, sole proprietorship, etc.).
- Incentives for entrepreneurship and its orientation to more or less productive activities.

This long but by no means exhaustive list of distortions shows that the distortive effect of a tax cannot be fully captured by the change in a single measurable entity, such as the number of hours worked in response to a change in labor taxation.

Because of the distortions that arise, the cost of a tax will be larger than the amount paid in tax; there will be an *excess* burden, also called a dead-weight loss. The excess burden is the monetary amount, in excess of the tax revenue collected, that the taxpayer would be willing to pay to remove all taxes.

As noted by Feldstein (2008), a tax change could create a dead-weight loss even if it causes GDP to rise (e.g., because of income effects that force a person to work more than that person would like to). Thus, taxes affect not only the level of economic activity but also its character. From a social welfare perspective, this result may be just as important.

Because of the many ways in which taxes affect behavior and given the complexity of tax systems, we agree with Slemrod and Gillitzer (2014, 6) who assert that to address many critical tax policy issues, tax analysis must move to "a tax-systems approach." In this approach, not only the tax rates and tax bases, but also the potential evasion/avoidance behavior are analyzed, and the administrative compliance costs associated with the tax system are considered. We also concur with Mirrlees et al. (2011, 2–3), who provide the crucial insight from their extensive review that "the tax system needs to be seen as just that—a system. . . . we focus throughout on the impact of the system as a whole—how taxes fit together and how the system as a whole achieves government's goals."

A tax system is a set of rules, regulations, and procedures that define what creates a tax liability and the size of that liability (i.e., tax rates and tax bases). In addition, a tax system comprises rules, regulations, and procedures that (1) specify who or what entity is obligated to remit the tax and (2) detail procedures for ensuring compliance and sanctions in case of noncompliance.[7] However, the studies in this volume do not address the latter two aspects.

If the effects of taxes should not be analyzed one tax at a time, it becomes necessary to distinguish how different taxes fit together and how the system as a whole achieves desired objectives.

4. The Example of High-Growth Firms

The complexity and intricacies involved can be illustrated by what is required to develop a successful firm.[8] First, a successful firm requires the combination of many complementary agents, or a competence structure. Entrepreneurship is vital, but other agents include the following: early stage financiers (business angels and venture capitalists), industrialists, inventors, innovators, skilled labor, competent customers, and agents on secondary markets (buyout firms, portfolio investors, management buy-ins). Successful venturing that generates rapid growth demonstrates how well the different agents acquire, update, and jointly use their respective competencies.

However, the tax code does not acknowledge these agent categories; there is no specific tax on income from entrepreneurial effort, inventive activity, or the return on acquired skills. Based on provisions in the tax code, individual (personal) income is classified as labor income, business income, or capital income, and in each of these categories, there may be further provisions that influence the effective tax rate. Income from labor and business is typically added and called earned income. In addition to these categories, a tax system usually includes corporate taxation, tax on asset holdings, and different forms of indirect taxation, such as payroll taxes and sales taxes/VAT. The incentive effects of a tax system are potentially large, highly complex, and difficult to assess with precision.

In Table 1.1, we outline different types of taxation and list the most important aspects of each category. The total effect on key competencies, including risk-taking behavior, is determined by the combined effect of the different taxes.

To fully evaluate the effect of the tax system on the incentives for entrepreneurship and firm growth, it is necessary to explain the combined effects of all taxes. Estimating the real size of the marginal tax burden faced by private firms for investment in real capital is a painstaking task, requiring the consideration of effects such as corporate taxation with its specific rules for depreciation and valuation, and the taxation of interest income, dividends, capital gains, and wealth. In addition, one must examine how these tax schedules differ for different types of investors. A correct estimate of the tax burden must consider what type of real capital the firm invests in, how these investments are financed, who the firm's owners and creditors are, and in what industries the investments are made. Estimates have been made for many countries using the methodology developed by King and Fullerton (1984). Generally, these studies show significant differences in real rates of taxation depending on the type of owner and sources of finance, which is likely to have a considerable impact on incentives for the various agents in the competence structure.

If taxation is nominal and tax rates are high, the real rate of taxation could easily exceed 100 percent even at moderate inflation rates. However, this rate of taxation can be largely offset by tax deductions of interest payments and if certain investments are tax favored, opportunities for tax arbitrage arise.

Let us also consider the investment and supply decisions of economic agents, including whether or not to acquire and utilize any of the key competencies crucial for high-growth firms. These choices depend on the complex interplay of many

Table 1.1 Different types of taxes with an impact on the agents needed to build a successful firm

Taxation of earned income and payroll taxes	*Corporate taxation*
–level and degree of progressivity	–level and degree of progressivity
–social security contributions	–statutory rate/effective rate
Taxation of capital income	–accounting measures to lower effective taxation
–level and degree of progressivity	–single- or multilevel taxation
–dividends versus interest income	–degree of symmetry in the tax treatment of business profits and losses
–exemptions	–against other types of income
–differences across assets	–against future profits
–differences across types of owner	–effect of progressivity
–differences based on holding period	–treatment of holding companies
–differences across instruments	–domestic/foreign
–preferential treatment of pension savings	*Taxation of stock options*
Taxation on asset holdings	–capital or labor income
–wealth tax	–tax on realized or imputed gain
–property tax	–differences based on holding period
–inheritance tax	*Sales tax/VAT*
–exemptions	–level
	–degree of uniformity
	–exemptions

Note: For all types of taxes, it matters whether nominal or real incomes are taxed.

Source: Henrekson, Johansson, and Stenkula (2010).

tax rates, tax code provisions, and the incentives for saving in general, especially in forms amenable to equity financing.

Tax systems typically contain many asymmetries that create distortions concerning, for example, ownership and firm age, which affect the functioning of the competence structure and the ability to become a successful firm. Innumerable combinations of tax rates and tax provisions exist, resulting in different blends of ownership, financing and industry structures, size distribution of firms, and the employment dynamics in different countries.

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

Figure 1.2 depicts the evolution of the tax-to-GDP ratio in Sweden.[9] During the first 50 years of our study, that is, until World War I, the tax-to-GDP ratio was stable, fluctuating slightly but consistently remaining below 10 percent of GDP. During World War I and the early 1920s, the ratio increased. After this period, the

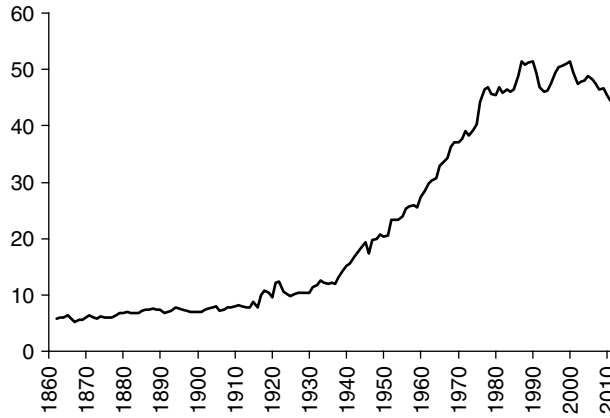

Figure 1.2 The tax-to-GDP ratio, 1862–2013 (%).

Source: Rodriguez (1981), Gårestad (1987), Edvinsson, Jacobson, and Waldenström (2014), and Statistics Sweden; OECD stat extracts, http://stats.oecd.org/Index.aspx?DataSetCode=REV.

tax-to-GDP ratio decreased but did not return to the prewar level. Thus, there was a small displacement effect because of World War I.[10] The tax-to-GDP ratio remained at approximately 10 percent during the 1920s. From 1930, the ratio increased continuously for nearly 50 years, reaching approximately 47 percent in 1978. The rapidly increasing ratio following World War II almost completely concealed any sign of displacement because of the war. The tax-to-GDP ratio remained slightly below 50 percent until the mid-1980s, when it increased. During the rest of the 1980s and 1990s, the ratio fluctuated at approximately 50 percent of GDP, with a clear decline in the early 1990s because of the economic crisis. The tax ratio peaked at approximately 51.5 percent in 1987.[11] Near the end of the period examined, the tax level declined significantly, and by 2013, the tax ratio had fallen below 45 percent.

Figure 1.3 decomposes total tax revenues into 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. No single source constantly reports the evolution of the tax structure in a consistent manner. Consistent reporting cannot be achieved because taxes have not always been consistently categorized and aggregated. For example, the wealth tax was an integral component of the ordinary income tax from 1911 to 1947. Similarly, the real estate tax was an integral component of the income tax until the 1990–1991 tax reform.

Income tax constitutes a broad category that includes all taxes on income (personal and corporate, capital and labor) and wealth and real estate taxes, when they were integrated with the income tax. Temporary income taxes are also included. Consumption taxes include taxes on general consumptions (such as sales taxes and value added taxes), specific consumption taxes (excise duties), and customs duties. Social security contributions include contributions paid by employers, contributions paid by employees, and payroll taxes.[12] The category "other" is a residual (further discussed below).

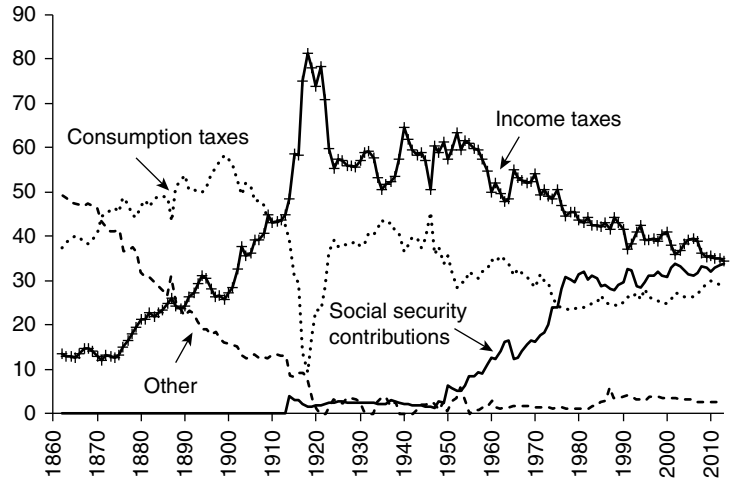

Figure 1.3 The composition of total tax revenues, 1862–2013 (%).

Note: Before 1875, no data on income taxes at the local level is available. As the total tax level was stable at this time, it is assumed that local income tax revenue was unchanged as a share of GDP during these years.

Source: Rodriguez (1980), Gårestad (1987), Ekonomistyrningsverket (2014), Statistics Sweden (various issues), and OECD stat extracts, http://stats.oecd.org/Index.aspx?DataSetCode=REV.

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. In the 1900s, technology offered new opportunities to extract resources, thus, enhancing the government's ability to collect taxes. Changes in production technologies increased the proportion of one's income that was subject to taxation and reduced the cost of collecting tax revenue. New revenue sources and new principles of taxation were introduced. For example, 150 years ago, the dominant perspective held that tax revenue should be used to cover—chiefly military—expenses, and budget surpluses or deficits should be avoided. Currently, the tax system is used to not only raise needed revenue to finance government expenditures but also alter income distribution, stabilize the business cycle, and improve the allocation of resources in the economy.

Consumption taxes were very important during the second half of the 1800s. The share of consumption taxes also increased during this period and represented more than 50 percent of the total tax revenue at the turn of the last century. Customs duties were the most important consumption tax at this time. The share of these taxes decreased sharply during World War I. There were several reasons for this abrupt decline, including international trade restrictions and rationing. The share of tax revenue from consumption taxes did not return to its original prewar level and continued to decrease slightly after World War II. The most important innovation during the postwar period was the introduction of a permanent sales tax in 1960, which was changed to a value added tax (VAT) in 1969. These taxes were

introduced because of the perceived difficulty in further increasing income taxes (Elvander 1972; Rodriguez 1980).

Income taxes were surprisingly unimportant at the beginning of the period examined, although their share began to increase in the last quarter of the nineteenth century. Because of 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 adaptation of modern bookkeeping and decreased monitoring and collecting costs, made income taxes a more feasible tax source.[13] In 1903, a new state income tax reform was implemented and all taxpayers were required to file an income tax return. 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. The share of income taxes continued to be high, although not as high as during the war. The share declined slowly during the postwar period, when the importance of other, primarily indirect, taxes increased. In 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. Although the shares of income and consumption taxes have declined since World War II, the share of social security contributions has increased dramatically. Social security contributions became more important than consumption taxes in the mid-1970s. During this period, the "Haga policy" was implemented, a major component of which was a significant increase of social security contributions to finance lower income taxes.[14] In the 1980s, the increase in social security contributions slowed considerably. Although the importance of social security contributions has continued to increase slightly, in recent decades, income taxes still generate the largest tax revenue.

The category *other* is a residual that includes several taxes. The share was highest during the 1800s and, at the beginning of our study period, residual taxes constituted 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.[15] Economic and social progress required authorities to rely on these taxes because most taxpayers were small farmers, which made 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 and 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 considerably over time. Initially, indirect taxes, such as customs duties, were extremely important. Direct income taxes grew rapidly in importance until World War II. During the postwar period, the rise of the VAT and social security contributions as important sources of revenue demonstrated that indirect taxes regained their importance. Currently, consumption taxes, social security contributions, and income taxes each

account for approximately one-third of tax revenue. The remainder is primarily attributable to property taxes.

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

The analysis of the Swedish tax system in this volume includes six chapters that discuss and examine in detail the taxation of labor income, capital income, consumption, inheritance and gifts, wealth, and real estate. The importance of these taxes has varied greatly over time. This section presents the main findings of each chapter, each addressing a key aspect of the Swedish tax system.

6.1 Taxation of Labor Income

Chapter 2 examines the taxation of labor income. It is written by Gunnar Du Rietz, Dan Johansson, and Mikael Stenkula. 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 principle, been progressive since 1903, although only very modestly until the 1920 reform. In the interwar period, the tax became more progressive, but the first tax bracket was very broad (its upper limit corresponded to more than three times the average annual wage of a production worker in 1920). In addition to the ordinary state tax system, temporary taxes were often imposed during and between the World Wars. The ordinary tax system was often augmented when temporary taxes were abolished, that is, the temporary tax increases were made permanent. The marginal tax rates continued to increase until the 1980s. Tax rates began to decrease in response to the 1983–1985 tax reform and, in particular, because of the 1990–1991 tax reform.

A local income tax has been imposed in addition to the state income tax. 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 percent 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 the most, 80 and 85 percent in the two highest tax brackets.

To illustrate the evolution of labor income taxation, the chapter calculates marginal tax rates for low-, average-, and high-income earners, defined as taxpayers earning 67, 100, and 167 percent, respectively, of the average annual wage of a production worker (APW). This calculation conforms to the way the Organisation for Economic Co-operation and Development (OECD) analyzes labor income taxation in their "taxing wages" comparisons.[16] These income levels are partly used to

illustrate capital income and wealth taxation as well. Furthermore, the chapter computes the top marginal tax rate and the income (in terms of APWs) at which the top marginal tax rate is applied.

The marginal tax rates are depicted in Figure 1.4. The analysis reveals that marginal tax rates were low and approximately identical for low-, average-, and high-income workers until the 1939 tax reform, although some progressivity had 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 categories continued to increase thereafter, primarily because of increased local government taxes and bracket creep; combined with a progressive tax schedule, inflation pushed taxpayers into tax brackets with higher marginal tax rates. In 1971, a tax reform was implemented, and the progressivity of the tax system was increased. In addition 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 whereas it fluctuated for the low- and average-income earners.

The 1983–1985 tax reform reduced the marginal tax rate for all three income categories by approximately 5–15 percentage points, but it fluctuated up and down during the rest of the 1980s. The 1990–1991 tax reform decreased marginal tax rates by approximately 15–20 percentage points. At the end of the period examined, the marginal tax rate was approximately 30 percent for the low- and average-income earner and approximately 52 percent for the high-income earner.

The top marginal tax rate increased considerably during World War I and further increased during the Depression in the 1930s. However, during this period, an income corresponding to several hundred APWs was required to make a taxpayer

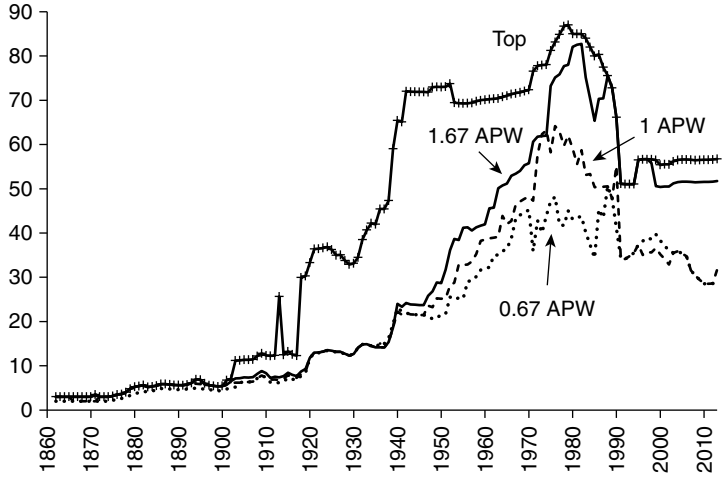

Figure 1.4 The marginal tax rates, 1862–2013 (%).
Source: Du Rietz, Johansson, and Stenkula (2015a).

subject to the top marginal tax rate. The top marginal tax rate continued to increase after the Depression to more than 70 percent 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 rate began to be applied decreased sharply during and after World War II. Approximately 400 APWs were required to pay the top marginal tax rate in 1938, approximately 7 APWs in 1970, and 1.6 APW by the end of the 1980s. The top marginal tax rate peaked at the end of the 1970s at approximately 87 percent.[17]

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 circumstances, consumption taxes are also included, and social security contributions can be adjusted to only include the fiscal component. Thus, Du Rietz, Johansson, and Stenkula (2015a) also include an analysis of the evolution of the marginal tax wedge.

Employer-paid social security contributions (SSCs) were introduced in 1955, and have increased significantly since then.[18] The top marginal employer-paid SSCs and the marginal employee-paid SSCs for the three income categories can be seen in Figure 1.5. The top marginal SSCs and the SSCs 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 because of 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 because of the removal of the income caps.

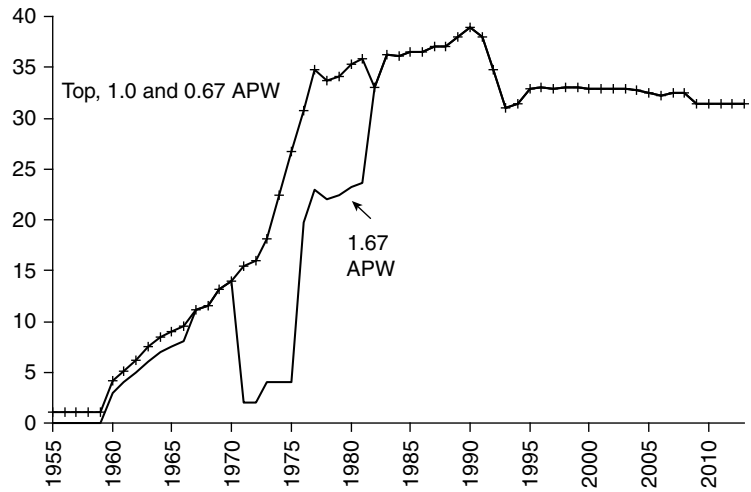

Figure 1.5 The marginal employer-paid SSCs, 1955–2013 (%).

Note: Top refers to the highest possible marginal SSCs rate.

Source: Du Rietz, Johansson, and Stenkula (2015a).

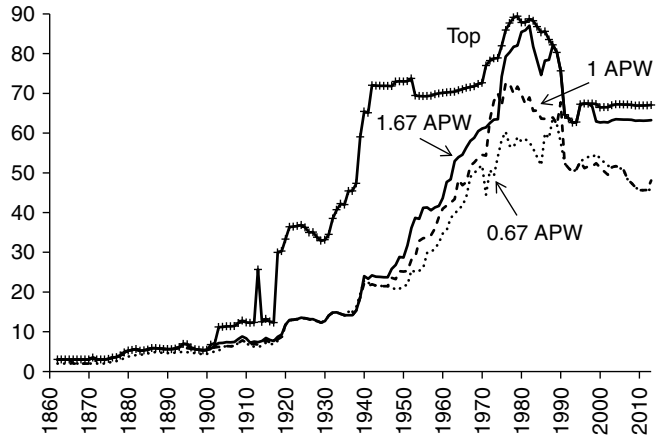

Figure 1.6 The marginal tax wedges, 1862–2013 (%).
Source: Du Rietz, Johansson, and Stenkula (2015a).

Figure 1.6 depicts the marginal tax wedges. They broadly follow the same evolution as the marginal tax rates. During the 1960s and 1970s, the marginal tax wedges increased more abruptly than the marginal tax rates because of substantial increases in SSCs. The top wedge peaked in 1980 at approximately 90 percent.

6.2 Taxation of Capital Income

Chapter 3 analyzes the taxation of capital income, including the taxation of corporate income, dividends, interest, capital gains, and wealth, and is written by Gunnar Du Rietz, Dan Johansson, and Mikael Stenkula.

The same tax schedule initially applied to both corporate and personal income; 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 the taxation of dividends, corporations were allowed to deduct dividends paid but only up to 6 percent 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 percent, 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 in the 1950s to contract an overheated economy. The statutory corporate tax rate continued to increase during the postwar period and remained high, at approximately 50–60 percent, until the 1990–1991 tax reform.[19] 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 percent in 1990 and 30 percent in 1991. The statutory tax rate was further reduced to 28 percent in 1994, 26.3 percent in 2009, and 22 percent in 2013.

Because 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, after a long boom period in the stock market. Before 1911, only "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 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 from two to five years. In 1966, shares owned for 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 percent of the gains on shares held for two years or more were taxed. The 1990–1991, tax reform made all capital gains fully taxable at a flat rate of 30 percent, irrespective of the holding period.

Wealth taxation has been imposed since 1911, although originally at low rates. Taxation on wealth was highest during the 1970s and 1980s. The wealth tax 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, the chapter calculates 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 post-tax 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 1.7. The METR was low until World War I, below 5 percent, 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 slightly upward and differed depending on the source of finance. The differences between sources increased and were relatively high until the 1990–1991 tax reform, when the differences decreased again.

In the case of retained earnings, the METR remained at approximately 10 percent during the interwar years. From 1939 to 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

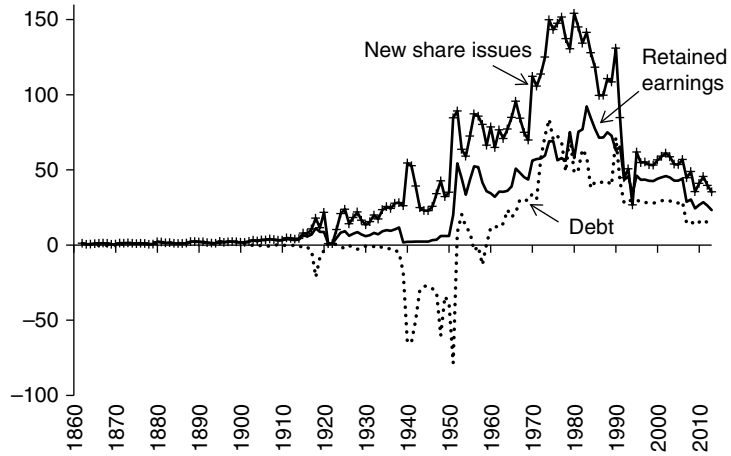

Figure 1.7 The marginal effective tax rate on capital income (METR) for an investment financed with new share issues, retained earnings, and debt, 1862–2013 (%).

Note: The calculations are based on an investor with a marginal tax rate corresponding to that of the average production worker.

Source: Du Rietz, Johansson, and Stenkula (2015b).

increased sharply and occasionally exceeded 50 percent because of the abolition of immediate write-offs and temporary investment taxes. The METR was slightly lower during the early 1960s, when the temporary increase in the corporate tax was discontinued and the investment tax had been abolished. From 1960 to the 1980s, the METR increased because of 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 percent. The METR began to decline in the second half of the 1980s.

Regarding new share issues, the METR peaked at close to 20 percent during World War I and remained at approximately this level during the interwar years. The tax rate increased until the early 1950s, with temporary spikes caused by additional 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 abruptly to nearly 90 percent in the early 1950s because of the elimination of immediate write-offs, temporary investment taxes, and high inflation. During the 1950s and 1960s, the METR fluctuated between 65 and nearly 100 percent. The progressivity was increased with the tax reform implemented in 1971 and, combined with high inflation, the METR increased above 100 percent during the 1970s and did not go back below this level until the 1990–1991 tax reform. The highest level was reached in 1980, at approximately 150 percent.

With regard to debt, the METR was near zero until 1939 when immediate write-offs were introduced. From 1939 to 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 percent. The METR 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 elimination of the wealth tax) and lower inflation. At the end of the period examined, the METR was typically 25–35 percent for investments financed with retained earnings and new share issues, and approximately 15 percent for debt-financed investments.

These calculations are based on an investor with a marginal tax rate corresponding to an average production worker. This assumption is less important before World War II because of the low tax rates. This assumption has no importance after the 1990–1991 tax reform because capital income was 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 significant during the 1970s and 1980s. If the top marginal income tax is considered instead, the METR often exceeded 150 percent, and peaked above 200 percent during this period if the investment was financed with new share issues.

6.3 Consumption Taxation

Chapter 4 discusses consumption taxation in greater detail and is written by Mikael Stenkula. The importance of this form of taxation was high and increasing at the end of the 1800s, whereas its relative importance has since declined. However, consumption taxes still constitute an important source of income tax revenue. The shares of revenue from customs duties and general and specific consumption taxes are depicted in Figure 1.8.

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

In addition to customs duties, specific consumption taxes were the most important tax category during the nineteenth century. An alcohol-related tax was the most important specific consumption tax until World War I. Additionally, a specific sugar tax was also imposed. Similar to customs duties, the share of specific consumption taxes decreased significantly during World War I, but the share increased again after the war. In the mid-1930s, the tax share from specific consumption taxes

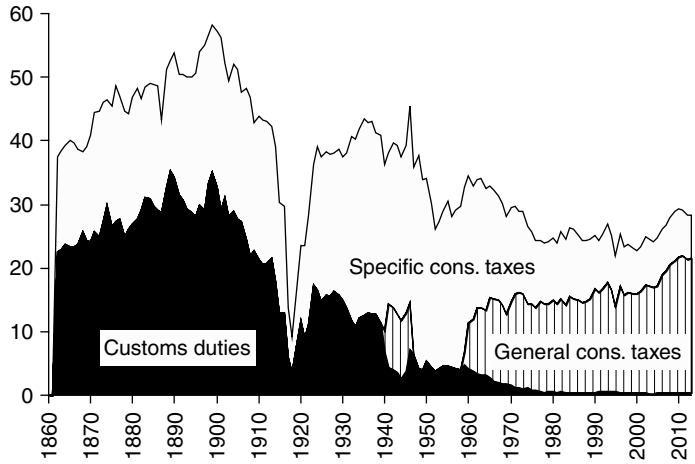

Figure 1.8 Composition of consumption tax revenue as a percentage of total tax revenue, 1862–2013 (%).

Source: Stenkula (2015a).

was the highest in the entire period examined. Two other specific taxes then 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 to 2013, the share fell from approximately two-thirds to one-quarter of the revenue from consumption taxes. The composition of specific consumption taxation also changed, and at the end of the period, environmental and energy taxes dominated.

General consumption taxes were introduced in the Swedish system relatively late, when compared with 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 tax on sales. The tax rate was 5 percent. After intense debate, the sales tax was reintroduced in 1960. Initially, the tax rate was 4 percent. In 1969, the sales tax was transformed into a value added tax (VAT). The tax rate increased sharply to approximately 20 percent. After the 1990–1991 tax reform, the base was broadened with tax exemptions for only a few services. Subsequently, the VAT was differentiated when the tax rate was decreased on items such as food, hotels, passenger transport, and books.

Consumption taxes have been an important source of revenue for the entire period examined. Several types of consumption taxes—such as the VAT and sales tax, introduced during the later part of the time period examined—were used purely

as fiscal devices to raise revenue, and not to influence the structure or volume of consumption. This motive was partly true for customs duties in the first half of the period examined. However, other types of consumption taxes were partly motivated by public health concerns (such as "sin taxes" on alcohol and tobacco) and climate protection (such as energy or environmentally related taxes), or were considered user taxes (such as vehicle related taxes to finance roads) or luxury taxes (such as taxes on perfume, luxury cars, and other nonessentials).

6.4 Inheritance and Gift Taxation

Chapter 5 examines inheritance and gift taxation and is written by Gunnar Du Rietz, Magnus Henrekson, and Daniel Waldenström.[20] The 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 comprised juridical persons such as public utilities, private nonprofit foundations, and associations, of which some (e.g., public institutions and religious communities) were tax exempt. Class II encompassed all other heirs, that is, heirs not belonging to classes I and III. In practice, Class II included parents, brothers, and sisters. The progressivity of the tax schedule was increased in 1910.

After 1911, sizeable tax increases were implemented on two occasions. The first substantial tax increase occurred in 1934 when the maximum rate for children and spouses was raised from 4 to 20 percent, and the maximum rate for other heirs was raised from 18 to 35 percent. 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 and combined 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 percent and from 35 to 67.5 percent for other heirs. The estate tax was abolished ten years later. To prevent a reduction in the effective tax rate on inheritances by eliminating the estate tax, inheritance tax rates were sharply increased at the same time. The marginal inheritance tax was also slightly raised in 1971 and 1983, and the tax brackets were adjusted upward in 1981. In 1987, the number of inheritance tax brackets was reduced, and tax rates were adjusted downward. 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 introduced in 1971 (see the section on wealth taxation).

Inheritance and gift tax revenues were never an important source of revenue for the central government. With a few exceptions, less than 2 percent of total tax revenue was raised this way, and in the 40 years before abolition, the share was

approximately one-tenth of that level. Instead, these taxes were primarily motivated by distributional concerns, a desire to reduce the unequal opportunities resulting from inherited wealth at the top of the wealth distribution.

To illustrate the effect of inheritance and gift taxation, average inheritance tax rates are calculated for differently endowed owners of family firms and individual fortunes corresponding to 10, 100, and 1,000 average annual wages of a production worker (APWs). In the analysis, it is assumed that two children 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 the inheritance tax and are then subject to the capital gains tax. Before 1966, the capital gains tax was zero in the calculations because Du Rietz, Henrekson, and Waldenström (2015) assume the heirs hold their shares for at least five years.

By examining the inheritance tax rates for all three firm types, clear similarities and differences become apparent. 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 because of the comprehensive valuation relief described later. Concerning tax levels, the conditions faced by the three different sizes of family firms diverged significantly. Comparing the small and large firms, the inheritance tax rate paid by heirs of the large firm was approximately four times greater than that paid by heirs of the small firm.

The heirs of wealthy individuals faced the same tax rates as heirs of family firms in every year 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 significant divergence occurred in 1974 after a large valuation discount for family business equity was introduced in the tax code. The beneficial treatment of family firm stock was reinforced through the tax rules introduced in 1978. No similar beneficial treatment existed for inherited noncorporate assets and, therefore, the heirs of this wealth paid between two and nearly three times the inheritance tax rates as heirs of similarly sized family firms. For inherited noncorporate assets, tax rates were first decreased in 1987 and then significantly reduced from 1991 to 1992.

Figure 1.9 depicts the long-term evolution of the direct inheritance tax incurred by the owner of a large family firm with equity of 1,000 APWs (SEK 262 million in 2004).[21] Figure 1.9 also includes the capital gains tax. According to the figure, sharp increases in the tax burden occurred in 1934 and 1948. In 1974, the inheritance tax declined sharply because of comprehensive valuation reductions.

6.5 Wealth Taxation

Chapter 6 provides a detailed analysis of the evolution of Swedish wealth taxation and is written by Gunnar Du Rietz and Magnus Henrekson (Du Rietz and Henrekson 2015). Modern wealth taxation was introduced in Sweden in 1911 when

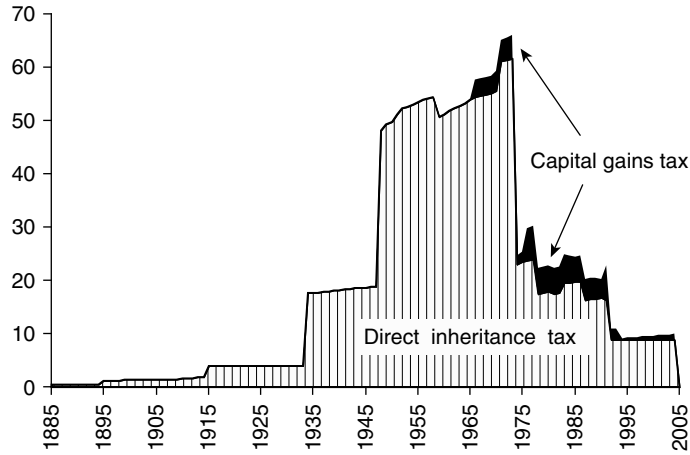

Figure 1.9 Direct and total inheritance tax: large firm, 1885–2005 (% of firm equity).
Note: The net worth of the large firm is 1,000 APWs (corresponding to SEK 262 million in 2004).
Source: Du Rietz, Henrekson, and Waldenström (2015).

a combined income and wealth tax was implemented.[22] 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. The share was one-sixtieth from 1911 to 1938 and 1 percent from 1939 to 1947 but was temporarily raised to 10 percent by the 1913 defense tax. This system was abolished in 1947.

A separate wealth tax was introduced with the income wealth tax in 1934 and applied until 2007.[23] This wealth tax directly levied specific marginal wealth tax rates in different brackets of net wealth. Initially, the exemption was high, and the tax rates varied between 0.1 and 0.5 percent. The exemption was subsequently reduced, and the tax rates increased to, at the most, 0.6 percent (1939) and 1.8 percent (1948). The changes in 1939 and 1948 were combined with a reduction in 1939 and abolition in 1948 of the share of wealth that was included in the ordinary income tax on labor.

Certain reduction rules were enacted to mitigate the effect of the wealth tax, limiting taxable wealth, to at the most, 25 (subsequently 30) times taxable income or limiting the sum of local and state income taxes and the wealth tax for individuals to, initially, a maximum of 80 percent. 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.

In the 1950s and 1960s, wealth tax rates continuously increased through bracket creep. This increase occurred despite the top marginal tax rate remaining at 1.8 percent until 1970 when it was temporarily raised to 2.5 percent. A final, temporary, wealth tax increase was implemented in 1983. In 1984, the top marginal tax rate was reduced from 4 to 3 percent and further reduced to 2.5 and 1.5 percent 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 percent of booked net equity value (assets less liabilities). This valuation rule was imposed until the wealth tax for unlisted corporate equity was repealed in 1991.

Because 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 important as a source of revenue for the central government, at least not since 1948. Since the 1930s, taxes on wealth were largely motivated by redistributional concerns.

To illustrate the effect of wealth taxation, the same approach is used as in the study of inheritance and gift taxation (Chapter 5). Average wealth tax rates are calculated for differently endowed owners of family firms and individual fortunes corresponding to 10, 100, and 1,000 APWs. 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 considers these additional indirect dividend taxes for the three standard firms.

By examining the wealth tax rates of all three firm types, clear similarities and differences become apparent, such as in the case of inheritance and gift taxation. 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 because of the substantial valuation reductions. Regarding tax levels, the experiences of the three differently sized family firms diverged significantly. Comparing the large (1,000 APWs) and medium (100 APWs) firms, the effective total tax rate of the large firm owner (including additional dividend tax) was approximately twice that of the owner of the medium firm. In contrast, for the small firm owner, the direct wealth tax rate for most years was relatively low.

Figure 1.10 depicts the long-term evolution of the direct wealth tax rate incurred by the owner of a large family firm with equity of 1,000 APWs (SEK 261 million in 2006). The figure depicts both the unreduced direct wealth tax and the reduced rate considering the reduction rules previously mentioned. The assessed direct tax rate has varied substantially over time: increasing in the postwar era, peaking in the early 1970s, then falling to zero since 1991. There were three major tax increases in 1934, 1948, and 1971 and an abrupt, though temporary, increase in 1913 because of the defense tax. However, by exploiting the rule that reduced taxable wealth, the owners of large firms 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.

The total effective wealth tax, including the indirect effect of dividend taxation, could be much higher than the direct wealth tax. Because additional dividends could be taxed at a high marginal tax rate, the wealth tax imposed a much higher

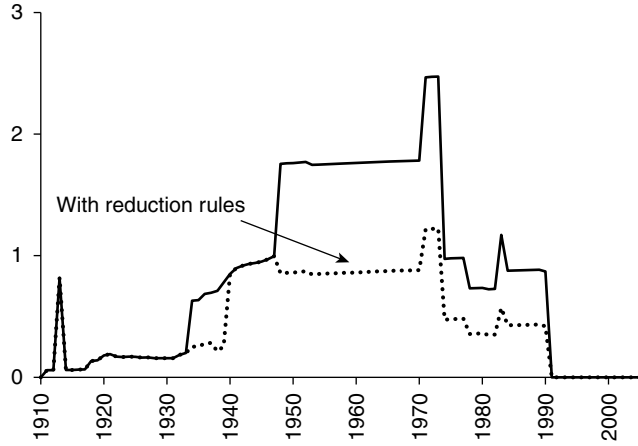

Figure 1.10 Direct wealth tax rate for an owner of a large firm, 1911–2006 (% of firm equity).

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

Source: Du Rietz and Henrekson (2015).

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 percent or higher and as much as 85 percent in 1977–1981, these indirect taxes were almost prohibitive. These high dividend tax rates 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 disadvantageous from the 1960s to 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. Because of these forms of relief, wealthy individuals paid between two and nearly three times more than the owners of medium and large firms. The difference was even greater for small wealth holders. However, including the indirect effect and assuming that wealthy individuals could avoid paying additional dividend taxes, firm owners paid a higher total wealth tax.

6.6 Real Estate Taxation

Chapter 7 examines real estate taxation and is written by Mikael Stenkula (2015b). The importance of the real estate tax is difficult to analyze because of limited data available in the historical record and the sheer complexity of the system. An imputed income based on property values was added to taxable income at the state and local levels in 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 combined income and real estate taxation, several urban municipalities employed a separate local tax on real estate to finance, for example, street maintenance, cleaning and garbage collection that were necessary in emerging and growing cities. Though small, the tax rate varied over time and across municipalities. However, the importance of real estate taxes for municipalities declined and was collected by fewer municipalities over time.

In 1920, the tax system was reformed, and a complex "guaranteed" tax system providing the municipalities with a stable tax base was introduced. It was argued that it was not possible to introduce a (much simpler) conventional system without any "guaranteed" level because many municipalities would collect 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 revenue 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 system, particularly during downturns and depressions. Estimations reveal that the real estate tax could significantly influence the tax base, but its importance declined substantially after World War II.

During the 1950s, there was considerable debate regarding the construction of the real estate tax, including the radical option of eliminating it completely. In 1953, the construction of the local guaranteed 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 real estate income was combined with a guaranteed system that ensured tax income for local authorities, even when little or no income was associated with a property. Most taxpayers had no income flows associated with their owner-occupied houses.[24] Following the reform, formal rules for an imputed income were introduced on these houses (*villaschablon*). Only interest payments associated with the property and no other costs were deductible from this imputed income. 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 was introduced in 1983 and originated with a state fee on old apartment houses. 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 1 percent of GDP. However, an assessment

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

7. A Summary and Synthesis of the Six Studies

In this overview, we have presented the main results of this volume, including six studies, each addressing a key aspect of the Swedish tax system from 1862 to 2013. The results are based on a comprehensive multi-year research project conducted at the Research Institute of Industrial Economics (IFN) to describe and analyze the development of the Swedish tax system and its components in detail. The data generated from this project and presented in this volume is unique in its consistency, thoroughness, breadth, and time period covered.

The Swedish tax system has experienced several changes since 1862. Currently, Sweden primarily relies on personal income taxes, a general consumption tax (VAT), and social security contributions to generate the bulk of its tax revenue. 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 been either completely eliminated or have minor importance. This general evolution—not only in Sweden—reveals that countries increasingly rely on broad-based taxes (such as income 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 has also changed dramatically. The ratio of 150 years ago amounted to a mere 6 percent. With the exception of World War I, the tax-to-GDP ratio was, at the most, 10 percent until the early 1930s. Since the 1930s, the ratio increased sharply and almost continuously for 50 years. The tax ratio peaked at 51.5 percent in 1987. Since then, the tax-to-GDP ratio has declined, and in 2013, it was below 45 percent. The economic effect of taxation depends on not only the tax level but also the tax structure. Some taxes are more harmful than others.

Overlooking 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 to 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 theses marginal rates set in at moderate annual incomes. The period following World War II also witnessed increased reliance on employer-paid social security contributions. With regard to wealth, inheritance, and gift taxation, rates increased sharply after World War II, and the highest statutory tax rates were

imposed during the 1970s and 1980s. However, valuation relief for unlisted businesses has been imposed since 1971 to mitigate the effect of these taxes. Neither the wealth tax (at least since 1948) nor the taxation of inheritance and gifts were particularly important sources of revenue 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 and general and specific consumption taxes changed considerably. During the 1800s, customs duties were the most important consumption tax, 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 because of the construction of the system and its integration with the income tax system. The separate state tax on real estate implemented in 1983 holds minor importance as a source of revenue.

Labor and capital income taxes have decreased since the 1990–1991 tax reform. The wealth tax and the inheritance and gift taxes were abolished in 2007 and 2004 respectively, whereas 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 had a substantial impact on the effect of taxation. A central explanation for the increasing marginal tax rates facing taxpayers during the postwar period was bracket creep. The METR has also been substantially influenced by the fact that taxation is nominal. With high inflation, the effective tax rate can be well above 100 percent on equity-financed marginal investments. The effect of the income tax system was also more unpredictable during the 1970s and 1980s, because 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 was important. From the interwar period to the 1990–1991 tax reform, the tax-to-GDP ratio increased sharply and stabilized at approximately 50 percent of GDP. Income taxes were an important source of revenue. New taxes such as the VAT and employer-paid social security contributions 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 decline.

A closer examination of specific taxes reveals further important turning points. Concerning the taxation of labor income, the tax reforms in 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 way. In 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 reinforced 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 tax hikes in 1934, 1948, and 1971, but valuation relief for certain assets was also provided in 1971 and strengthened in 1974 and 1978. The evolution of these taxes depended on taxpayer characteristics, for example, whether the wealth or inheritance included business assets or whether the reduction rules for wealth taxation were binding. In general, these tax rates were relatively low before World War II and increased after the war until the 1970s, if valuation relief was applied. 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 emphasize the introduction of the local "guaranteed 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.

8. Implications and Suggestions for Future Research

The results of this research make it possible to analyze the impact of taxation on key economic variables such as firm formation, firm growth, and industry structure, with a very long-term perspective or based on a specific type of tax.[25] A tax system's effect on economic performance depends on not only the aggregate tax level but also the tax structure.[26] Taxation impacts the use of the factors of production and, consequently, affects 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 example, an increased scope for, and lower costs of, taxation? Several studies have analyzed this question, but they focus on total tax revenue or total government spending and, therefore, the combined effect of all taxes.[27] The ability to tax may differ substantially both over time and among types of taxes. No study has analyzed conditions in Sweden during the 1800s.

In their overall evaluation of the US tax system, Slemrod and Bakija (2008, 306) note: "The Devil is in the details." A proper evaluation of the effects of taxes on key economic outcomes requires a systemic approach and, thus, requires detailed data on the various tax rates and tax bases. Although we cannot claim that we have documented every relevant detail, we currently have far more detail than before regarding annual tax rates and the definitions of the relevant tax bases for a uniquely long time period—152 years—in a single country. We hope that this information provides the basis for numerous systematic studies of the effects of

taxation on Swedish economic performance from the eve of industrialization to the present.

Objective analysis is the only way to penetrate the innumerable self-serving arguments advanced in the public debate and arrive at reasonable judgments concerning tax policy. Thus, positive analysis can also provide the knowledge necessary for normative conclusions.

Notes

1. An often-cited example is the window tax introduced in England in 1696, which tended to create dark homes rather than raise significant revenue.
2. Svensson (2013).
3. See, for example, Vermeend, van der Ploeg, and Timmer (2008) and Slemrod and Gillitzer (2014) for reviews.
4. Historical studies are, of course, not completely absent in the literature. Weber and Wildavsky (1986), Steinmo (1993), and Piketty (2014) are examples of studies discussing the long-term evolution of taxation in the West, but they are not as detailed in their presentation and analyses as the studies in this volume. Steinmo (1993) examines the evolution of taxation during the nineteenth and twentieth 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 rates in 19 countries from 1816 to 2000.
5. The share of government spending in Sweden appears to be roughly equal to that of the other countries, for which there is data covering this time period. In these other countries, the spending share also fluctuated very little in the latter part of the 1870s (Henrekson 1992).
6. See, for example, Feldstein (2008), Vermeend, van der Ploeg, and Timmer (2008), and Slemrod and Gillitzer (2014). Even the time of death may be affected (Eliason and Ohlsson 2013).
7. Slemrod and Gillitzer (2014, 10).
8. This example draws on Henrekson, Johansson, and Stenkula (2010).
9. The results are based on the new updated GDP data presented in Edvinsson, Jacobson, and Waldenström (2014).
10. The 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, creating a stepwise increasing function of tax rates and government expenditures with plateaus and peaks. See Henrekson (1993) or Durevall and Henrekson (2011) for a further discussion.
11. The tax ratio was at approximately the same level in 1990 and 2000.
12. The most common approach—also used by the OECD—is to treat social security contributions as taxes because they supplement other taxes in financing social security expenditures (see Vermeend, van der Ploeg, and Timmer 2008, 63, for a further discussion).
13. See, for example, the discussion in Ward (1982), Alt (1983), and Aidt and Jensen (2009).
14. This policy has been called the "Haga policy" after the negotiations conducted at the Haga Mansion among the government, opposition parties, and labor market organizations.

15. The *grundskatter* ("basic tax") was primarily a fixed, lump-sum state tax that was often paid in kind. The *grundskatter* 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. Earlier, certain transactions had to be written on specific documents or "stamps" had to be attached to legal documents to be valid. Currently (in 2014), the stamp duty is generally payable when one purchases real estate or acquires a mortgage.
16. See, for example, OECD (2011). The marginal tax rate is the sum of the state and local marginal income tax rates, considering that the local income taxes were deductible from the state income tax base between 1920 and 1970. It also includes employee-paid social security contributions. Employee-paid social security contributions (SSCs) were introduced on a small scale in 1913 and have never been important in Sweden.
17. This tax rate can be compared with the peak level in the United States, where the top marginal tax rate was 91 percent in 1954 until it was reduced to 70 percent by the 1964 Revenue Act (Vermeend, van der Ploeg, and Timmer 2008, 13).
18. As mentioned earlier, employee-paid social security contributions were introduced on a small scale in 1913 and have never been important in Sweden.
19. From 1984 to 1990, a specific "profit sharing tax" on corporations was levied to finance 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 5 percentage points (Davis and Henrekson 1997; Agell, Englund, and Södersten 1998). The funds eventually introduced were a considerably diluted version of the original proposal, which can be considered an instrument to realize the vision of leading Social Democrats to convert large corporations to "social enterprises without owners" (Lindbeck 1997; Henrekson and Jakobsson 2001, 352–354).
20. Various types of duties and fees on estates, inheritances, and wills existed earlier but only for small and specific parts of the tax base and population strata.
21. 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 a few exceptions, fluctuated from six to nine kronor to the dollar.
22. Various, often temporary, types of wealth taxes had occasionally existed earlier.
23. For a discussion on why the wealth tax was abolished and why the inheritance tax was abolished before the wealth tax, see Henrekson and Du Rietz (2014).
24. 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.
25. See, for example, Cashin (1995), Agell, Lindh, and Ohlsson (1997), Kneller, Bleaney, and Gemmell (1999), Fölster and Henrekson (2001), and Bergh and Karlsson (2010), who analyze the effect of the tax-to-GDP ratio on economic performance using cross-country data or panel data generally covering approximately 25 years. Romer and Romer (2010) analyze the postwar period in the United States, 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.
26. Widmalm (2001) and Lee and Gordon (2005) are examples of studies analyzing the effect of the tax structure using panel data covering approximately 30 years. Romero-Avila and Strauch (2008) analyze data representing a smaller group of countries (EU15) dating from 1960. Romero-Avila and Strauch find direct taxes have negative and significant effects on growth whereas indirect taxes and social security contributions have no significant effects. Afonso and Furceri (2010) analyze how several revenue and expenditure sources, measured as a percentage of GDP, directly relate to growth in 28 OECD

countries from 1970 to 2004. Afonso and Furceri find that indirect taxes and social security contributions as a percentage of GDP have a sizeable, negative and statistically significant effect on growth.

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

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Chapter 2

Swedish Labor Income Taxation (1862–2013)

Gunnar Du Rietz, Dan Johansson, and Mikael Stenkula

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 chapter 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 is 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 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 has 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 example, country-specific analyses covering marginal tax rates have been performed for the United States (Barro and Sahasakul 1986; Poterba 2004; Saez 2004), the United Kingdom (Orhnial 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 chapter 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–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 the Organisation for Economic Co-operation and Development (OECD 2011) and calculate the *marginal* tax wedge, t_w, as follows:

$$t_w = 1 - \frac{(1-t_1)(1-t_2)}{(1+t_3)} \tag{2.1}$$

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 is 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:

$$t_w = 1 - \frac{(1-t_1)(1-t_2)(1-t_4)}{(1+t_3)} \tag{2.2}$$

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 sector D in the International Standard Industrial Classification of all Economic Activities, Revision 3 (ISIC Rev. 3). In 1979, the series on wage data was complemented by 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%, 100%, and 167% 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). This data does 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 chapter), 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 wage data does 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 were 15 APWs, the marginal tax wedge in 1938 would remain less than 5 percentage points greater.[13]

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, 7 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 4 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 the most, it is approximately 1 percentage point for the high-income earner with two children).

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 nonstandard 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 nonstandard 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 5 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 1 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 1 percentage point.[15]

2.7 General Tax Structure

Generally speaking, the tax system's structure was such that considering other nonlabor income, nonstandard 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.

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 2.1 summarizes the taxes that affect the marginal tax wedge on labor income.

Figure 2.1 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.

3.1 Central Government Taxation, the State Income Tax[16]

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 redistributional 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.

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 2.2 shows the state marginal income tax rates paid by our three categories of income earners.

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

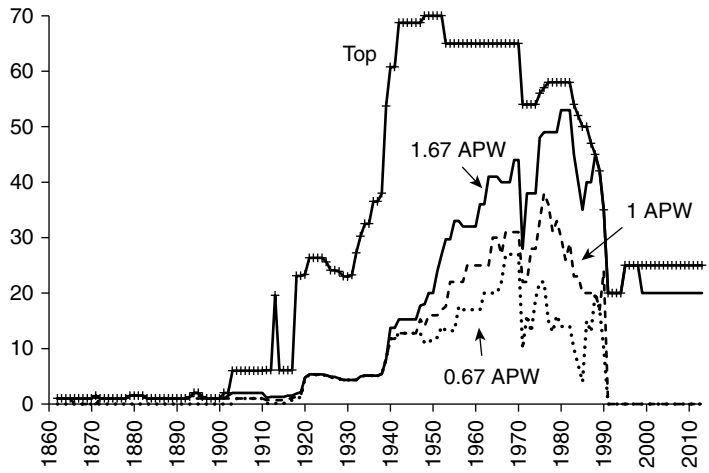

Figure 2.2 State marginal income tax rates, 1862–2013 (%).

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.

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 1 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 2 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 1 to 5 percent. Taxpayers had to begin paying the lowest tax rate, 1 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 the most, 4 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 6 percent, with an average tax cap of 5 percent of taxable income. One-sixtieth of the 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]

As a result of World War I, temporary progressive defense taxes (*värnskatter*) were introduced for necessary military expenditures. The tax rates could be relatively high (up to 17% 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 (*utjämningsskatt*). 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%, at the most).

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 4 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/*bottenskatt*), determined by Parliament on an annual basis, and one fixed tax rate (the surtax/*tilläggsskatt*). 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 (*värnskatt*), 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]

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 it could also be 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 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 5–15 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 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 thus 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.

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 2 to 5 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 7 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 8 percent, but it had an average tax cap of 6 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 8 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 5 percent and an average tax cap of 4.5 percent. In 1930, the ordinary local tax rate had increased to approximately 10 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 2 percentage points since 1980.

Along with the local top marginal income tax rate, Figure 2.3 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.

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 2.4 depicts this evolution. In 1913, employees began paying the first SSC, the national basic pension contribution (*folkpensionsavgift*). Until 1935, the contribution was

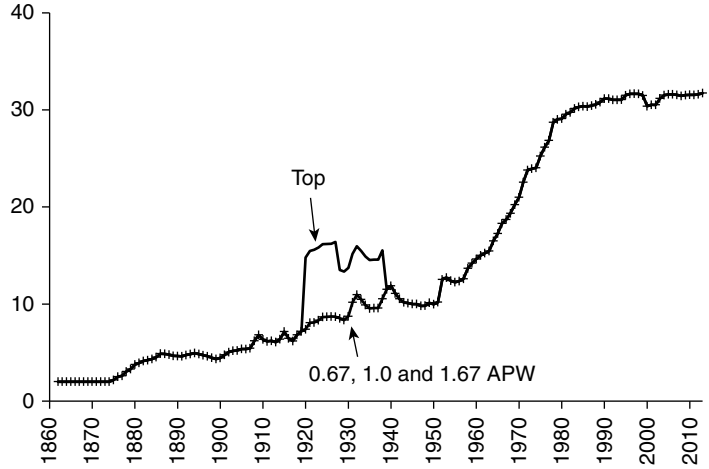

Figure 2.3 Local marginal income tax rates, 1862–2013 (%).

Note: Statistics on local taxes are incomplete before 1875. We impute a tax rate of 2 percent between 1862 and 1874.

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

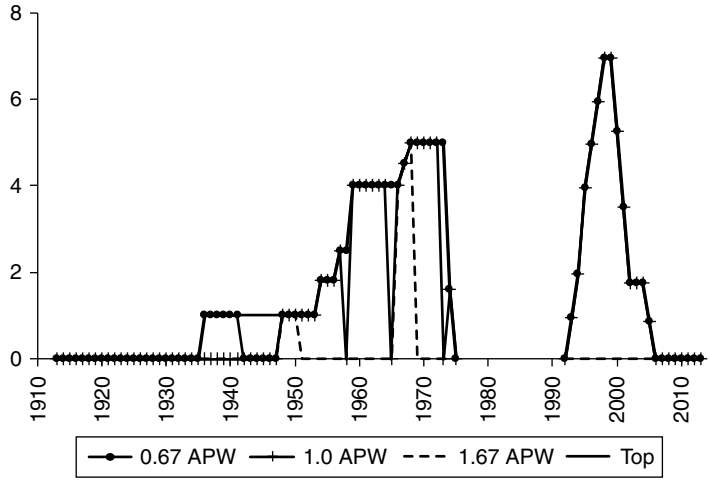

Figure 2.4 Marginal employee-paid SSCs, 1913–2013 (%).

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 the most, 1 percent.

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

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 1 percent of taxable income (up to a cap). The rate increased slowly to 5 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 7 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 2.5. 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 a maximum of 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.

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-

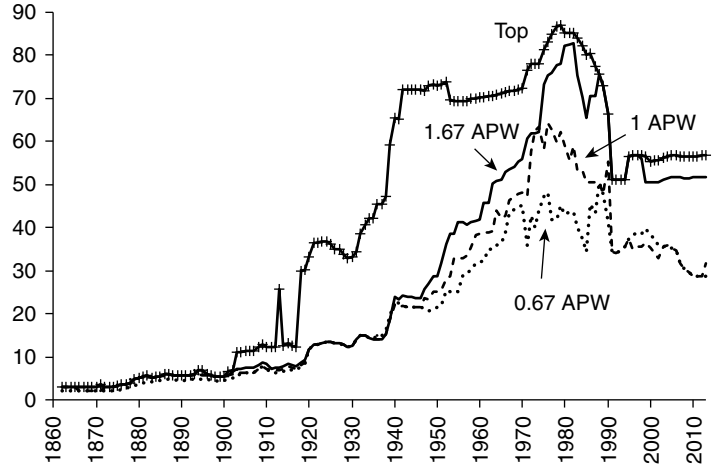

Figure 2.5 Marginal tax rates, 1862–2013 (%).

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.

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 3 percent, and the work injury insurance contribution (*arbetsskadeavgift*), 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 1 percent, which increased to 4 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, *efterlevande-pensionsavgift*).

Figure 2.6 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

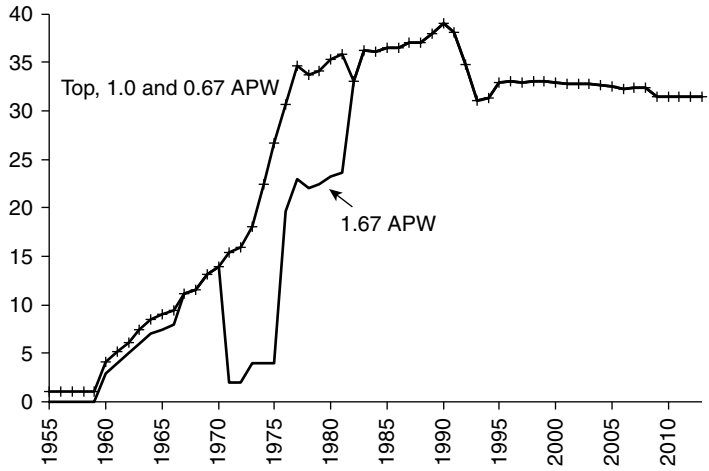

Figure 2.6 Marginal employer-paid SSCs, 1955–2013 (%).

Note: Top refers to the highest possible marginal SSCs rate.

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

SSCs on marginal income increases. Due to the removal of income caps, marginal SSCs increased sharply in 1976 and 1982.

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 2.7 depicts the marginal tax wedge for our three categories and the top marginal tax wedge between 1862 and 2013 (excluding consumption taxes). Figures 2.8a, 2.8b, and 2.8c depict the top marginal tax wedge and the income level at which the top marginal tax wedge begins to be applied. Figure 2.9 depicts the marginal tax wedge, including consumption taxes.

4.1 The Marginal Tax Wedge for the Low-, Average-, and High-Income Earner

Figure 2.7 shows that the marginal tax wedges for the examined income categories were all approximately 3 percent in 1862. At the turn of the twentieth century, these wedges had increased to approximately 5 percent. The main explanation was higher local taxes. Nonetheless, the marginal tax wedges were low compared with future levels.

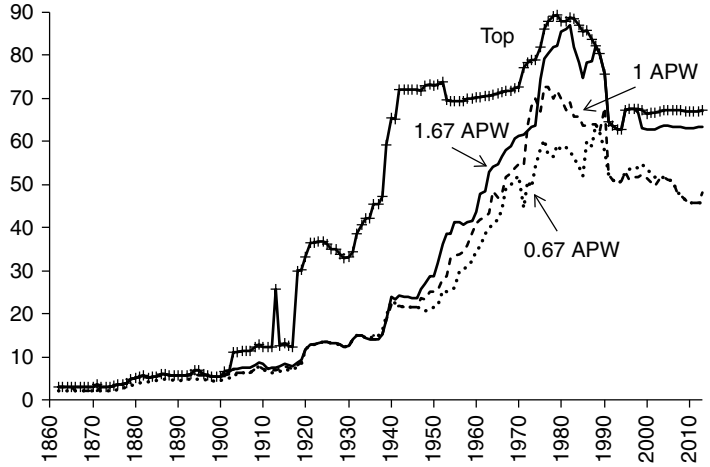

Figure 2.7 Marginal tax wedges on labor income, 1862–2013 (%).

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.

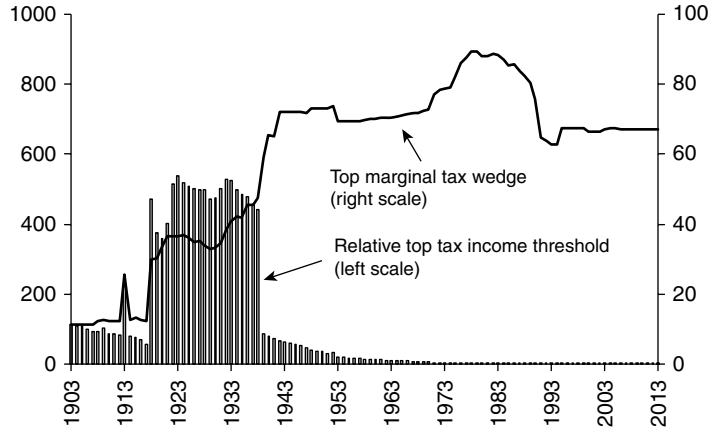

Figure 2.8a The top marginal tax wedge and the relative top tax income threshold, 1903–2013.

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.

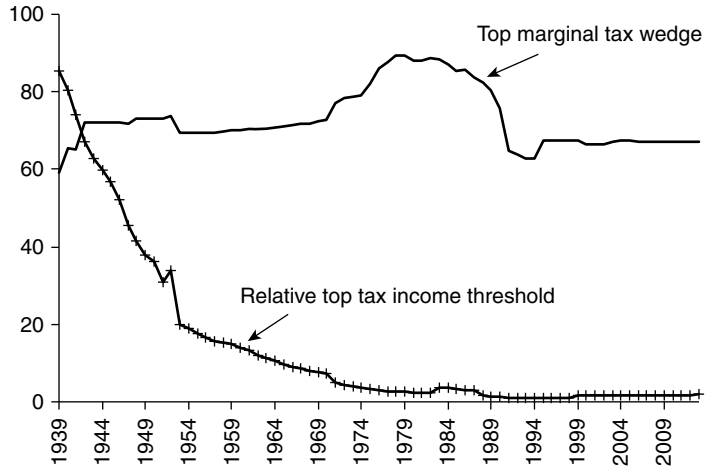

Figure 2.8b The top marginal tax wedge and the relative top tax income threshold, 1939–2013.

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.

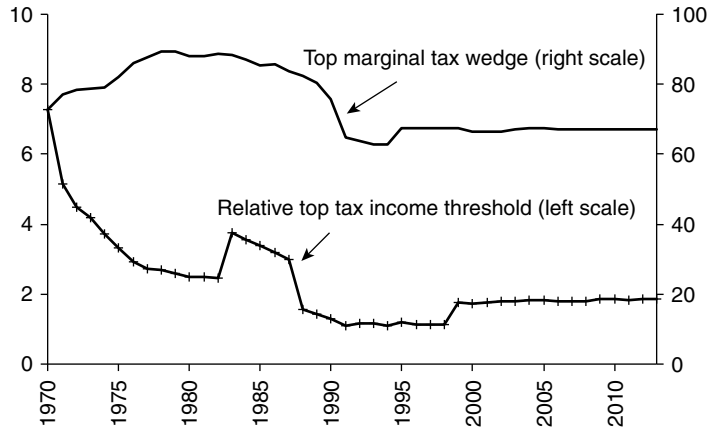

Figure 2.8c The top marginal tax wedge and the relative top tax income threshold, 1970–2013.

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.

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 above 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 2.7 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 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 10 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 2.8a–2.8c.

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 10 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 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

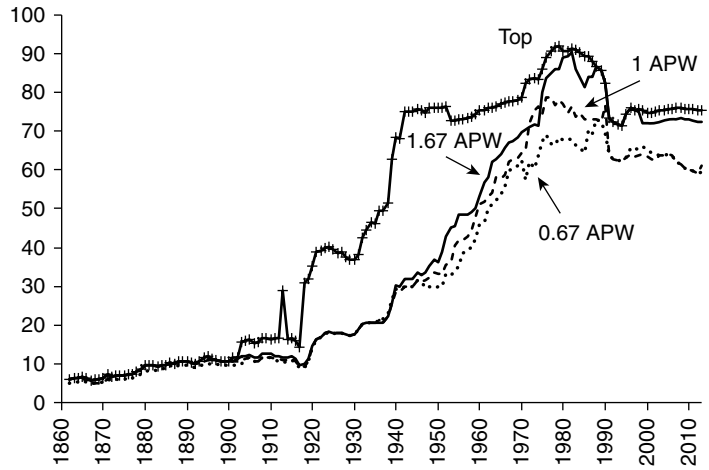

Figure 2.9 Marginal tax wedges on labor income, including consumption taxes, 1862–2013 (%).

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.

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 the 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.

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 5–10 percentage points until the beginning of the 1990s and between 10 and 15 percentage points by the end of the period (see Figure 2.9). 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]

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 further substantial increases to the top marginal tax wedge until the tax reform was 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 chapter, 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. The data and analyses are unique; no one has thus far calculated these values 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 (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.

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 onward was 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 2 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 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 the 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]

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's 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 would be skewed, and would 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 (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).

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 7 percentage

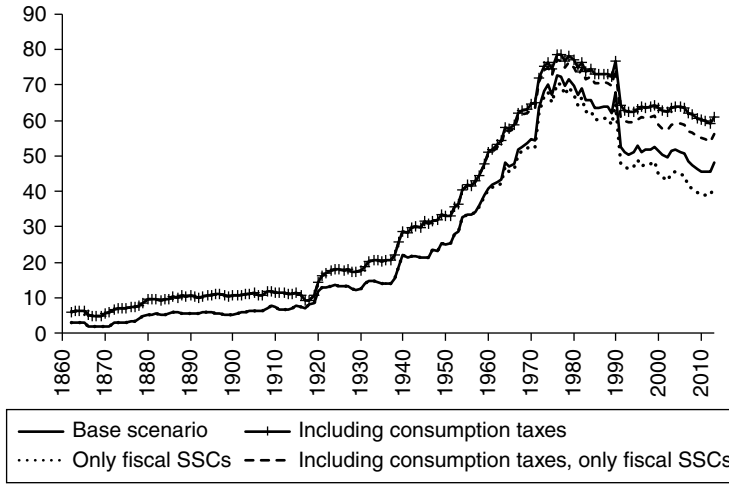

Figure 2.10 Marginal tax wedge, given different assumptions, for the average-income earner, 1862–2013 (%).

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

points at most at the end of the period examined, for the average-income earner (see Figure 2.10). 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 the most, about 10 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.

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.

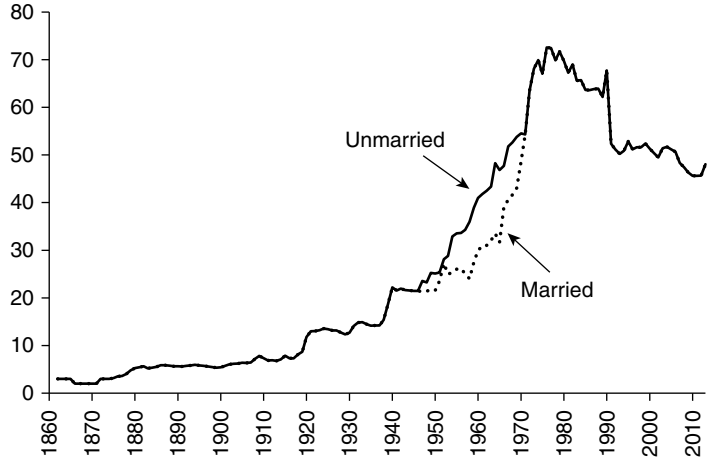

Figure 2.11 Marginal tax wedge for married and unmarried average-income earners, 1862–2013 (%).

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.

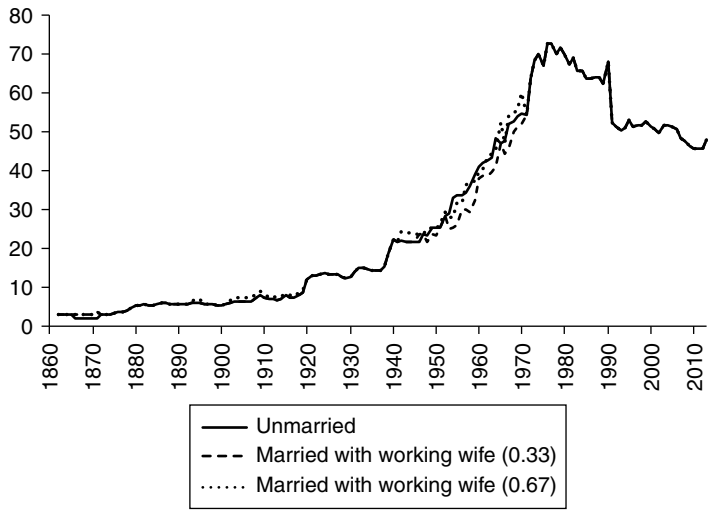

Figure 2.12 Marginal tax wedge for married with working spouse and unmarried average-income earners, 1862–2013 (%).

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.

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 2.11, 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]

The calculation in Figure 2.11 refers to a household with one income earner. In Figure 2.12, 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.

In Figure 2.13, 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]

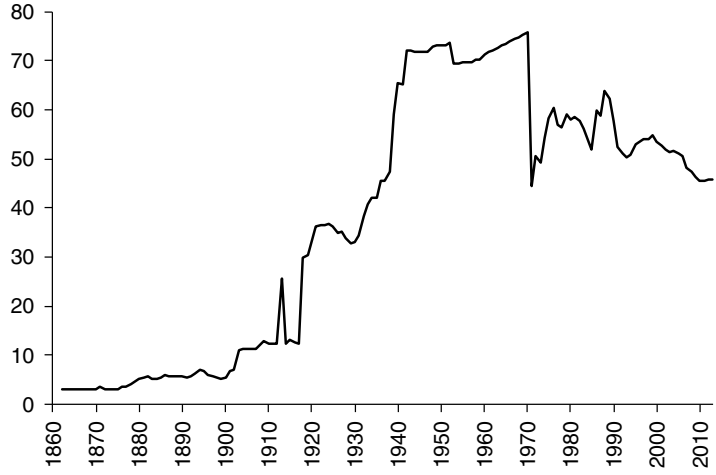

Figure 2.13 Marginal tax wedge, second income earner married to top income earner, 1862–2013 (%).

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 2.1 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

continued

Table 2.1 Continued

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 %
1902	482	5.0	5.0	720	6.0	6.0	1,202	6.5	6.5
1903	496	5.2	5.2	740	6.2	6.2	1,236	7.2	7.2
1904	511	6.2	6.2	762	6.2	6.2	1,273	7.2	7.2
1905	518	6.4	6.4	773	6.4	6.4	1,291	7.4	7.4
1906	566	6.4	6.4	844	6.4	6.4	1,410	7.4	7.4
1907	604	6.4	6.4	901	6.4	6.4	1,505	7.4	7.4
1908	605	7.2	7.2	902	7.2	7.2	1,507	8.2	8.2
1909	565	7.8	7.8	843	7.8	7.8	1,408	8.8	8.8
1910	653	7.3	7.3	975	7.3	7.3	1,628	8.3	8.3
1911	661	6.2	6.2	986	6.8	6.8	1,647	7.2	7.2
1912	692	6.3	6.3	1,033	6.9	6.9	1,726	7.5	7.5
1913	711	6.2	6.2	1,062	6.8	6.8	1,773	7.4	7.4
1914	717	6.5	6.5	1,071	7.1	7.1	1,788	7.7	7.7
1915	741	7.3	7.3	1,105	7.9	7.9	1,846	8.5	8.5
1916	837	7.0	7.0	1,249	7.4	7.4	2,086	8.0	8.0
1917	1,006	6.9	6.9	1,502	7.3	7.3	2,508	7.7	7.7
1918	1,376	7.7	7.7	2,054	8.1	8.1	3,429	8.7	8.7
1919	1,724	8.5	8.5	2,574	8.7	8.7	4,298	9.3	9.3
1920	2,015	11.7	11.7	3,008	11.8	11.8	5,023	11.8	11.8
1921	1,816	12.9	12.9	2,711	13.0	13.0	4,527	13.0	13.0

1922	1,419	12.9	12.9	2,118	13.0	13.0	3,537	13.0	13.0
1923	1,364	13.1	13.1	2,035	13.2	13.2	3,399	13.2	13.2
1924	1,417	13.5	13.5	2,114	13.5	13.5	3,531	13.5	13.5
1925	1,449	13.3	13.3	2,162	13.4	13.4	3,611	13.4	13.4
1926	1,466	13.1	13.1	2,189	13.2	13.2	3,655	13.2	13.2
1927	1,475	13.1	13.1	2,202	13.2	13.2	3,678	13.2	13.2
1928	1,477	12.6	12.6	2,205	12.7	12.7	3,682	12.7	12.7
1929	1,549	12.3	12.3	2,312	12.3	12.3	3,860	12.3	12.3
1930	1,553	12.7	12.7	2,317	12.7	12.7	3,870	12.7	12.7
1931	1,491	14.1	14.1	2,225	14.1	14.1	3,715	14.1	14.1
1932	1,426	14.8	14.8	2,128	14.8	14.8	3,554	14.8	14.8
1933	1,430	14.9	14.9	2,134	14.9	14.9	3,564	14.9	14.9
1934	1,492	14.5	14.5	2,227	14.5	14.5	3,720	14.5	14.5
1935	1,533	14.2	14.2	2,288	14.2	14.2	3,821	14.2	14.2
1936	1,555	15.0	15.0	2,320	14.2	14.2	3,875	14.2	14.2
1937	1,628	15.0	15.0	2,430	14.2	14.2	4,058	14.2	14.2
1938	1,697	16.2	16.2	2,533	15.4	15.4	4,230	15.4	15.4
1939	1,775	19.5	19.5	2,649	18.7	18.7	4,424	18.7	18.7
1940	1,893	23.0	23.0	2,825	22.2	22.2	4,717	24.0	24.0
1941	2,035	22.3	22.3	3,037	21.5	21.5	5,072	23.3	23.3
1942	2,236	21.9	21.9	3,337	21.9	21.9	5,573	24.2	24.2
1943	2,381	21.6	21.6	3,554	21.6	21.6	5,935	23.9	23.9
1944	2,490	21.6	21.6	3,717	21.6	21.6	6,207	23.8	23.8

continued

Table 2.1 Continued

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 %
1945	2,622	21.5	21.5	3,913	21.5	21.5	6,535	23.7	23.7
1946	2,865	21.5	21.5	4,277	21.5	21.5	7,142	23.7	23.7
1947	3,255	21.3	21.3	4,859	23.6	23.6	8,114	25.8	25.8
1948	3,572	20.6	20.6	5,331	23.2	23.2	8,903	26.8	26.8
1949	3,930	20.8	20.8	5,865	25.3	25.3	9,795	28.8	28.8
1950	4,104	21.6	21.6	6,125	25.1	25.1	10,229	28.7	28.7
1951	4,848	21.8	21.8	7,235	25.3	25.3	12,083	31.7	31.7
1952	5,671	25.5	25.5	8,464	28.1	28.1	14,135	36.1	36.1
1953	5,818	25.0	25.0	8,684	28.8	28.8	14,502	38.6	38.6
1954	6,169	25.3	25.3	9,208	32.9	32.9	15,377	38.4	38.4
1955	6,542	25.2	26.0	9,765	32.8	33.5	16,307	41.2	41.2
1956	6,917	29.1	29.9	10,323	32.9	33.6	17,240	41.3	41.3
1957	7,374	29.3	30.1	11,007	33.5	34.3	18,381	40.6	40.6
1958	7,783	30.1	30.9	11,616	35.3	36.0	19,399	41.3	41.3
1959	8,007	31.6	32.4	11,951	38.2	38.9	19,958	41.7	41.7
1960	8,433	32.0	34.7	12,587	38.5	41.0	21,020	41.9	43.6
1961	9,092	32.3	35.6	13,570	38.8	41.8	22,662	45.6	47.7
1962	9,994	34.9	38.7	14,916	39.0	42.5	24,911	45.8	48.3
1963	10,791	35.1	39.6	16,107	39.1	43.4	26,898	50.1	52.9
1964	11,576	35.9	40.9	17,277	43.9	48.3	28,853	50.7	54.0

1965	12,569	36.4	41.7	18,760	42.1	46.9	31,330	51.2	54.6
1966	13,703	38.8	44.1	20,453	42.7	47.7	34,156	52.9	56.4
1967	14,711	43.3	49.0	21,956	46.4	51.8	36,667	53.4	58.1
1968	15,620	44.1	49.9	23,313	47.1	52.6	38,933	54.0	58.8
1969	16,341	44.7	51.1	24,390	47.7	53.8	40,732	55.3	60.5
1970	17,793	45.2	51.9	26,557	48.2	54.5	44,350	55.8	61.2
1971	19,500	35.9	44.5	29,104	47.3	54.3	48,604	60.6	61.4
1972	22,399	42.8	50.7	33,432	57.7	63.5	55,831	61.8	62.5
1973	24,072	40.1	49.3	35,929	62.3	68.1	60,001	61.9	63.4
1974	26,970	43.9	54.2	40,254	63.2	69.9	67,224	62.0	63.5
1975	31,222	47.2	58.4	46,600	58.2	67.0	77,822	73.2	74.3
1976	35,443	48.2	60.3	52,900	64.2	72.6	88,343	75.2	79.2
1977	37,855	41.9	56.8	56,500	62.9	72.4	94,355	75.9	80.4
1978	38,525	41.7	56.4	57,500	59.7	69.9	96,025	77.7	81.7
1979	42,849	45.0	59.0	63,954	62.0	71.7	1,06,803	78.0	82.0
1980	46,900	43.1	57.9	70,000	59.1	69.8	1,1,6900	82.1	85.5
1981	51,381	43.6	58.4	76,688	55.6	67.3	1,2,8069	82.6	85.9
1982	56,682	43.7	57.7	84,600	58.7	69.0	1,4,1282	82.7	87.0
1983	58,691	40.2	56.1	87,598	53.2	65.6	1,4,6289	75.2	81.8
1984	64,457	37.3	53.9	96,205	53.3	65.7	1,6,0662	70.3	78.2
1985	69,588	34.4	51.9	10,3862	50.4	63.6	1,7,3450	65.4	74.6
1986	74,003	45.3	59.9	11,0452	50.3	63.6	1,8,4455	70.3	78.3
1987	79,098	43.4	58.7	11,8057	50.4	63.8	1,9,7155	70.4	78.4

continued

Table 2.1 Continued

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 %
1988	85,199	50.6	63.9	1,27,162	50.6	63.9	2,12,361	75.6	82.2
1989	94,095	47.8	62.2	1,40,440	47.8	62.2	2,34,535	72.8	80.3
1990	1,03,622	41.2	57.7	1,54,660	55.2	67.7	2,58,282	66.2	75.6
1991	1,08,808	34.3	52.4	1,62,400	34.3	52.4	2,71,208	51.2	64.6
1992	1,14,570	34.1	51.2	1,71,000	34.1	51.2	2,85,570	51.0	63.7
1993	1,16,513	34.8	50.2	1,73,900	34.8	50.2	2,90,413	51.0	62.6
1994	1,22,677	35.5	50.9	1,83,100	35.5	50.9	3,05,777	51.1	62.7
1995	1,24,378	37.4	52.8	1,85,639	37.4	52.8	3,1,0017	56.5	67.3
1996	1,37,158	38.2	53.6	2,04,714	35.0	51.2	3,41,872	56.7	67.4
1997	1,40,173	38.9	54.0	2,09,214	35.7	51.6	3,49,387	56.7	67.4
1998	1,44,378	38.6	53.9	2,15,490	35.6	51.6	3,59,868	55.8	66.7
1999	1,47,831	39.7	54.7	2,20,644	36.6	52.4	3,68,475	50.6	62.9

2000	1,54,247	38.3	53.6	2,30,220	35.2	51.3	3,84,467	50.4	62.7
2001	1,54,860	37.2	52.7	2,31,134	34.2	50.4	3,85,994	50.5	62.8
2002	1,61,983	36.0	51.8	2,41,766	32.9	49.5	4,03,749	50.5	62.7
2003	1,66,098	35.5	51.4	2,47,908	35.5	51.4	4,14,006	51.2	63.2
2004	1,68,359	35.9	51.7	2,51,282	35.9	51.7	4,19,641	51.5	63.5
2005	1,69,845	35.4	51.2	2,53,500	35.4	51.2	4,23,345	51.6	63.5
2006	1,74,803	34.8	50.7	2,60,900	34.8	50.7	4,35,703	51.6	63.4
2007	1,81,905	31.6	48.3	2,71,500	31.6	48.3	4,53,405	51.6	63.4
2008	1,88,538	30.4	47.4	2,81,400	30.4	47.4	4,69,938	51.4	63.3
2009	1,93,563	29.5	46.3	2,88,900	29.5	46.3	4,82,463	51.5	63.1
2010	1,97,583	28.6	45.6	2,94,900	28.6	45.6	4,92,483	51.6	63.1
2011	2,05,489	28.6	45.6	3,06,700	28.6	45.6	5,12,189	51.6	63.1
2012	2,12,792	28.6	45.7	3,17,600	28.6	45.7	5,30,392	51.6	63.2
2013	2,16,142	28.7	45.8	3,22,600	31.7	48.1	5,38,742	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 2.2 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

continued

Table 2.2 Continued

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 %
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
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

continued

Table 2.2 Continued

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 %
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
1956	173.3	17	65	57.0	69.3	69.3

continued

Table 2.2 Continued

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 %
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

continued

Table 2.2 Continued

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 %
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
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 2.3 The local tax rate and the consumption tax rate, 1862–2013

Year	Local tax %	Consumption tax %
1862	2.0	3.1
1863	2.0	3.3
1864	2.0	3.5
1865	2.0	3.7
1866	2.0	3.5
1867	2.0	2.9
1868	2.0	3.1
1869	2.0	3.1
1870	2.0	3.6
1871	2.0	4.1
1872	2.0	3.9
1873	2.0	4.1
1874	2.0	4.2
1875	2.18	4.0
1876	2.51	4.1
1877	2.60	3.9
1878	3.05	4.0
1879	3.29	4.1
1880	3.76	4.5
1881	3.93	4.5
1882	4.13	4.4
1883	4.21	4.3
1884	4.33	4.5
1885	4.52	4.5
1886	4.88	4.9
1887	4.86	4.3
1888	4.78	5.3
1889	4.66	5.2
1890	4.64	5.3
1891	4.60	5.0
1892	4.74	4.6
1893	4.84	4.9
1894	4.94	5.1

continued

Table 2.3 Continued

Year	Local tax %	Consumption tax %
1895	4.84	5.4
1896	4.73	5.6
1897	4.62	5.7
1898	4.47	5.5
1899	4.33	5.5
1900	4.44	5.5
1901	4.76	5.3
1902	5.05	5.0
1903	5.17	5.1
1904	5.21	5.3
1905	5.37	5.5
1906	5.36	4.6
1907	5.44	4.7
1908	6.20	4.9
1909	6.81	4.3
1910	6.34	4.7
1911	6.15	4.9
1912	6.21	4.8
1913	6.07	4.6
1914	6.38	4.3
1915	7.15	3.9
1916	6.46	3.7
1917	6.19	2.1
1918	6.83	1.4
1919	7.18	2.2
1920	7.39	2.8
1921	8.52	3.7
1922	8.57	4.5
1923	8.79	5.3
1924	9.13	5.5
1925	9.15	5.2
1926	9.18	5.4
1927	9.17	5.6
1928	9.02	5.5
1929	8.84	5.7

continued

Table 2.3 Continued

Year	Local tax %	Consumption tax %
1930	9.23	5.6
1931	10.67	5.7
1932	11.46	6.4
1933	10.97	6.6
1934	10.39	7.1
1935	10.04	7.3
1936	10.08	7.4
1937	10.08	7.5
1938	10.53	8.0
1939	11.51	8.6
1940	11.87	8.1
1941	11.09	8.8
1942	10.53	10.3
1943	10.17	10.7
1944	10.09	10.6
1945	10.00	13.0
1946	10.00	12.2
1947	9.80	10.6
1948	9.83	11.6
1949	10.12	11.2
1950	9.97	10.6
1951	10.19	10.6
1952	12.53	10.3
1953	12.72	10.6
1954	12.39	11.4
1955	12.24	12.4
1956	12.36	12.2
1957	12.60	13.0
1958	13.68	13.3
1959	14.20	14.6
1960	14.63	17.0
1961	15.00	17.1
1962	15.24	18.6
1963	15.46	19.1
1964	16.50	19.0

continued

Table 2.3 Continued

Year	Local tax %	Consumption tax %
1965	17.25	20.5
1966	18.29	20.9
1967	18.71	21.1
1968	19.34	21.1
1969	20.24	20.2
1970	21.00	21.7
1971	22.54	23.4
1972	23.79	22.9
1973	23.94	22.2
1974	24.03	21.1
1975	25.23	22.0
1976	26.15	21.8
1977	26.85	22.7
1978	28.71	22.7
1979	29.02	22.5
1980	29.09	23.6
1981	29.55	23.0
1982	29.74	23.7
1983	30.15	23.7
1984	30.30	25.8
1985	30.38	25.6
1986	30.34	25.6
1987	30.44	25.7
1988	30.56	25.4
1989	30.80	26.6
1990	31.16	27.6
1991	31.15	24.6
1992	31.04	24.0
1993	31.04	24.5
1994	31.05	23.5
1995	31.50	21.7
1996	31.65	26.0
1997	31.66	24.4

continued

Table 2.3 Continued

Year	Local tax %	Consumption tax %
1998	31.65	25.1
2000	30.38	24.9
2001	30.53	24.6
2002	30.52	25.2
2003	31.17	25.0
2004	31.51	25.0
2005	31.60	26.1
2006	31.60	26.1
2007	31.55	26.4
2008	31.44	26.8
2009	31.52	26.4
2010	31.56	26.5
2011	31.55	25.9
2012	31.60	24.9
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 2.4 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 2.4–2.24 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 2.5 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 2.6 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 2.7 The state marginal income tax rate, 1903–1919

State taxable income	Marginal tax rate, %	State taxable income	Marginal tax rate, %
	1903–1910		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

continued

Table 2.7 Continued

State taxable income	Marginal tax rate, % 1903–1910	State taxable income	Marginal tax rate, % 1911–1919
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 2.8 The state marginal income tax rate, 1920–1947

State taxable income	1920–1938	State taxable income	1939–1947		Withdrawal percentage			
	Base amount %		Bottom tax %	Surtax %				
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

continued

Table 2.8 Continued

State taxable income	1920–1938	State taxable income	1939–1947		Withdrawal percentage			
	Base amount %		Bottom tax %	Surtax %				
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, 1 percent of the taxpayer's wealth was 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 2.9 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

continued

Table 2.9 Continued

State taxable income	Marginal tax rate, % 1948–1951	State taxable income	Marginal tax rate, % 1952	State taxable income	Marginal tax rate, % 1953–1956
20,000	40	35	35	100,000	60.5
30,000	45	36	36	150,000	65.0
40,000	50	39	39		
60,000	55	45	45		
100,000	60	49	49		
200,000	70	50	50		
		54	54		
		55	55		
		59	59		
		60	60		
		69	69		
		70	70		

Source: Söderberg (1996, 82–85).

Table 2.10 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 2.11 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 2.12 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 2.13 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 a maximum of 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 2.14 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

continued

Table 2.14 Continued

State taxable income	Marginal tax rate, % 1982	State taxable income	Marginal tax rate, % 1983	State taxable income	Marginal tax rate, % 1984
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 a maximum of 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 2.15 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 a maximum of 80 percent of taxable income.

Source: Söderberg (1996, 100–101).

Table 2.16 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 2.17 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) and Skatteverket (2009, 71, Table 4.20).

Table 2.18 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
		2008	328,800	495,000

continued

Table 2.18 Continued

State taxable income	Marginal tax rate, % 1999–2013	Year	Lower tax limit	Upper tax limit
		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 2.19 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 2.20 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 2.21 Defense taxes during World War II, 1939–1947

Taxable income	Marginal tax rate, % 1939	Taxable income	Marginal tax rate, % 1940–1941	Taxable income	Marginal tax rate, % 1942–1947
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 1 percent of wealth.

Source: Genberg (1942, 24–25).

Table 2.22 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 2.23 The state equalization tax (*den statliga utjämningsskatten*), 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) and Söderberg (1996, 77).

Table 2.24 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 2.25 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

continued

Table 2.25 Continued

Year	Local allowance	State allowance
1935	420	840
1936	420	840
1937	420	840
1938	420	See Table 2.26
1939	420	See Table 2.26
1940	420	See Table 2.26
1941	420	See Table 2.26
1942	420	See Table 2.26
1943	420	See Table 2.26
1944	420	See Table 2.26
1945	420	See Table 2.26
1946	420	See Table 2.26
1947	420	See Table 2.26
1948	420	See Table 2.27
1949	420	See Table 2.27
1950	420	See Table 2.27
1951	420	See Table 2.27
1952	1,290	See Table 2.27
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
1966	2,250	2,250
1967	2,250	2,250
1968	2,250	2,250
1969	2,250	2,250

continued

Table 2.25 Continued

Year	Local allowance	State allowance
1970	2,250	2,250
1971	See Table 2.28	See Table 2.28
1972	See Table 2.28	See Table 2.28
1973	See Table 2.28	See Table 2.28
1974	See Table 2.28	See Table 2.28
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 2.25–2.27, 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 to 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 2.26 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 2.27 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

continued

Table 2.27 Continued

State assessed income	Allowance	State assessed income	Allowance	State assessed income	Allowance	State assessed income	Allowance
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

continued

Table 2.27 Continued

State assessed income	Allowance	State assessed income	Allowance	State assessed income	Allowance	State assessed income	Allowance
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 2.28 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 2.29 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 2.30 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 · (T – 63,984)	65,900	8,800 + 0.25 · (T – 65,472)
99,200	19,800	101,500	17,800
105,300	19,866 – 0.1 · (T – 104,576)	107,700	17,864 – 0.1 · (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 2.31 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 · (T – 66,402)	67,400	8,688 + 0.25 · (T – 67,332)
103,200	18,100	104,600	18,000
108,800	18,118 – 0.1 · (T – 108,528)	110,200	18,009 – 0.1 · (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 2.32 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 · (T – 67,518)	68,000	8,800 + 0.25 · (T – 68,000)
104,700	18,000	105,200	18,100
111,000	18,059 – 0.1 · (T – 110,352)	110,800	18,000 – 0.1 · (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) and Skatteverket (1998, 41).

Table 2.33 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 · (T – 68,000)	68,200	8,800 + 0.25 · (T – 68,200)
105,200	18,100	105,800	18,200
110,800	18,000 – 0.1 · (T – 110,800)	111,400	18,100 – 0.1 · (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) and Skatteverket (2000, 51).

Table 2.34 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 · (T – 68,800)	70,900	11,300 + 0.25 · (T – 70,900)
106,400	19,500	109,300	20,900
112,900	19,400 – 0.1 · (T – 112,900)	115,900	20,800 – 0.1 · (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) and Skatteverket (2002, 51).

Table 2.35 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 · (T – 53,600)	58,557	16,700 + 0.2 · (T – 58,557)
105,00	25,900	106,896	26,400
119,700	25,900 – 0.1 · (T – 119,700)	121,830	26,400 – 0.1 · (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) and Skatteverket (2003, 67).

Table 2.36 Basic local and state income tax allowances, 2005

Assessed income	Allowance 2005
0	0.423 PBB
1.185 PBB	0.423 + 0.20 · (*T* – 1.185 PBB)
2.72 PBB	0.73 PBB
3.11 PBB	0.73 PBB – 0.10 · (*T* – 3.11 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 2.37 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 PBB + 0.20 · (*T* – 0.99 PBB)	2007	40,300
2.72 PBB	0.77 PBB	2008	41,000
3.11 PBB	0.77 PBB – 0.10 · (*T* – 3.11 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; 2007, 70; 2008, 70; 2009, 70; 2010, 70; 2011, 70; 2013, 130).

Appendix F. National Basic Pension Contribution Paid by Employees (*folkpensionsavgift*)

Table 2.38 National basic pension contribution, 1913–1921

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

Source: Elmér (1960, 222).

Table 2.39 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 2.40 National basic pension contribution, 1936–1974

Year	Fee
1936–1947	1.0% of the state assessed income, however at least SEK 6 and at the most SEK 20.
1948–1951	1.0% 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% 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% 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% 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% of the state taxable income. A maximum of 1,200 SEK for unmarried individuals.
1967	4.5% of the state taxable income. A maximum of 1,350 SEK for unmarried individuals.
1968–1973	5.0% 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 2.41 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 2.42 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

continued

Table 2.42 Continued

Annual wage	Fee		
	1963–1964	1965	1966
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 2.43 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 2.44 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.)

Source: Söderberg (1996, 52).

Appendix H. General Employee-Paid Social Security Contributions (*allmänna egenavgifter*)

Table 2.45 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 2.46 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 2.47 Earned income tax credit, 2007

Income from active work per year (AI)	Tax credit
0	(AI – GA) · KI
0.79 PBB	(0.79 PBB + 0.2 · (AI – 0.79 PBB) – GA) · KI
2.72 PBB	(1.176 PBB – GA) · 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 2.48 Earned income tax credit, 2008

Income from active work per year (AI)	Tax credit
0	(AI – GA) · KI
0.91 PBB	(0.91 PBB + 0.2 · (AI – 0.91 PBB) – GA) · KI
2.72 PBB	(1.272 PBB + 0.033 · (AI – 2.72 PBB) – GA) · KI
7.00 PBB	(1.413 PBB – GA) · 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 2.49 Earned income tax credit, 2009

Income from active work per year (AI)	Tax credit
0	(AI – GA) · KI
0.91 PBB	(0.91 PBB + 0.25 · (AI – 0.91 PBB) – GA) · KI
2.72 PBB	(1.363 PBB + 0.065 · (AI – 2.72 PBB) – GA) · KI
7.00 PBB	(1.642 PBB – GA) · 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 2.50 Earned income tax credit, 2010–2013

Income from active work per year (AI)	Tax credit
0	(AI – GA) · KI
0.91 PBB	(0.91 PBB + 0.304 · (AI – 0.91 PBB) – GA) · KI
2.72 PBB	(1.461 PBB + 0.095 · (AI – 2.72 PBB) – GA) · KI
7.00 PBB	(1.868 PBB – GA) · 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; 2010, 66; 2011, 66; 2012, 68).

Appendix J. Employer-Paid Social Security Contributions (*arbetsgivaravgifter*)

Table 2.51 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

continued

Table 2.51 Continued

Year	Fee, %	Levied on
	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	Wwage 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

continued

Table 2.51 Continued

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

continued

Table 2.51 Continued

Year	Fee, %	Levied on
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
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).

Notes

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1. A 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.
2. This wider measure is preferable because several forms of taxation affect individual choices. The marginal income tax rate captures the effect from one form, that is, 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, for example, Agell, Englund, and Södersten (1998) or Sørensen (2004) for a thorough discussion.

3. Furthermore, the excess burden is not a linear function of the marginal tax wedge but an increasing convex function, that is, 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, for example, 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, for example, 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 chapter are derived from these 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.
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).
9. See, for example, 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, for example, 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.
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 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.
14. The OECD has conducted robustness tests on average tax rates, including nonstandard tax relief. For Sweden, the estimated difference is approximately 5 percentage points or less (see, e.g., OECD 2010, 490f).
15. The defense taxes also included one-sixtieth or 1 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).
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.
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 1 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 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).
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.
26. However, the income when this new top marginal tax rate began to apply was substantially decreased (40% 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."
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*).
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 the most, 5 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.
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.
36. There is still a marginal effect on small incomes that fall far below the incomes of full-time employees (Skatteverket 2006, 72).
37. There were also tax caps that restricted the sum of wealth and income taxes (see Du Rietz and Henrekson 2015).
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 United States 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).
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.
41. See Stenkula (2015) for further details regarding consumption taxes.
42. Our first two periods coincide with the first period in Lindbeck's classification.
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).
47. Consumption taken from Annual Estimates, National Accounts, http://www.scb.se/en_/Finding-statistics/Statistics-by-subject-area/National-Accounts/.
48. SOU (*Statens offentliga utredningar*) is the Swedish official series of reports of committees appointed by the Swedish Government.
49. See, for example, the discussion in Lewin (2009). Despite the fact that the employee-paid SSCs rate was decreasing (beginning in 2000), the benefits that were supposed to be linked to the contributions were unaffected, implying that the contributions in practice were fiscal.
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.
51. If both spouses were working, there was also an additional small allowance between 1921 and 1984.
52. See, for example, Gustafsson (1992) for a discussion of female labor participation and wages.

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Chapter 3

Swedish Capital Income Taxation (1862–2013)

Gunnar Du Rietz, Dan Johansson, and Mikael Stenkula

1. Introduction

Taxation affects many economic decisions, including those related to labor supply, household savings, corporate investment, and entrepreneurial activity. In this chapter, we study the incentives provided by capital income taxation to invest. Capital income taxation affects the incentives to invest through its effect on the cost of capital, that is, the minimum rate of return that an investment must yield before taxes to provide the saver with the same net of tax return that (s)he would receive from lending at the market interest rate. Investment projects worth pursuing require that the profitability is higher than the cost of capital. The total effect of capital income taxation depends on the system of corporate taxation, personal income taxation, and wealth taxation, in addition to the interaction between these taxes and inflation.

The purpose of this chapter is twofold. First, we intend to describe the general evolution of Swedish capital income taxation, including corporate, capital gains, dividends, interest income, and wealth taxation. The analysis begins in 1862 with the introduction of a major new state (central government) tax system. Second, we want to illustrate the evolution of capital income taxation by calculating the long-term evolution of the so-called marginal effective tax rate on capital income (METR), which is based on the method developed in King and Fullerton (1984). The METR focuses on the flow of private savings into real corporate investment and the flow of profits back to households. It is an established tax measure that is used to compare tax rates across countries and investment projects. Long-run analyses are rare, however. The METR is preferable to other measures—such as the average corporate

tax rate—because it includes effects at both the personal and corporate levels and because it focuses on the marginal effect, which measures the incentives for additional investments.[1]

Historical studies of the Swedish capital tax system include Genberg (1942), Jakobsson and Normann (1974), Rodriguez (1980, 1981), Gårestad (1987), and Mutén (2003). These studies incorporate extensive information about the Swedish tax system but do not include a formal calculation of the METR. Some of the results in this chapter are derived from these sources. A calculation of the METR in a Swedish context can be found in Södersten and Lindberg (1983), Södersten (1984, 1993), Norrman and McLure (1997), Lindhe (2002), Öberg (2004), and Sørensen (2008), among others. Nevertheless, none of these studies has analyzed the METR over an extensive time period.[2] Previous country or cross-country studies analyzing the United States and the United Kingdom, for example, are presented in Devereux, Griffith, and Klemm (2002) and cover mainly the 1980s and 1990s. Hence, this chapter complements previous studies by computing the METR as far back as 1862 and up to 2013. No previous study has generated a data series of this magnitude, for Sweden, and we are not aware of any international studies covering a period of similar duration.

The chapter is organized as follows. The next section describes the evolution of different components of capital taxation. Section 3 defines the METR and presents its evolution. Section 4 concludes. In the appendices, we discuss the METR and the corporate tax system more formally and present complete tables covering statutory corporate taxes.[3]

2. The Development of Capital Income Taxation

This section describes the general evolution of different parts of Swedish capital income taxation, that is, taxation of corporate profits, dividends, capital gains, interest income, and wealth. This description is used to calculate the METR in the next section. We present figures in the text to illustrate the development of capital income taxation in Sweden. Complete tables with all tax rates and tax brackets for the entire period under examination are presented in the appendices to avoid cluttering and fragmenting the main text of this chapter. In Sweden, capital income taxes have historically been paid to counties (*landsting*) and to municipalities (*kommuner)*; we will refer to counties and municipalities as local government and to the state as central government. Because the METR also depends on inflation, we also present the evolution of the inflation rate.

2.1 Corporate Taxation

The business form "corporation with limited liability" was legally introduced as a new organizational form by a law passed by Sweden's Parliament in 1848.[4] In 1862, a new state appropriation tax law (*bevillning*) was implemented, and a new local tax

system was introduced in the following year. Profits from corporations were taxed at the corporate level in the same way and at the same rates as earned income for individual taxpayers. Initially, approximately 1 percent of taxable profit was paid to the state, and approximately 2 percent was paid to local governments.[5] The tax system can be considered proportional.[6] The state income tax rate was stable, but the local tax rate increased slowly to approximately 5 percent during the second half of the nineteenth century.

In 1903, a progressive state income tax was implemented that applied to corporations as well as individuals. The new state tax was supposed to replace the system of appropriation, which was gradually phased out and finally abolished in 1928. Thus, there were two parallel state tax systems at the beginning of the twentieth century. The state corporate marginal tax rate varied between 1 and 5 percent.[7] In 1903, dividends to individuals were also taxed. To avoid double taxation, corporations were allowed to deduct dividends paid, but only up to 6 percent of the book value of equity. Thus, there was no double taxation of profits as long as dividends did not exceed 6 percent. The ordinary local tax system remained proportional and continued as such for the remainder of the period under study. The local tax continued to gradually increase until it had reached approximately 10 percent, during World War II.

In 1911, the state income tax was reformed and personal and corporate income taxes were separated. Firms were no longer allowed to make any deductions for dividends; hence, full double taxation was introduced. The state corporate tax remained progressive but was now based on profitability (as a percentage of equity) rather than on profits (in SEK), as it had been in 1903.[8] The state corporate tax rate varied between 2.5 and 5.2 percent depending on the rate of return on equity. In addition, corporations had to pay temporary defense taxes to the state in 1918 and 1919 (at the most, 5 and 10% on the margin, respectively).[9]

In 1920, following World War I, a new state income tax system was implemented that was supposed to replace the ordinary income tax and the temporary defense taxes. This tax system was intended to be more flexible and stable than previous systems. Technically, the structure of the tax system—tax income brackets and progressivity—was fixed, but the specific tax rates were flexible and were determined on an annual basis. As with earlier systems, the tax rate was based on companies' profitability.[10] The state corporate tax rate could vary between approximately 2 and 20 percent depending on the year and profitability. Local corporate taxes were now also deductible from income.[11]

In 1920, a progressive local corporate tax was introduced with a marginal tax rate that varied from 1 to 8 percent, depending on profitability.[12] In 1928, this tax was reformed, and part of the progressive local tax was transformed into a separate, additional state income tax, called the equalization tax (*utjämningsskatt*). The progressive local corporate tax had a top tax rate of 3.75 percent, whereas the equalization tax had a top tax rate of 1.25 percent initially and 2.5 percent after 1934. As a result, the total corporate tax rate could already be relatively high for highly profitable companies during World War I and during the interwar years; by the end of the 1930s, the tax rate could be well above 30 percent (see Figure 3.1). However, the option to defer tax payments by free inventory write-downs, which was introduced in 1928, reduced the effective corporate tax rate.[13]

In 1939, a new proportional state corporate income tax was implemented when the temporary taxes that were introduced in the 1920s were abolished. The tax rate was set to 10 percent. In practice, the tax rate immediately increased to 13 percent.[14] New temporary defense taxes were also introduced, levying marginal tax rates of 3 percent initially and 10 and 12 percent, subsequently. The regular proportional state corporate tax rate was further increased to 20 percent in 1940. As a result, the total statutory corporate tax rate could increase substantially—reaching approximately 40 percent (see Figure 3.1). In 1939, the scope for reducing corporate taxes was also expanded. By introducing free write-downs for machinery and equipment and deductible allocations for pension and investment funds (the IF system), the increase in the effective corporate tax rate could be lower than the increase in the statutory tax rate.

In 1947, the corporate tax was once again reformed, and a proportional state income tax rate corresponding to 40 percent of taxable profits was introduced. All temporary taxes were abolished. The tax rate was temporarily increased to 45 percent in 1955 and to 50 percent between 1956 and 1959. There were also temporary investment taxes on investments in 1951–1953 and in 1955–1957. These tax increases and additional taxes were instituted to contract the overheated economy that resulted from the Korea crisis.[15] However, in 1955, the investment funds system became more generous, and between 1961 and 1993, a certain mitigation of the double taxation of dividends was available at the firm level through the so-called Annell deduction.

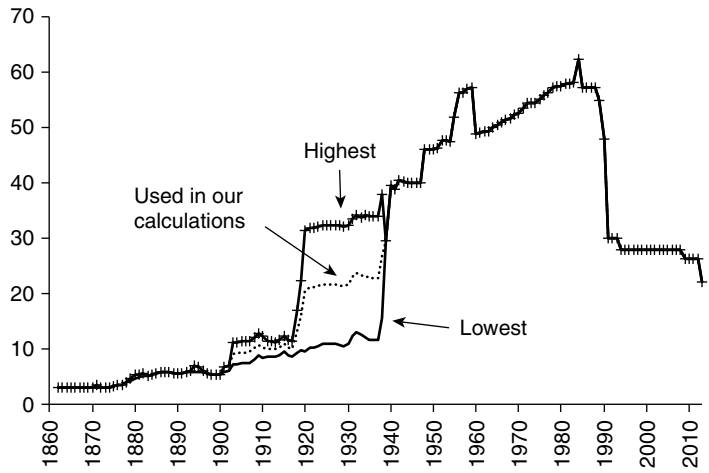

Figure 3.1 The highest and lowest statutory marginal corporate tax rate and the statutory marginal corporate tax rate used in our calculations of the METR, 1862–2013 (%).

Note: The statutory marginal corporate tax rate refers to the total effect of local and state corporate taxes.

Source: Genberg (1942); Rodriguez (1981); Gårestad (1987); Nordling (1989, 61–67); Agell, Englund, and Södersten (1995); Ministry of Finance (2008, 2013); Du Rietz, Johansson, and Stenkula (2015); own calculations.

In 1960, the facility to carry forward losses and deduct them against profits in later years was also implemented.

Although the state income tax rate was stable, local taxes increased during the postwar period. Between the end of World War II and 1970, the local tax rate doubled from approximately 10 to 20 percent. When local taxes are taken into account, the total statutory corporate tax rate increased to 45 percent after World War II and (temporarily) to 55 percent at the end of the 1950s. The local tax continued to increase to almost 30 percent in the mid-1980s, and the total corporate tax rate followed suit.

The local corporate tax was abolished in 1985. In its place, the state corporate tax rate was increased to 52 percent, and the total statutory tax rate thus remained practically unchanged. Between 1984 and 1990, an additional, specific "profit sharing tax" (PST) on corporations was levied to finance the so-called wage-earner funds (*löntagarfonder*).[16] The highly complex tax base of the PST was real profits (above an exempted amount of one-half to one million SEK or 6 percent of the payroll), and it thus cannot be easily expressed as a single statutory tax rate.[17] It has been estimated that this tax increased the statutory corporate tax rate by 5 percentage points.[18]

After the far-reaching tax reform in 1990–1991, options to reduce the effective corporate tax rate were limited (Lodin 2011, Chapter 7). The reform was designed to be revenue neutral, and it involved substantial cuts in statutory tax rates and a broadening of the tax base by removing many tax deferrals, for example, the earlier investment funds system, the possibility to undervalue inventories and the profit equalization fund. The statutory tax rate was cut to 40 percent in 1990 and to 30 percent in 1991. It was further reduced to 28 percent in 1994, to 26.3 percent in 2009, and to 22 percent in 2013.

2.2 Taxation of Interest Income and Dividends

Figures 3.2 and 3.3 depict the marginal tax rate on interest income and dividends for a top income earner paying the highest marginal tax rate, an income earner with an annual wage of an average production worker (APW), and an income earner making 0.67 or 1.67 APW.[19] Few income earners paid the top marginal tax when progressivity was introduced.[20]

In the state appropriation tax law of 1862 and in the local tax implemented in 1863, interest income was taxed the same as other personal income (labor and business income). Initially, 1 percent of interest income was paid to the state, and approximately 2 percent was paid to the local governments. Dividends were tax exempt until the state tax reform implemented in 1903, but shareholders initially only paid state income tax on dividends. Between 1903 and 1919, the state income tax was slightly progressive with state tax rates up to 6 percent.[21] The local tax was proportional at roughly 5–6 percent during this period. Beginning in 1920, local taxes were also levied on dividends. Interest income and dividends were now taxed in the same way as and jointly with other personal income until the 1990–1991 tax reform.

During the interwar years, the marginal tax rate (including both local and state taxes) could vary between 12 and 15 percent for regular income.[22] The 1948 income

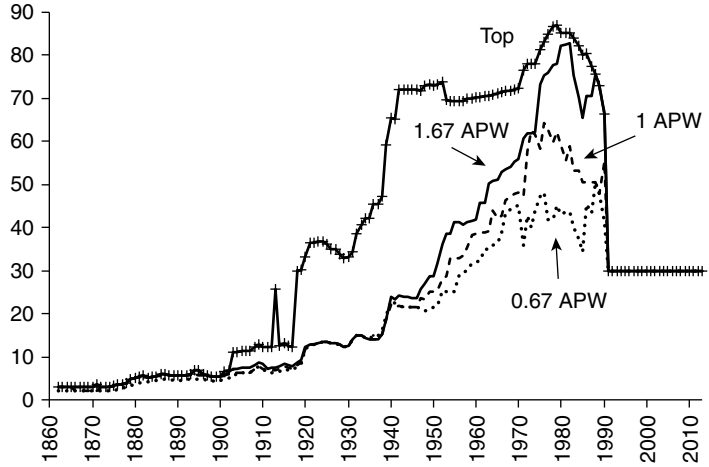

Figure 3.2 The marginal tax rate on interest income, 1862–2013 (%).
Source: Du Rietz, Johansson, and Stenkula (2015); own calculations.

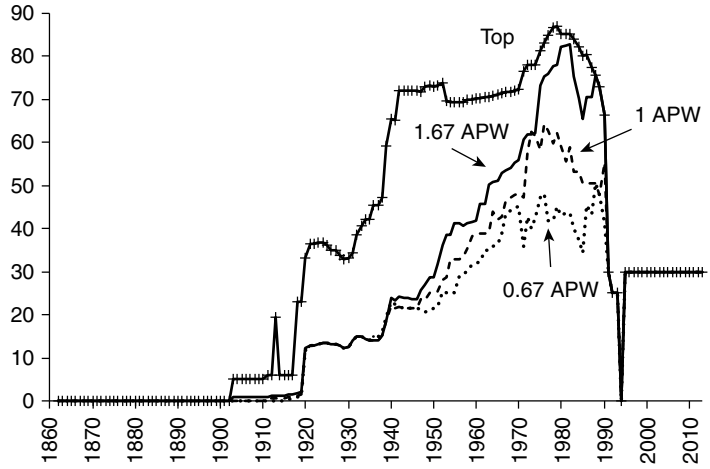

Figure 3.3 The marginal tax rate on dividends, 1862–2013 (%).
Note: Before 1903, dividends were tax exempt. From 1903 until 1919, dividends were taxed at the state level only.
Source: Du Rietz, Johansson, and Stenkula (2015); own calculations.

tax reform was highly progressive, and inflation resulted in bracket creep, causing a steady increase in the marginal tax rate until a new tax reform was implemented in 1971.[23] This reform increased the progressivity of the income tax even further.[24] For high-income earners, the marginal tax rate could be as high as 85 percent in 1980.

A minor tax reform implemented in 1983–1985 reduced the marginal tax rates by approximately 5 to 15 percentage points.[25]

In 1991, a separate personal capital income tax was introduced, and the tax on dividends and interest income was cut to 30 percent for natural persons. Politicians debated the taxation of capital income, including the "double taxation" of dividends. When a center–right government was elected in 1991, the dividend tax, but not the tax on interest income, was temporarily reduced to 25 percent in 1992–1993; in 1994, the tax on dividends was abolished altogether. It was reintroduced in the next year at a rate of 30 percent when the Social Democrats regained power. It has remained at that level for dividends paid by public companies.[26]

2.3 Capital Gains Taxation

Before 1911, only so-called "speculative" capital gains were taxable. However, there was no formal tax rule that defined when capital gains were speculative. Taxation was based on the tax authority's discretionary decisions. Formal capital gains taxation was introduced in 1911. It was launched after a long boom period in the stock market. The intention was still to tax only "speculative" capital gains—but more transparently. Because of the difficulty of defining "speculative" gains, a more precise, though in itself arbitrary, rule was introduced, which meant that the tax on capital gains depended on the holding period. A longer holding period meant that the taxable part of the gain was smaller (and, implicitly, that the estimated "speculative" share was lower). In 1911, capital gains on stocks that were held more than five years were tax exempt, whereas short-term capital gains were fully taxed. As with dividends, the taxable part of capital gains was taxed jointly with other personal income until the 1990–1991 tax reform.[27]

The rules that determine the tax-exempt share have been modified several times (see Table 3.1). The sharp time limit of five years has frequently been debated among politicians and experts.[28] The rules were not changed until 1951, however, when a stepwise system was introduced. Part of the capital gains was taxed for shares that were owned between two and five years whereas gains on shares that were owned for more than five years remained tax exempt. In 1966, long-term capital gains were taxed for the first time. Ten percent of the proceeds of the sale of shares were included in the income tax base of the seller of shares that were owned for five years or more.[29] In 1976, the rules were changed to stipulate that all gains on shares that were held for under two years were taxed, whereas only 40 percent of the gains were taxed for shares that were held for two years or more.

This implies that the marginal tax rate on capital gains on long-term holdings was zero until 1965 (see Figure 3.4). From 1966 through 1975, the marginal tax rate varied between approximately 10 percent (for a taxpayer earning 0.67 APW) and 20 percent (for a top income earner paying the highest marginal tax rate). The tax changes that were implemented in 1976 increased the top marginal tax rate sharply to more than 30 percent, and this rate peaked in 1979 at almost 35 percent. Thereafter, it fell to 25–30 percent before the 1990–1991 tax reform.

The 1990–1991 tax reform made all capital gains fully taxable, regardless of holding period. However, capital gains were no longer taxed jointly with personal income but were taxed by a separate capital income tax at a flat rate of 30 percent. In

Table 3.1 Taxable share of capital gains

Time period	Speculative gains				Nonspeculative gains
1862–1910	100				0
	Holding period (years)				
	<2	2–3	3–4	4–5	≥5
1911–1950	100	100	100	100	0
1951–1965	100	75	50	25	0
1966–1975	100	75	50	25	10/25[a]
1976–1990	100	40	40	40	40
1991–2013	100	100	100	100	100

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

Source: Eberstein (1929, 154–155); Bratt and Fernström (1975); SOU 1977:91, 242–243; Rundfelt (1982); Södersten (1984, 106–107).

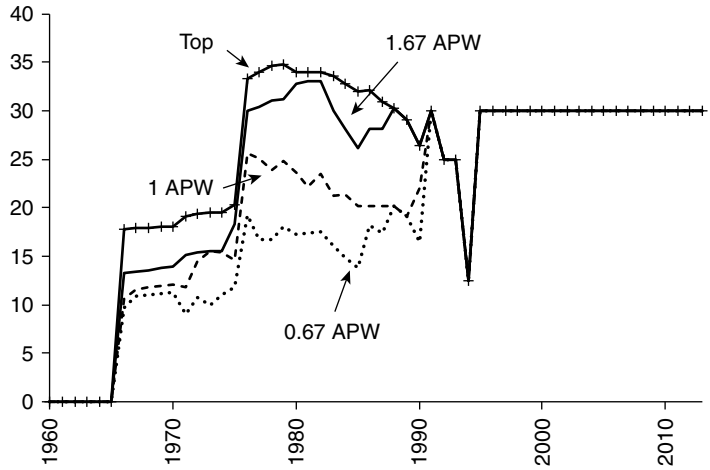

Figure 3.4 The marginal tax rate on long-term capital gains, 1960–2013 (%).

Note: Before 1966, long-term capital gains (≥5 years) were tax exempt. From 1966 until 1990, only a proportion of capital gains was taxable; see Table 3.1. Between 1910 and 2013, the marginal tax rate on short-term capital gains (<2 years) mimics the tax rate on interest income with the exception of 1992–1994, when the tax rate on short-term capital gains was somewhat lower (see the main text). If capital gains are considered "speculative," the capital gains tax also mimics the tax rate on interest income between 1862 and 1909, as only speculative capital gains were taxable during this period.

Source: Du Rietz, Johansson, and Stenkula (2015); own calculations.

1992–1993, this separate capital income tax rate was temporarily cut to 25 percent; in 1994, this rate was temporarily lowered to 12.5 percent.[30]

2.4 Wealth Taxes

The Swedish wealth tax applied only to individuals, and was in force from 1911 to 2006. Between 1911 and 1947, the personal income tax was a combined income and wealth tax, where part of taxpayer's net wealth was included in the tax base. The share of wealth that was added to the tax base varied over time. It was one-sixtieth between 1911 and 1938 and 1 percent between 1939 and 1947. There were also temporary taxes during and between the world wars, which included part of a taxpayer's net wealth in the tax base. This portion of net wealth was as high as 10 percent in 1913, but the temporary war taxes affected only persons with very high income and high wealth.[31]

Between 1934 and 2006, there was also a separate wealth tax that levied specific tax rates on assessed net wealth (see Figure 3.5). The marginal tax rate initially ranged from 0.1 to 0.5 percent, and the tax-exempt allowance was high.[32] The marginal tax rate was increased slightly (to a maximum of 0.6 percent) and the allowance was diminished in 1939. In 1948, the tax rates were substantially increased, ranging from 0.6 to 1.8 percent. The changes in 1939 and 1948 were combined with a reduction, in 1939, and the abolition, in 1948, of the part of wealth that was included in the ordinary income tax on labor.

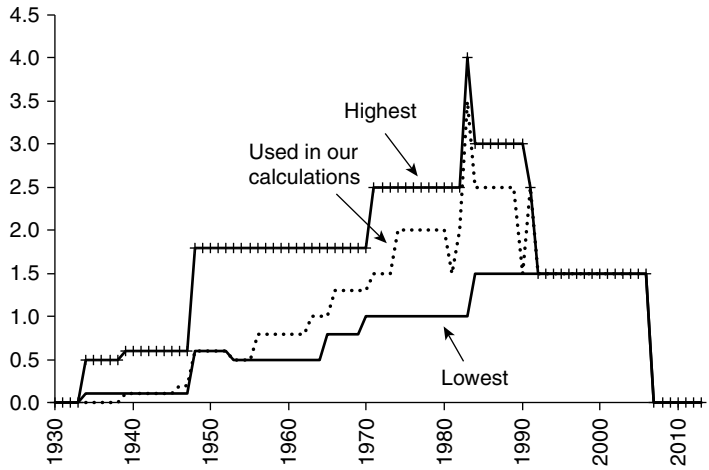

Figure 3.5 Highest and lowest marginal wealth tax rate and the marginal wealth tax rate used in our calculations, 1930–2013 (%).

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

Source: Du Rietz and Henrekson (2015); own calculations.

This system was only slightly revised until 1970. After 1970, the formal tax rates were increased to between 1 and 2.5 percent. In 1983, the tax rates were increased again, ranging from 1 to 4 percent. The 1983 schedule was the most progressive wealth schedule during the entire period. The wealth tax rates were reduced in 1984 and continued to diminish during the 1990s and 2000s. In 1991, the tax was discontinued on unlisted firm equity, and in 2007, the wealth tax was eliminated altogether. To diminish the effect of the wealth tax, valuation reliefs and average tax caps have occasionally been used to limit the total tax on income and wealth (see Du Rietz and Henrekson 2015 for further details).

2.5 Inflation

During the nineteenth century, the price level was roughly stable over time, and inflation was, on average, zero (see Figure 3.6). Sweden used a silver standard as the basis for its monetary system at the beginning of our period. A gold standard was used from 1873 until the outbreak of World War I. Inflation peaked during World War I (at almost 50 percent in 1918), and a period of extensive deflation followed during the early 1920s (reaching almost 20 percent in 1921). Sweden returned to the gold standard in 1924, and deflation resulted from a policy to restore the price level to prewar levels. Deflation also occurred in the late 1920s and early 1930s, but Sweden has not experienced deflation since then. Sweden followed the UK—Sweden's most important trading partner at that time—and abandoned the gold standard in 1931. After a short period of a floating exchange rate, Sweden fixed its currency, first, to the pound (1933) and, subsequently, to the dollar (1939). On average, the inflation

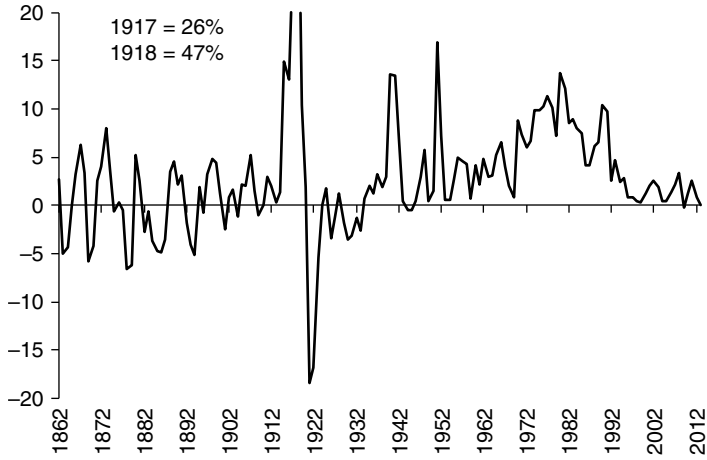

Figure 3.6 The inflation rate, 1862–2013 (%).
Source: http://www.scb.se/Statistik/PR/PR0101/2011M12/PR0101_2011M12_DI_06-07_SV.xls.

rate was almost zero between 1862 and 1939; thus, the price level was stable for approximately 80 years despite the inflationary peaks during and after World War I.

Inflation peaked again during World War II. The Swedish currency became tied to the Bretton Woods system beginning in 1951. Except for the period during the Korean boom in the early 1950s, inflation was moderate during the 1950s and 1960s, rarely exceeding 5 percent. The Bretton Woods system was formally abolished in 1973. During the 1970s and 1980s, inflation was higher than during the 1950s and 1960s. Occasionally, it exceeded 10 percent. To accommodate the high inflation rate, the currency was devalued five times. In the 1990s, Sweden introduced an explicit inflation target of 2 percent, and the central bank was granted independence. Since that time, the average inflation rate has been below 2 percent per annum.

3. Estimates of the Marginal Effective Tax Rate on Capital Income (METR)

This section will illustrate the evolution of capital income taxation over time by calculating the METR based on the method originally presented in King and Fullerton (1984). We follow the framework developed by King and Fullerton (1984) because it is a generally accepted method for evaluating capital tax systems and because the use of this method facilitates comparisons with previous studies. First, the tax wedge is defined (Section 3.1), and the general framework is described (Section 3.2). Finally, the evolution of the METR is presented (Section 3.3).

3.1 Definition

The aim of King and Fullerton (1984) is to investigate the METR on investment projects in the nonfinancial corporate sector using a framework that takes all personal capital income taxes, corporate taxes, and wealth taxes that concern the investment decision of the saver into account. The method should also be sufficiently generalizable to allow for the analysis and comparison of investment projects as well as tax systems across countries. King and Fullerton (1984) cover Sweden, the United States, the United Kingdom, and West Germany. Södersten (1984) provides an analysis of Sweden, and since then, studies on the METR in Sweden have been based on his work.

As a starting point for the analysis, a saver can either lend her/his capital to the capital market at the market interest rate or invest in a business project. To induce the saver to choose to invest in the project, the project must generate a real rate of return after tax that at least equals the real interest rate after tax. The minimum rate of return that an investment must yield before taxes to provide the saver with the same net of tax return that (s)he would receive from lending at the market interest rate is called the cost of capital, which is denoted by p. A necessary, but not sufficient, condition to pursue investment projects is that their profitability is at least as high as the cost of capital. The METR is calculated by using an equilibrium model, and

the fact that the saver likely requires a risk premium to invest in a business project is not taken into account. Furthermore, the calculated values are the theoretical values in equilibrium. However, the real economy may well be in disequilibrium. For instance, because of capital income taxation, the return on savings after tax does not sufficiently compensate for postponing consumption. Further, risk and uncertainty are not considered in the model, and the results are based on the assumption that no further tax changes will occur.

Taxes drive a wedge between the pretax rate of return on investments by firms and the net return received by savers. As taxation is normally based on nominal income, both the real rate of return and the inflation compensation are taxed. The inflation rate thus influences the amount of tax paid, and to capture this effect, the tax wedge is normally calculated in real terms where the real tax wedge increases with inflation. The tax wedge influences the incentive to supply and demand capital.

The marginal tax wedge, w, can formally be defined as:

$$w = p - s \tag{3.1}$$

where p is the pretax real rate of return on a marginal investment and s the post-tax real rate of return to the saver (King and Fullerton 1984; Södersten 1993; Sørensen 2004). The marginal tax wedge, w, includes the relevant capital taxes that influence the investment choice.

The METR, t, is defined as:

$$t = \frac{w}{p} \tag{3.2}$$

where w and p are defined as above. The METR, t, is, hence, the ratio of the marginal tax wedge, w, to the pretax real rate of return, p. The marginal tax wedge and the marginal effective tax rate can be used as two measures of the distortion caused by the tax system.

3.2 General Framework

The calculation of the METR depends on the marginal tax rate on interest income, dividends, capital gains, and wealth for households. The calculation further depends on the marginal statutory corporate tax rate and the present discounted value of tax savings from depreciation allowances and other grants associated with a unit investment, the rules for the valuation of inventories and allocations to different untaxed reserves, such as the investment funds (*investeringsfonder*) or profit equalization fund (*resultatutjämningsfond*).[33] Finally, the particular assets purchased, the source of finance, the category of ownership, and the industry in question also affect the METR. King and Fullerton (1984) estimate METRs for three types of assets (buildings, machinery, and inventory), three sources of finance (new share issues, retained earnings, and debt), three ownership categories (households, tax-exempt

institutions,[34] and insurance companies), and three industries (manufacturing, commerce, and other industry). Hence, King and Fullerton calculate 81 different tax wedges, based on different assumptions concerning the investment. The effective tax rates also depend on the level of profitability.[35] King and Fullerton base their calculations on the pretax real rate of return, p, which is assumed to be 10 percent.

To illustrate the evolution of capital taxation, we will—in line with, for example, Devereux, Griffith, and Klemm (2002) and the Organisation for Economic Co-operation and Development (OECD 2007)—compute the METR for a marginal investment in machinery based on an increase of household savings in the economy. The calculations are made for each year during the 1862–2013 period. Because the general tax system in Sweden is independent of industry and has seldom had industry-specific tax subsidies, we disregard industry in the calculations.

To calculate the METR, we first must determine the corporate tax rate over time. Before 1903 and after 1938, the corporate tax system was, in principle, proportional. However, between 1903 and 1938, the corporate tax system was progressive. For this period, we will use the average marginal statutory tax rate. Until 1917, the progressivity of the tax system was low, but it was more pronounced between 1918 and 1938. Using either the highest or lowest tax rate implied by the tax system during the 1903–1938 period does not affect our general conclusions. The METR will be much lower than later levels even if the top marginal corporate income tax is used. The evolution of the corporate tax rate that is used in our calculations is shown in Figure 3.1. Between 1939 and 1990, the IF system was in place.[36] Agell, Englund, and Södersten (1995, 116) claim that the IF system can be characterized as a general profit subsidy that implies a reduction of the total statutory corporate tax rate by approximately 15 percentage points, which may reduce the METR by approximately 10 percentage points and will not affect our general conclusions (see discussion and Figure 3.11 in Appendix B).

Our calculations must also include the marginal personal tax rate on capital income. As the marginal personal tax rate on capital income was progressive between 1903 and 1990, we must determine the tax rate on which to base our analysis. Södersten (1984) based his analysis on the average marginal capital income tax rate of all households using HINK data. This data provides extensive information on individual households but does not exist before 1975.[37] We will instead draw on Du Rietz, Johansson, and Stenkula (2015) and base our analysis on the marginal income tax rate faced by an average production worker. This marginal tax rate closely corresponds to the average marginal tax rate for all households.[38] The evolution of the tax rate on dividends and interest income for our assumed income earner is shown in Figures 3.2 and 3.3, respectively.

The statutory capital gains tax must be converted to an effective tax rate on accrued capital gains because capital gains are only taxed on realization. In line with King and Fullerton (1984, 23–24), we base our analysis on corporate shares with a mean holding period of ten years. Because the statutory tax rate on capital gains depends on the length of the holding period between 1911 and 1990, we base our calculation of the accrued effective tax rate on long-term possessions for these years.[39] We consider capital gains to be nonspeculative in our calculations before 1911. Thus, the capital gains tax is zero in our calculations until 1965 because nonspeculative capital

gains/capital gains on long-term possessions were tax exempt during this period. The evolution of the tax rate on capital gains for our assumed income earner is shown in Figure 3.4.

The assumed income and corresponding marginal tax rate on capital income is less important before World War II because of the low tax rates and is not important after the 1990–1991 tax reform because capital income is taxed separately from labor income at a flat tax rate. For the period beginning with World War II and ending with the 1990–1991 tax reform, the assumed income and corresponding marginal tax rate on capital income may influence the general evolution of the METR (see the next section). For capital gains, the assumed income will not affect the results at all until 1965, because we examine only long-term possessions (and nonspeculative gains before 1911) and capital gains on long-term possessions were tax exempt through 1965. From 1966 until 1990, the assumed income had an effect. We therefore provide an extended discussion of the impact of household income and the associated marginal personal tax rate on capital income on the METR in Section 3.3.

The calculation of the METR also includes the wealth tax. Södersten (1984) bases his analysis on the average marginal wealth tax rate of all households using the detailed description of the distribution of household wealth in Sweden in 1975 presented in Spånt (1979). We draw on Du Rietz and Henrekson (2015) and base our analysis on wealth equal to ten APWs.[40] Using the highest wealth tax rate may increase the METR by approximately 15 percentage points, at most (1990). If no wealth tax is used, the METR may decrease by a maximum of approximately 35 percentage points (1983). The evolution of the wealth tax rate that is used in our calculations is shown in Figure 3.5.

Finally, the calculation must also incorporate the present discounted value of tax savings from depreciation allowances and other grants associated with a unit investment (A). These adjustments are calculated separately in Appendix B and are included in the estimations. The King and Fullerton method assumes that a company can make full use of the provisions that the tax legislation offers to reduce the METR (Öberg 2004; Södersten 1984, 147–148).[41] To analyze the impact of these provisions, we conduct a robustness test by calculating the METR with the assumption that no provisions to reduce the tax were used and that the company pays the statutory corporate tax.[42] In this case, METR may increase by as much as 100 percentage points between 1939 and 1991, depending on the source of finance. These results thus reinforce our general conclusions about the distortionary character of the tax system during this period.

3.3 Results

Figure 3.7 shows the evolution of the METR between 1862 and 2013 for an investment financed by retained earnings, new share issues, and debt based on the assumptions given in Section 3.2. In the case of retained earnings, the METR was approximately 1 percent at the beginning of the period and hovered around approximately 3 percent until World War I. It peaked at approximately 11 percent during World War I. During the interwar years, the METR hovered at roughly 10 percent.

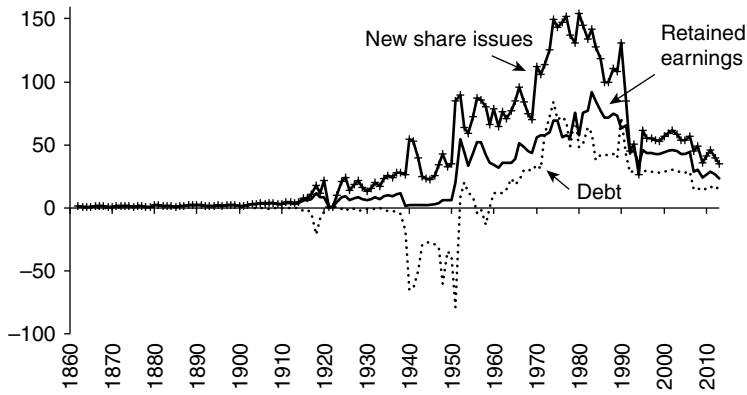

Figure 3.7 The METR for an investment financed by new share issues, retained earnings, and debt for an average production worker, 1862–2013 (%).

Note: Based on assumptions given in the text.

Source: Own calculations.

Between 1939 and 1951, immediate write-offs (free depreciation) were allowed, and the METR was reduced to nearly zero despite strong increases in the statutory corporate tax rates. During the 1950s, the METR increased sharply and could occasionally be above 50 percent because of the abolition of immediate write-offs and the implementation of temporary investment taxes. The METR was somewhat lower during the early 1960s when the temporary increase in the corporate tax ended and after the investment tax had been abolished. Between 1960 and the 1980s, the METR increased because of increased corporate, personal, and wealth taxes. Long-term capital gains were taxable after 1966. At the beginning of the 1980s, the METR was almost 100 percent. In the second half of the 1980s, the METR began to decrease. The 1990–1991 tax reform lowered the METR substantially because of a combination of lower tax rates on capital income, wealth, and profits, and a low inflation rate. In 2007, the wealth tax was abolished, which further accentuated the fall. At the end of the period examined, the METR was approximately 25 percent.

In the case of new share issues, the METR did not exceed 5 percent before World War I. During the war, the METR peaked at almost 20 percent and oscillated around this level in the interwar period. Until the early 1950s, the tax rate increased, with temporary spikes in 1940–1941 and in 1948 because of extra defense taxes during World War II and inflation spikes. The effect of free depreciation was counteracted by increased income taxes and higher inflation rates. The METR increased sharply to almost 90 percent in the early 1950s with the abolition of free depreciation, the implementation of temporary investment taxes, and because of high inflation. During the 1950s and 1960s, the METR fluctuated between 65 and nearly 100 percent. The 1971 tax reform increased the progressivity of the income tax system. In combination with high inflation, the METR rose above 100 percent in 1970 and did not fall below this level until the 1990–1991 tax reform. The highest level—approximately

150 percent—was reached in 1980. At the end of the period examined, the METR was approximately 35 percent.

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 values for the METR are associated with inflation peaks. Debt-financed investment under a system of immediate write-offs implied a subsidy.[43] 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 percent.[44] During the 1980s, it began to decline, particularly after the tax reform in 1990–1991. At the end of the period examined, the METR was approximately 15 percent.

Overall, it is clear that the changing tax rules have had substantial effects on the evolution of the METR. Before World War II, the effects on the METR were more modest. The rules permitting immediate write-offs (free depreciation) had a large impact on its evolution between 1939 and 1951. The tax reform in 1948, which made "temporary" tax increases implemented during World War II permanent, did not initially have a substantial effect on the METR, but the increasing marginal tax rate on income during the postwar period due to bracket creep and temporary investment taxes pushed the METR higher. However, generous accounting provisions mitigated this effect. With the 1971 tax reform, the evolution continued, although investment grants occasionally alleviated the effect on the METR. The 1983–1985 and (particularly) the 1990–1991 tax reforms substantially reduced the METR and the difference between sources of finance. It is clear from the calculations that financing from new share issues was the most heavily taxed form of financing, notwithstanding the Annell deduction.

Our results are similar to Södersten's calculations for occasional years after 1960, as reported in Henrekson (1996) and Henrekson and Johansson (1999). However, our results differ from Södersten and Lindberg's (1983) results because their results include three different ownership categories (households, insurance companies, and tax-exempt institutions).

The above results are based on the marginal tax rate on personal income (dividends, interest income, and capital gains) for an average production worker. As discussed briefly in Section 3.2 above, this assumed tax rate may occasionally substantially influence the METR. The results can be recalculated with a taxpayer instead facing the top marginal tax rate or the marginal tax rate for a taxpayer earning 0.67 APW (see Figures 3.8 and 3.9).

If the top marginal tax rate is used, the METR is fairly similar until World War I and is not affected after the 1990–1991 tax reform. In the case of new share issues, the METR is much higher. It would exceed 100 percent almost every year from 1951 until the 1990–1991 tax reform. It also peaks above 100 percent in 1918, 1940–1941, and 1951 when inflation was high. During the 1970s and 1980s, it exceeds 150 percent every year and peaks above 200 percent. The METR also increases dramatically in the case of debt when the top marginal tax rate is considered. It becomes positive in every year, even when immediate write-offs are allowed, and exceeds 100 percent from 1970 until the 1990–1991 tax reform. The METR is not substantially affected in the case of retained earnings when the top

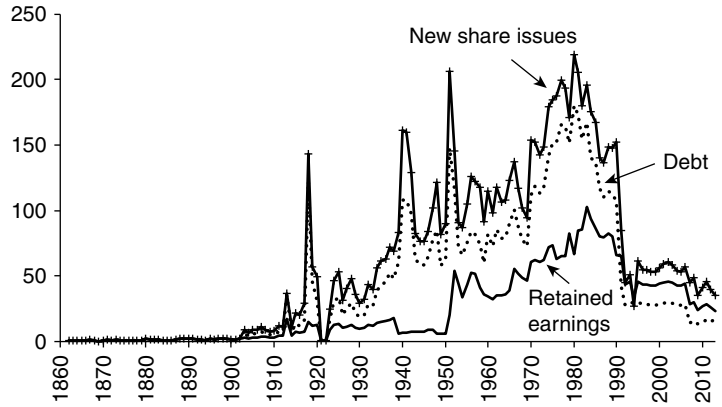

Figure 3.8 The METR for an investment financed by new share issues, retained earnings, and debt for an individual facing the top marginal income tax rate, 1862–2013 (%).

Note: Based on assumptions given in the text.

Source: Own calculations.

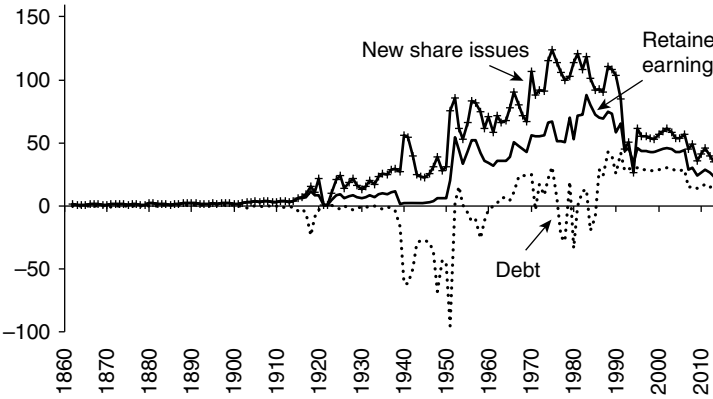

Figure 3.9 The METR for an investment financed by new share issues, retained earnings, and debt for an individual earning 0.67 APW, 1862–2013 (%).

Note: Based on assumptions given in the text.

Source: Own calculations.

marginal tax rate is considered, except during the 1970s and 1980s when it peaks at 100 percent.

If the marginal tax rate for a taxpayer earning 0.67 APW is used, the effect on the METR is negligible until World War II and after the 1990–1991 tax reform. In the case of new share issues, the METR is lower, but not much lower before the 1970s. It is significantly lower during the 1970s and 1980s, although it still often exceeds 100 percent. In the case of debt, the METR is even more negative between 1939

and 1951 when immediate write-offs were allowed. It is slightly negative for some years around 1980, even when immediate write-offs were not allowed (mainly during years when investment grants were given). The largest discrepancy is once again observed for the 1970s and 1980s. In the case of retained earnings, the METR is largely unaffected.

4. Conclusions

This chapter analyzes the evolution of capital income taxation, including corporate income, dividends, interest income, capital gains, and wealth taxation, in Sweden. The evolution has been captured by calculating the so-called METR (i.e., the marginal effective tax rate on capital income) for an investment by a natural person financed by 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 post-tax real rate of return to the saver.

Capital income taxes on firms and individuals were low or nonexistent (dividends were tax exempt) until 1903, when a progressive income tax was implemented (long-term capital gains were tax exempt through 1965). Most savers did not face markedly increased marginal tax rates before World War II, and increased accounting provisions could offset increased corporate tax rates. The statutory corporate tax rate remained high until 1991, when it was halved at the same time that the tax base was broadened and tax-reducing provisions were reduced or repealed. The personal tax rate on capital income was substantially decreased in the same year when a dual income tax system was introduced, in which labor income and capital income were taxed separately. Wealth taxation was introduced in 1911, but initially at low rates. Wealth tax rates grew continually, reaching high levels in the 1970s and 1980s. The wealth tax was abolished on unlisted firms in 1991 and then on all assets in 2007.

The METR was low until World War I at below 5 percent, 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 somewhat upward and began to differ depending on the source of finance. Beginning in World War II, the evolution diverged profoundly between the sources of finance. The METR increased sharply in the mid-1950s for investments financed by debt and retained earnings. Many taxes had already been raised during World War II, but these tax increases did not substantially affect the METR because of generous provisions for reducing corporate taxes. In the case of new share issues, the METR increased during World War II, as the effect from free depreciation was counteracted by increased income tax rates and higher inflation. The METR continued to increase and peaked during the 1970s and 1980s. After the 1990–1991 tax reform, the METR fell sharply because of a combination of decreased tax rates (including the abolition of the wealth tax) and lower inflation. At the end of the period examined, the METR

varied between approximately 25 and 35 percent for investments financed by retained earnings and new share issues, and it was approximately 15 percent for debt-financed investments.

Appendix A: Calculation of the METR

This appendix gives a brief and more formal description of how the METR is calculated.[45] In King and Fullerton (1984), the rate of return net of depreciation for a project is assumed to be

$$p = MRR - \delta \tag{A.1}$$

where p is the pretax real rate of return on the project (the cost of capital), MRR is the gross marginal rate of return, and δ is the depreciation rate. The assumed depreciation rate will be set to 7 percent, which conforms to Södersten's estimation.[46] The discounted present value of profits for the project, V, net of taxes, is:

$$V = \frac{(1-\tau)MRR}{(\rho+\delta-\pi)} \tag{A.2}$$

where τ is the corporate tax rate, ρ is the firm's discount rate, and π is the inflation rate. The investment project is assumed to have an infinite lifetime with an initial cost of one unit.

The cost of the investment project is unity minus the present discounted value of tax savings from depreciation allowances and other grants associated with a unit investment, which we denote by A.[47] The cost of the project (C) is therefore:

$$C = 1 - A \tag{A.3}$$

The firm carries out the project under the condition that the discounted present value of profits of the project net of taxes, V, at least equals the cost of the project, C. Hence, using (A.1), we derive:

$$p = \frac{(1-A)}{(1-\tau)}(\rho+\delta-\pi) - \delta \tag{A.4}$$

Given (A.4), ρ must be solved. The values of p, τ, δ, and π are given, whereas A must be calculated (see the next section). A also depends on ρ in a nonlinear fashion, requiring a numerical solution.

Ignoring wealth tax on corporations (which is not used in Sweden) and investments in inventory (we focus on investments in machinery and equipment), the final step is to derive the relationship between the market interest rate i and the discount

rate ρ. The discount rate will differ from the market interest rate depending on the source of finance as follows:

(a) $\rho = i(1-\tau)$ for the use of debt; (A.5a)

(b) $\rho = i\dfrac{(1-m)}{(1-z)}$ for the use of retained earnings, (A.5b)

where m is the personal tax rate and z is the effective capital gains tax and is defined as

$$z = \frac{\lambda z_s}{\lambda + \rho_p}$$

where z_s is the statutory capital gains tax, λ is the proportion of accrued gains realized by investors in each period, and ρ_p is the marginal investors nominal discount rate (in general, this is equal to $s + \pi$, where s is the post-tax real rate of return to the saver and is defined below).

(c) $\rho = i\dfrac{(1-m)}{(1-m_d)}$ for the use of new share issues, (A.5c)

where m_d is the tax rate on dividends.

To compute the effective tax rate given a fixed p value, we first solve for ρ (using equation (A.4)); given the source of finance, we then solve for i (using equations (A.5a–c)). In the case of retained earnings, λ is assumed to be 0.1, implying that corporate shares have a mean holding period of ten years, which is in line with Södersten (1984). To compute the post-tax real rate of return to the saver, s, we use the following equation:

$$s = (1-m)(r+\pi) - \pi - w_p \tag{A.6}$$

where $i = r + \pi$ and w_p is the rate of personal wealth tax. Given the value of p and the computed value of s, the tax wedge, w, is $p - s$, and the effective tax rate, t, is w/p.

The effective tax rate can also be calculated given a fixed r (which is assumed to be 5 percent in King and Fullerton 1984). Given r, a discount rate, ρ, can be calculated depending on the source of finance (using equations (A.5a–c)), and p can then be calculated (using equation (A.4)). s can be calculated separately using equation (A.6) and the given r value. The tax wedge and effective tax rate can then be calculated as in the case with a fixed p. Typically, the tax wedge is computed by assuming a fixed p, and we conform to this practice.

As discussed briefly in the main text, the effective marginal tax on capital income can be calculated for three ownership categories (households, tax-exempt institutions, and insurance companies), three types of assets (machinery, buildings, and inventory), and three sources of finance (debt, retained earnings, and new share issues).

Average marginal effective tax rates can then be calculated by using the true division between type of owner, type of investment, and source of finance.

Appendix B. Allowances and Grants

The effective tax rate on corporate profits depends on the present discounted value of tax savings from depreciation allowances and other grants, the rules for the valuation of inventories, and allocations to different untaxed reserves, such as the investment funds (*investeringsfonder)* or profit equalization fund (*resultatutjämningsfond*).[48] As a result, the corporate tax rate was—particularly between the interwar years and 1990—substantially lower than the statutory tax rate.[49] This appendix discusses how we have included the opportunities to reduce the tax rate, in line with King and Fullerton (1984) and Södersten (1984), by estimating the present discounted value of tax savings from depreciation allowances and other grants associated with a unit investment (called A in the King and Fullerton (1984) terminology).[50]

The General Structure

Until 1928, the options to defer corporate taxes were limited, but the acquisition cost of machinery and equipment could be written off for tax purposes. Formal depreciation rules were first introduced in 1910.[51] Between the interwar years and 1990, Sweden had a high statutory corporate tax rate, but the corporate tax base was narrow because corporations had many opportunities to reduce their taxable income through accelerated depreciation allowances and allocations to untaxed reserves.

In 1928, the rules for the valuation of inventory stocks were relaxed (free inventory write-down), which decreased the effective tax rate. In 1939, immediate write-offs (free depreciation) of machinery and equipment and the investment funds system (IF system) were introduced. However, the IF system was not favorable and it held little importance at this time. In 1955, the IF system became more generous, particularly for investments in buildings (see further discussion below).

In 1955, immediate write-offs of machinery and equipment were also permanently abolished and replaced by less favorable rules.[52] The rules (which remained in use in 2013) allow depreciation for tax purposes at a rate of 30 percent per annum on a declining balance basis (the 30 percent rule), implying that firms are free to use accelerated depreciation (instead of immediate write-offs). Firms also have an option to choose—for all machinery and equipment—the book value that results from five years of straight-line depreciation (the 20 percent rule).

Between 1955 and 1984, inventory write-downs were limited to a maximum of 60 percent of the acquisition cost. Between 1961 and 1993, the so-called Annell deduction was also in place, which reduced effective corporate taxation on new share issues. Under these rules, firms were allowed to deduct dividends on newly issued shares against profits for six years initially, that is, corporations were entitled to mitigate the double taxation of dividends to a limited extent. The maximum rate

of deduction allowed was initially 4 percent per year but was increased to 5 percent in 1967 and to 10 percent in 1980; concurrently, the time period was extended first to ten and then to 20 years.[53] The IF system was used extensively during the 1970s and the first half of the 1980s, but it was favorable mainly for investments in buildings.

Between 1976 and 1978, firms were offered an extra investment allowance of 25 percent for machinery and equipment for state income tax purposes.[54] This allowance did not reduce the base of depreciation allowances, and it greatly reduced the effective tax rate until 1979, when the rules were repealed. The allowance was reintroduced in 1980 at a rate of 20 percent for both local and state income assessments and was discontinued again in 1981.

Table 3.2 Tax allowances in different time periods

Year	Tax allowances
1928	Free inventory write-down
1939	Immediate write-off (free depreciation) of machinery and equipment IF system introduced
1955	Maximum inventory write-down lowered to 60% Maximum of 30% for depreciation of machinery and equipment Allocations of IF up to 40% of profits, 50% interest-free deposition
1961	Annell deduction, maximum 4% of dividends on new shares for 6 years
1967	Annell deduction extended, maximum of 5% for 10 years
1976	25% extra investment allowance for machinery and equipment from national tax income
1979	Extra investment allowance discontinued Annell deduction extended, maximum of 10% for 20 years
1980	50% maximum allocations to IF 20% extra investment allowance for machinery and equipment from both national and local tax income Allocations to a profit equalization fund (RUF), maximum of 20% of wage costs
1981	Extra investment allowance discontinued
1984	Maximum inventory write-down diminished to 50%
1985	Interest-free Central Bank deposit raised to 75% of IF allocations
1987	Interest-free Central Bank deposit raised to 100% of IF allocations
1991	Tax-free allocation to a tax equalization fund (SURV) Inventory write-down (up to 50%), IF system and profit equalization fund (RUF) abolished
1994	Annell deduction abolished, SURV replaced by periodization funds

Source: SOU 1989:34, 15–21; Södersten (1993, 285–294). There were also temporary investment taxes on machinery, equipment, and inventory that can be regarded as negative investment subsidies in 1951–1953 and 1955–1957. Immediate write-offs were also abolished and reduced to a maximum of 20 percent on machinery and equipment between 1952 and 1954.

In 1980, a provision to reduce taxation through allocations to a profit equalization fund (*resultatutjämningsfond* or RUF; a maximum of 20 percent of wage costs) was introduced.[55]

As described in the text, the scope for deferring corporate taxes was further diminished by the 1990–1991 tax reform when the statutory tax rate was reduced to 30 percent and the profit-sharing tax was discontinued. To avoid reducing corporate tax revenue, the corporate tax base was substantially broadened. The IF system was discontinued, inventory write-downs were no longer allowed, and allocations to RUF were abolished. The reform also included a new option that enabled companies to reduce taxation through tax-free allocations to a tax equalization fund (*skatteutjämningsreserv* or SURV, in force between 1991 and 1993) and periodization funds (*periodiseringsfonder*, in force after 1994). The Annell deduction was abolished in 1994 when the tax on dividends was abolished, but it was not reintroduced when the tax exemption of dividends was retracted in the following year. Table 3.2 summarizes the most important tax allowances during the period examined.

Estimation of the Present Discounted Value of Tax Savings from Depreciation Allowances and Other Grants Associated with a Unit Investment (A)

Our calculations are focused on a marginal investment in *machinery and equipment*. In line with King and Fullerton (1984) and as described in Appendix A, we consider an investment project with an initial cost of one unit. The cost of the investment project—the initial payment for the asset—is unity minus the present discounted value of tax savings from depreciation allowances and other grants associated with a unit investment, which we denote by A. Therefore, the cost of the project (C) is:

$$C = 1 - A$$

To derive an expression for A in the case of retained earnings and debt during the 1862–2013 period, we follow King and Fullerton (1984, 19) and consider allowances for investments in machinery and equipment of three types: (1) standard depreciation allowances (accelerated write-offs), (2) immediate expensing or free depreciation (immediate write-offs), and (3) cash grants (equivalent to tax credits).[56] Denote f_i as the proportion of the acquisition cost that can be used for the different allowance possibilities (i = 1, 2, 3). The tax savings from immediate write-offs will then be $f_2\tau$. If we further denote A_d as the tax savings from accelerated depreciation allowances on a unit of investment and denote g as the rate of grant, then:

$$A = f_1 A_d + f_2\tau + f_3 g$$

Because immediate write-offs reduce the basis for accelerated depreciation allowances, the sum of $f_1 + f_2$ is restricted to one. The sum of f_1, f_2, and f_3 does not need to

be restricted to unity because depreciation does not reduce the basis for investment grants. A_d can be calculated as:

$$A_d = \frac{\tau a}{a + \rho}$$

where τ is the statutory corporate tax rate, a is an exponential depreciation rate (corresponding to a declining-balance depreciation of a), and ρ is the discount rate.

In the case of new share issues, A is calculated as (King and Fullerton 1984, 322):

$$A = f_1 A_d + f_2 \tau + f_3 g + A_A$$

where A_A refers to the present value of tax savings from the Annell deduction, with a unit investment. A_A is calculated as (King and Fullerton 1984, 322–323):

$$A_A = \frac{\tau h[1 - e^{-\rho\omega}]}{\rho - \pi + \delta}\left[1 - \left(\frac{\rho - \pi + \delta}{\rho}\right)\left(f_1 A_d + f_2 \tau - \frac{\tau(\delta - \pi)}{\rho - \pi + \delta}\right)\right]$$

where h refers to the rate of the Annell deduction per dollar of new share issues and ω is the number of years that the deduction is permitted after the new share issues. As discussed above, h increased from 4 percent in 1961 to 5 percent in 1967 and then to 10 percent in 1979. Similarly, ω increased from 6 years to 10 years (1967) and then to 20 years (1979). There was also an upper limit to the deduction (from 1979) that required that the total deduction did not exceed the amount raised by the issue, that is, $h\omega = 1$. As explained above, the average dividend was approximately 6 percent on new share issues at the end of the 1970s. Hence, we will use $h = 0.06$ and $\omega = 16.7$ for the 1980–1993 period.[57] When the Annell deduction was not in effect, A is calculated as in the case of retained earnings and debt.

The higher the statutory tax rate, the more important it is to find a reasonable estimate of A. Because the statutory corporate tax rate was low (below 25 percent in our calculation) before the 1930s, the accuracy of the estimate only slightly affects the effective tax rate for this period.

Immediate write-offs were allowed between 1939 and 1954. From 1955 onward, accelerated write-offs (the 30 and 20 percent rules) were in force.[58] We base our estimations on the 30 percent rule during this time, that is, $a = 0.3$. As the first allowance may be taken in the first year of acquisition, $f_1 = 0.7$, and $f_2 = 0.3$.[59] When cash grants in the form of extra investment allowances were in effect from 1976 to 1978 and in 1980, the calculations are adjusted accordingly. Before 1939, the extent of accelerated write-offs is difficult to estimate because of a lack of studies. Because it was possible to use limited depreciation before 1939, we have assumed that the acquisition cost could be depreciated for tax purposes by using the 30 percent rule.[60] The estimations

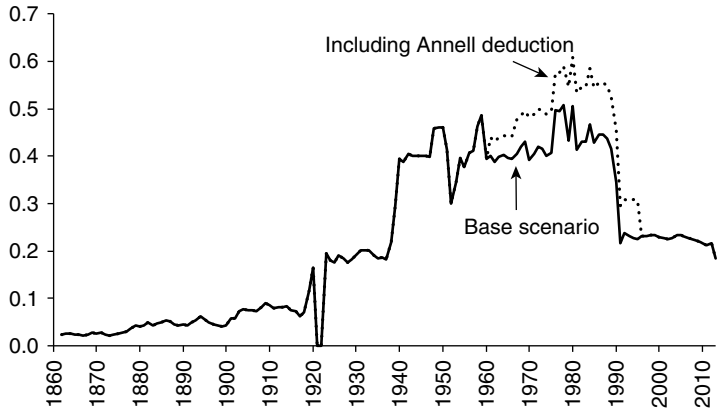

Figure 3.10 The present discounted value of tax savings from depreciation allowances and other grants (*A*) given an initial cost of one unit.

Note: Based on assumptions given in the text.

Source: Own calculations.

should also include the effects from the IF system, which was introduced in 1939 and abolished in 1991. However, the IF system was most favorable for investments in buildings and was less favorable for investments in machinery and equipment (see the next section).

The evolution of *A* is depicted in Figure 3.10. The present discounted value of tax savings from depreciation allowances and other grants associated with a unit investment is initially small but increases sharply in 1939 with the introduction of immediate write-offs and increase of the statutory corporate tax rate. *A* remains relatively high until the 1990–1991 tax reform when the statutory corporate tax rate was almost cut in half and when the value of tax savings thus decreased. However, the value of *A* after the 1990–1991 tax reform is higher than the estimated value of *A* before World War II, that is, during the first half of the period examined. In the figure, we have also included the effect of the Annell deduction, which increases the value of *A* somewhat between 1961 and 1993 (this example only applies in the case of new share issues).

The Investment Fund System[61]

As described above, the IF system was introduced in 1939, but it did not have an important effect until 1955. The system's purpose was to stabilize the economy and change the timing of investments from booms to busts through the tax system. The rules behind the system were complicated and changed over time. In general, the system allowed firms to reduce their taxable profit by transferring part of the profit, normally 40–50 percent, to an investment fund. Part of this allocation, which was

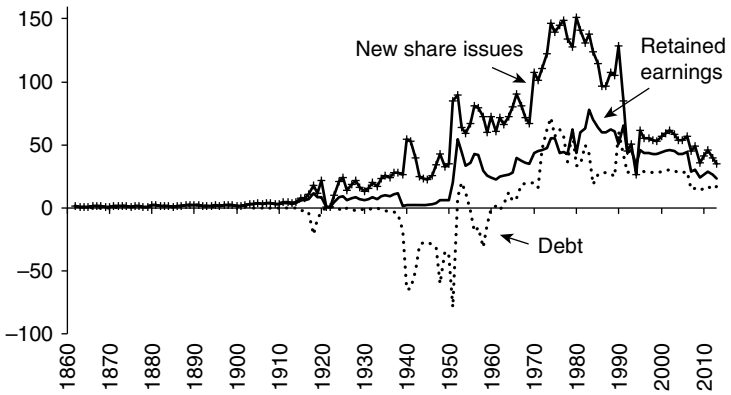

Figure 3.11 The METR for an investment financed by new share issues, retained earnings, and debt for an average production worker, including effects from the IF system, 1862–2013 (%).

Note: Based on assumptions given in the text.

Source: Own calculations.

normally 40–50 percent (but at the end of the 1980s, it could be much higher), had to be deposited in a zero-interest account in the central bank. The deposits could be withdrawn and used for new investments after discretionary decisions by the government.[62] The rules also stipulated that regular depreciation allowances did not apply to investments financed by IF funds. Thus, the IF system was most favorable for investments in buildings because the net present value of depreciation allowances was lower for buildings than for machinery and equipment.

Our previous calculations do not include any effect from the IF system. The precise effect of the IF system cannot be determined without making additional assumptions. Södersten (1993, 281) claims that the conventional way to calculate the effect of using IF funds is based on special circumstances and that the effects of the IF system are substantially reduced when these assumptions are not fulfilled.[63] When funds are released, the IF system can be characterized as a general profit subsidy, which can be interpreted as a general reduction in the statutory tax rate.[64] According to Agell, Englund, and Södersten (1995, 116), a reasonable assumption about the IF system is that it might reduce the corporate tax rate by approximately 15 percentage points. Such a reduction may reduce the METR by approximately 10 percentage points; see Figure 3.11.[65] It is clear from the figure that the general pattern will remain the same.

The Corporate METR

One can also recalculate the METR and exclude personal taxes (income and wealth taxes), that is, only include and analyze the effect of the corporate tax. With this

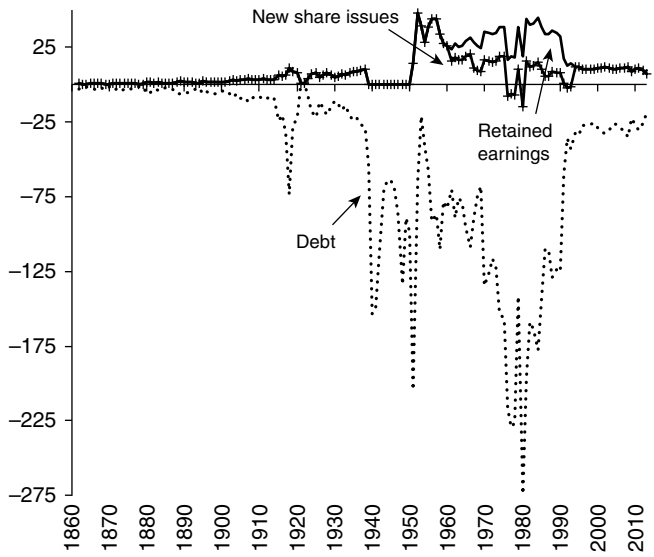

Figure 3.12 The METR, corporate taxes only (corporate METR) (%).

Note: Based on assumptions given in the text.

Source: Own calculations.

measure, one can see the proportion of the METR that results from taxation at the corporate level. Figure 3.12 shows the result of this calculation.

For equity financing, including new share issues and retained earnings, the corporate METR was low during the nineteenth century and began to increase between World War I and World War II (excluding the spike during World War I). It seldom exceeded 10 percent. When immediate write-offs were allowed and when no investment tax was in force, that is, between 1939 and 1950, the corporate METR was 0. When immediate write-offs were discontinued and when temporary investment taxes were introduced, the corporate METR increased sharply. When the temporary investment taxes were abolished, the corporate METR initially decreased, but soon began to gradually increase again until the 1980s, with the exception of some temporary dips due to investment grants in 1976–1978 and in 1980. It peaked at above 40 percent in the 1980s, but the highest level was reached in the 1950s. The corporate METR in the case of new share issues was lower than retained earnings between 1961 and 1993 because of the Annell deduction; otherwise, it follows the same pattern. After the 1990–1991 tax reform, the corporate METR remained between 10 and 15 percent. No corporate tax is paid on the marginal return in the case of debt financing because interest is deductible. Hence, the corporate METR is negative. It is occasionally very low: it is below minus 200 percent in 1980 when investment grants were used and when inflation was high.

Appendix C. Tax Tables

Statutory Corporate Tax

This appendix presents statutory corporate tax schedules for each year between 1862 and 2013. The row in each table refers to a tax income bracket, beginning at indicated profit. Corporations and individual taxpayers were taxed identical with the same tax schedules until 1910. Corporate taxation includes both a state tax and a local tax (until 1984), as well as several temporary taxes, such as defense taxes during World War I and World War II.

Table 3.3 The state marginal tax rate (appropriation tax), 1862–1910

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

Note: 1862–1883: If the state taxable profit did not exceed SEK 1,800, SEK 300 was exempted from taxation.
1884–1910: If the state taxable profit did not exceed SEK 1,200, SEK 450 was exempted from taxation. If the state taxable profit amounted to SEK 1,200 but did not exceed SEK 1,800, SEK 300 was exempted from taxation.
Extra appropriations are not included in the numbers. After 1911, the tax still existed as a local tax with the tax rate 0.1 percent above SEK 500.

Source: Du Rietz, Johansson, and Stenkula (2015).

Table 3.4 Temporary appropriation tax

State taxable profit, SEK	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: Du Rietz, Johansson, and Stenkula (2015).

Table 3.5 The state marginal tax rate, 1903–1910

State taxable profit, SEK	Marginal tax rate, %
0	0
1,000	1.0
6,000	1.5
10,000	2.0
15,000	2.5
20,000	3.0
30,000	3.5
50,000	4.0
80,000	5.0
145,500	4.0

Note: State taxable profit = profit – dividends paid (maximum 6 percent of equity).

Source: Genberg (1942, 26); SFS 1902:84; own calculations.

Table 3.6 The state income tax rate, 1911–1919

Profitability, %	Tax rate, %	Profitability, %	Tax rate, %
0	2.5	18.5	3.90
5.0	2.55	19.0	3.95
5.5	2.60	19.5	4.00
6.0	2.65	20.0	4.05
6.5	2.70	21.0	4.10
7.0	2.75	22.0	4.15
7.5	2.80	23.0	4.20
8.0	2.85	24.0	4.25
8.5	2.90	25.0	4.30
9.0	2.95	26.0	4.35
9.5	3.00	27.0	4.40
10.0	3.05	28.0	4.45
10.5	3.10	29.0	4.50
11.0	3.15	30.0	4.55
11.5	3.20	32.0	4.60
12.0	3.25	34.0	4.65
12.5	3.30	36.0	4.70
13.0	3.35	38.0	4.75

continued

Table 3.6 Continued

Profitability, %	Tax rate, %	Profitability, %	Tax rate, %
13.5	3.40	40.0	4.80
14.0	3.45	45.0	4.85
14.5	3.50	50.0	4.90
15.0	3.55	55.0	4.95
15.5	3.60	60.0	5.00
16.0	3.65	70.0	5.05
16.5	3.70	80.0	5.10
17.0	3.75	90.0	5.15
17.5	3.80	100.0	5.20
18.0	3.85		

Note: Profitability = profit/equity.
All profit is taxed according to the tax rates above, that is, if profitability is between 9.5 and 10 percent, the company has to pay 3 percent of *all* profit in corporate tax.
Source: Genberg (1942, 26); SFS 1910:115.

Table 3.7 The state income tax rate, 1920–1938

Profitability, %	Basic rate	Profitability, %	Basic rate	Withdrawal percentage, %	
0	1.5	22.0	7.60	Income year	
4.0	1.6	23.0	7.75	1920	155
4.25	1.7	24.0	7.90	1921	175
4.5	1.8	25.5	8.05	1922	175
4.75	1.9	27.0	8.20	1923	175
5.0	2.0	28.5	8.35	1924	175
5.33	2.2	30.0	8.50	1925	170
5.67	2.4	32.0	8.65	1926	160
6.0	2.6	34.0	8.80	1927	160
6.33	2.8	36.0	8.95	1928	150
6.67	3.0	39.0	9.10	1929	145
7.0	3.2	42.0	9.25	1930	145
7.33	3.4	46.0	9.40	1931	145
7.67	3.6	50.0	9.55	1932	145
8.0	3.8	55.0	9.70	1933	165
8.5	4.0	60.0	9.85	1934	170
9.0	4.2	65.0	10.00	1935	170
9.5	4.4	70.0	10.15	1936	170
10.0	4.6	75.0	10.30	1937	170

continued

Table 3.7 Continued

Profitability, %	Basic rate	Profitability, %	Basic rate	Withdrawal percentage, %	
10.5	4.8	80.0	10.45	1938	180
11.0	5.0	85.0	10.60		
11.5	5.2	90.0	10.75		
12.0	5.4	95.0	10.90		
12.5	5.6	100.0	11.00		
13.0	5.8	105.0	11.10		
13.67	6.0	110.0	11.20		
14.33	6.2	115.0	11.30		
15.0	6.4	120.0	11.40		
16.0	6.6	125.0	11.50		
17.0	6.8	130.0	11.60		
18.0	7.0	135.0	11.70		
19.0	7.15	140.0	11.80		
20.0	7.30	145.0	11.90		
21.0	7.45	150.0	12.00		

Note: Profitability = profit/equity. Local tax paid was deductible.
To calculate the exact tax rate for a specific year between 1920 and 1938, one has to multiply the basic rate by the withdrawal percentage for the specific year. All profit is taxed according to the tax rates above, that is, if the profitability is 10 percent, then the company has to pay 4.6% · 1.55 = 7.13% of *all* profit in corporate tax in 1920.

Source: SFS 1919:733; Genberg (1942, 8–9, 26).

Table 3.8 The state marginal tax rate, 1939–1947

Year	Marginal tax rate, %
1939	13
1940	20
1941	20
1942	20
1943	20
1944	20
1945	20
1946	20
1947	20

Note: Formally, the tax rate was 10 percent, but the withdrawal percentage was 130 percent in 1939 and 200 percent between 1940 and 1947.

Source: Genberg (1942, 27); Rodriguez (1980).

Table 3.9 The state marginal tax rate, 1948–2013

Year	Marginal tax rate, %	Year	Marginal tax rate, %	Year	Marginal tax rate, %
1948	40	1973	40	1998	28
1949	40	1974	40	1999	28
1950	40	1975	40	2000	28
1951	40	1976	40	2001	28
1952	40	1977	40	2002	28
1953	40	1978	40	2003	28
1954	40	1979	40	2004	28
1955	45	1980	40	2005	28
1956	50	1981	40	2006	28
1957	50	1982	40	2007	28
1958	50	1983	40	2008	28
1959	50	1984	40	2009	26.3
1960	40	1985	52	2010	26.3
1961	40	1986	52	2011	26.3
1962	40	1987	52	2012	26.3
1963	40	1988	52	2013	22
1964	40	1989	52		
1965	40	1990	40		
1966	40	1991	30		
1967	40	1992	30		
1968	40	1993	30		
1969	40	1994	28		
1970	40	1995	28		
1971	40	1996	28		
1972	40	1997	28		

Note: An additional "profit sharing tax" was in force between 1984 and 1990 but is not included in the figures above. The tax rate from this tax cannot be easily expressed as a single statutory tax rate. We have assumed that this tax increased the statutory tax rate by 5 percentage points during this time period.

Source: Nordling (1989); Södersten (1993); Agell, Englund, and Södersten (1995); Ministry of Finance (2008, 2013).

Table 3.10 The local corporate tax rate, 1862–1984

Year	Local tax, %	Year	Local tax, %	Year	Local tax, %
1862	2.0	1903	5.2	1944	10.1
1863	2.0	1904	5.2	1945	10.0

continued

Table 3.10 Continued

Year	Local tax, %	Year	Local tax, %	Year	Local tax, %
1864	2.0	1905	5.4	1946	10.0
1865	2.0	1906	5.4	1947	9.8
1866	2.0	1907	5.4	1948	9.8
1867	2.0	1908	6.2	1949	10.1
1868	2.0	1909	6.8	1950	10.0
1869	2.0	1910	6.3	1951	10.2
1870	2.0	1911	6.1	1952	12.5
1871	2.0	1912	6.2	1953	12.7
1872	2.0	1913	6.1	1954	12.4
1873	2.0	1914	6.4	1955	12.2
1874	2.0	1915	7.2	1956	12.4
1875	2.2	1916	6.5	1957	12.6
1876	2.5	1917	6.2	1958	13.7
1877	2.8	1918	6.8	1959	14.2
1878	3.0	1919	7.2	1960	14.6
1879	3.3	1920	6.5	1961	15.0
1880	3.8	1921	8.1	1962	15.2
1881	3.9	1922	8.1	1963	15.5
1882	4.1	1923	8.3	1964	16.5
1883	4.2	1924	8.7	1965	17.3
1884	4.3	1925	8.7	1966	18.3
1885	4.5	1926	8.7	1967	18.7
1886	4.9	1927	8.7	1968	19.3
1887	4.9	1928	8.5	1969	20.2
1888	4.8	1929	8.3	1970	21.0
1889	4.7	1930	8.7	1971	22.5
1890	4.6	1931	10.2	1972	23.8
1891	4.6	1932	11.0	1973	23.9
1892	4.7	1933	10.5	1974	24.0
1893	4.8	1934	9.9	1975	25.2
1894	4.9	1935	9.5	1976	26.2
1895	4.8	1936	9.6	1977	26.9
1896	4.7	1937	9.6	1978	28.7
1897	4.6	1938	10.5	1979	29.0
1898	4.5	1939	11.5	1980	29.1

continued

Table 3.10 Continued

Year	Local tax, %	Year	Local tax, %	Year	Local tax, %
1899	4.3	1940	11.9	1981	29.6
1900	4.4	1941	11.1	1982	29.7
1901	4.8	1942	10.5	1983	30.2
1902	5.0	1943	10.2	1984	30.3

Source: Du Rietz, Johansson, and Stenkula (2015).

Table 3.11 The local progressive income tax, 1920–1927

Profitability, %	Marginal tax rate, %
0	0
6.0	1
11.0	2
16.0	3
21.0	4
26.0	5
34.0	6
42.0	7
52.0	8
64.5	5

Note: Profitability = profit/equity. In the highest tax income bracket, the marginal tax rate is lower because of the average tax cap.

Source: Genberg (1942, 26).

Table 3.12 The local progressive income tax, 1928–1938

Profitability, %	Tax rate, %	Profitability, %	Tax rate, %
0	0	32	1.95
7	0.075	33	2.025
8	0.15	35	2.10
9	0.225	36	2.175
10	0.30	36	2.25
11	0.375	37	2.325
12	0.45	38	2.40
13	0.525	39	2.475

continued

Table 3.12 Continued

Profitability, %	Tax rate, %	Profitability, %	Tax rate, %
14	0.60	40	2.55
15	0.675	41	2.625
16	0.75	42	2.70
17	0.825	43	2.775
18	0.90	44	2.85
19	0.975	45	2.925
20	1.05	46	3.00
21	1.125	47	3.075
22	1.20	48	3.15
23	1.275	49	3.225
24	1.35	50	3.30
25	1.425	51	3.375
26	1.50	52	3.45
27	1.575	53	3.525
28	1.65	54	3.60
29	1.725	55	3.675
30	1.80	56	3.75
31	1.875		

Note: The tax rate was equal to 3/40 · (profitability–6%). There was also an average tax cap of 3.75 percent. Profitability = profit/equity. All profit is taxed according to the tax rates above, that is, if the profitability is 10 percent, then the company has to pay 0.3 percent of *all* profit in corporate tax. This table is an illustration and shows the tax rate for profitability in integers. To obtain the tax rate for profitability rates between the integer levels, one has to use the formula given above.

Source: Genberg (1942, 27).

Table 3.13 The state equalization tax, 1928–1933

Profitability, %	Tax rate, %	Profitability, %	Tax rate, %
0	0.0	32	0.65
7	0.025	33	0.675
8	0.05	35	0.7
9	0.075	36	0.725
10	0.10	36	0.75
11	0.125	37	0.775
12	0.15	38	0.8
13	0.175	39	0.825

continued

Table 3.13 Continued

Profitability, %	Tax rate, %	Profitability, %	Tax rate, %
14	0.20	40	0.85
15	0.225	41	0.875
16	0.25	42	0.9
17	0.275	43	0.925
18	0.30	44	0.95
19	0.325	45	0.975
20	0.35	46	1
21	0.375	47	1.025
22	0.40	48	1.05
23	0.425	49	1.075
24	0.45	50	1.1
25	0.475	51	1.125
26	0.50	52	1.15
27	0.525	53	1.175
28	0.55	54	1.2
29	0.575	55	1.225
30	0.60	56	1.25
31	0.625		

Note: Profitability = profit/equity. Formally, the state equalization tax was one-third of the local progressive income tax. All profit is taxed according to the tax rates above, that is, if the profitability is 10 percent, then the company has to pay 0.1 percent of *all* profit in corporate tax.

Source: Genberg (1942, 27).

Table 3.14 The state equalization tax, 1934–1938

Profitability, %	Tax rate, %	Profitability, %	Tax rate, %
0	0.0	32	1.30
7	0.05	33	1.35
8	0.10	35	1.40
9	0.15	36	1.45
10	0.20	36	1.50
11	0.25	37	1.55
12	0.30	38	1.60
13	0.35	39	1.65
14	0.40	40	1.70

continued

Table 3.14 Continued

Profitability, %	Tax rate, %	Profitability, %	Tax rate, %
15	0.45	41	1.75
16	0.50	42	1.80
17	0.55	43	1.85
18	0.60	44	1.90
19	0.65	45	1.95
20	0.70	46	2.00
21	0.75	47	2.05
22	0.80	48	2.10
23	0.85	49	2.15
24	0.90	50	2.20
25	0.95	51	2.25
26	1.00	52	2.30
27	1.05	53	2.35
28	1.10	54	2.40
29	1.15	55	2.45
30	1.20	56	2.50
31	1.25		

Note: Profitability = profit/equity. Formally, the state equalization tax was two-thirds of the local progressive income tax. All profit is taxed according to the tax rates above, that is, if the profitability is 10 percent, then the company has to pay 0.2 percent of *all* profit in corporate tax.

Source: Genberg (1942, 27).

Table 3.15 The defense tax in 1918

Profitability, %	Tax rate, %	Profitability, %	Tax rate, %	Profitability, %	Tax rate, %
0.00	0	13.50	2.10	36.00	3.30
5.00	0.36	14.00	2.13	38.00	3.35
5.33	0.56	14.50	2.16	40.00	3.40
5.67	0.76	15.00	2.20	45.00	3.45
6.00	0.96	15.50	2.25	50.00	3.50
6.33	1.16	16.00	2.30	55.00	3.55
6.67	1.36	16.50	2.35	60.00	3.60
7.00	1.56	17.00	2.40	65.00	3.65
7.33	1.59	17.50	2.45	70.00	3.70
7.67	1.62	18.00	2.50	75.00	3.75

continued

Table 3.15 Continued

Profitability, %	Tax rate, %	Profitability, %	Tax rate, %	Profitability, %	Tax rate, %
8.00	1.65	18.50	2.55	80.00	3.80
8.33	1.68	19.00	2.60	85.00	3.85
8.67	1.71	20.00	2.65	90.00	3.90
9.00	1.74	21.00	2.70	95.00	3.95
9.33	1.77	22.00	2.75	100.0	4.00
9.67	1.80	23.00	2.80	105.0	4.10
10.00	1.83	24.00	2.85	110.0	4.20
10.33	1.86	25.00	2.90	115.0	4.30
10.67	1.89	26.00	2.95	120.0	4.40
11.00	1.92	27.00	3.00	125.0	4.50
11.33	1.95	28.00	3.05	130.0	4.60
11.67	1.98	29.00	3.10	135.0	4.70
12.00	2.01	30.00	3.15	140.0	4.80
12.50	2.04	32.00	3.20	145.0	4.90
13.00	2.07	34.00	3.25	150.0	5.00

Note: Profitability = profit/equity. All profit is taxed according to the tax rates above, that is, if profitability is 10 percent, the company has to pay 1.83 percent of *all* profit in defense tax.

Source: SFS 1918:512.

Table 3.16 The defense tax in 1919

Profitability, %	Tax rate, %	Profitability, %	Tax rate, %	Profitability, %	Tax rate, %
0.00	0.00	13.50	4.20	36.00	6.60
5.00	0.72	14.00	4.26	38.00	6.70
5.33	1.12	14.50	4.32	40.00	6.80
5.67	1.52	15.00	4.40	45.00	6.90
6.00	1.92	15.50	4.50	50.00	7.00
6.33	2.32	16.00	4.60	55.00	7.10
6.67	2.72	16.50	4.70	60.00	7.20
7.00	3.12	17.00	4.80	65.00	7.30
7.33	3.18	17.50	4.90	70.00	7.40
7.67	3.24	18.00	5.00	75.00	7.50
8.00	3.30	18.50	5.10	80.00	7.60

continued

Table 3.16 Continued

Profitability, %	Tax rate, %	Profitability, %	Tax rate, %	Profitability, %	Tax rate, %
8.33	3.36	19.00	5.20	85.00	7.70
8.67	3.42	20.00	5.30	90.00	7.80
9.00	3.48	21.00	5.40	95.00	7.90
9.33	3.54	22.00	5.50	100.0	8.00
9.67	3.60	23.00	5.60	105.0	8.20
10.00	3.66	24.00	5.70	110.0	8.40
10.33	3.72	25.00	5.80	115.0	8.60
10.67	3.78	26.00	5.90	120.0	8.80
11.00	3.84	27.00	6.00	125.0	9.00
11.33	3.90	28.00	6.10	130.0	9.20
11.67	3.96	29.00	6.20	135.0	9.40
12.00	4.02	30.00	6.30	140.0	9.60
12.50	4.08	32.00	6.40	145.0	9.80
13.00	4.14	34.00	6.50	150.0	10.00

Note: Profitability = profit/equity. All profit is taxed according to the tax rates above, that is, if profitability is 10 percent, the company has to pay 3.66 percent of *all* profit in defense tax.

Source: SFS 1918:513.

Table 3.17 The defense tax during World War II

Year	Marginal tax rate, %
1939	6.5
1940	10
1941	10
1942	12
1943	12
1944	12
1945	12
1946	12
1947	12

Source: Genberg (1942, 27); Nordling (1989, 62).

Table 3.18 Marginal personal tax rate on interest income, 1862–2013

Year	0.67	APW	1.67	Top	Year	0.67	APW	1.67	Top	Year	0.67	APW	1.67	Top
1862	2.0	3.0	3.0	3.0	1906	6.4	6.4	7.4	11.4	1950	21.6	25.1	28.7	73.0
1863	2.0	3.0	3.0	3.0	1907	6.4	6.4	7.4	11.4	1951	21.8	25.3	31.7	73.1
1864	2.0	3.0	3.0	3.0	1908	7.2	7.2	8.2	12.2	1952	25.5	28.1	36.1	73.8
1865	2.0	3.0	3.0	3.0	1909	7.8	7.8	8.8	12.8	1953	25.0	28.8	38.6	69.5
1866	2.0	2.0	3.0	3.0	1910	7.3	7.3	8.3	12.3	1954	25.3	32.9	38.4	69.3
1867	2.0	2.0	3.0	3.0	1911	6.2	6.8	7.2	12.2	1955	25.2	32.8	41.2	69.3
1868	2.0	2.0	3.0	3.0	1912	6.3	6.9	7.5	12.3	1956	29.1	32.9	41.3	69.3
1869	2.0	2.0	3.0	3.0	1913	6.2	6.8	7.4	25.7	1957	29.3	33.5	40.6	69.4
1870	2.0	2.0	3.0	3.0	1914	6.5	7.1	7.7	12.5	1958	30.1	35.3	41.3	69.8
1871	2.0	2.0	3.5	3.5	1915	7.3	7.9	8.5	13.3	1959	31.6	38.2	41.7	70.0
1872	2.0	3.0	3.0	3.0	1916	7.0	7.4	8.0	12.6	1960	32.0	38.5	41.9	70.1
1873	2.0	3.0	3.0	3.0	1917	6.9	7.3	7.7	12.3	1961	32.3	38.8	45.6	70.3
1874	2.0	3.0	3.0	3.0	1918	7.7	8.1	8.7	29.9	1962	34.9	39.0	45.8	70.3
1875	2.2	3.2	3.2	3.2	1919	8.5	8.7	9.3	30.3	1963	35.1	39.1	50.1	70.4
1876	2.5	3.5	3.5	3.5	1920	11.7	11.8	12.1	33.3	1964	35.9	43.9	50.7	70.8
1877	2.6	3.6	3.6	3.6	1921	12.9	13.0	13.0	36.4	1965	36.4	42.1	51.2	71.0
1878	3.0	4.0	4.0	4.0	1922	12.9	13.0	13.0	36.5	1966	38.8	42.7	52.9	71.4
1879	3.3	4.8	4.8	4.8	1923	13.1	13.2	13.2	36.6	1967	43.3	46.4	53.4	71.5
1880	3.8	5.3	5.3	5.3	1924	13.5	13.5	13.5	36.9	1968	44.1	47.1	54.0	71.8
1881	3.9	5.4	5.4	5.4	1925	13.3	13.4	13.4	36.2	1969	44.7	47.7	55.3	72.1
1882	4.1	5.6	5.6	5.6	1926	13.1	13.2	13.2	35.0	1970	45.2	48.2	55.8	72.4

1883	4.2	5.2	5.2	5.2	1927	13.1	13.2	13.2	35.1	1971	35.9	47.3	60.6	76.5
1884	4.3	5.3	5.3	5.3	1928	12.6	12.7	12.7	33.8	1972	42.8	57.7	61.8	77.8
1885	4.5	5.5	5.5	5.5	1929	12.3	12.3	12.3	32.9	1973	40.1	62.3	61.9	77.9
1886	4.9	5.9	5.9	5.9	1930	12.7	12.7	12.7	33.1	1974	43.9	61.6	62.0	78.0
1887	4.9	5.9	5.9	5.9	1931	14.1	14.1	14.1	34.5	1975	47.2	58.2	73.2	81.2
1888	4.8	5.8	5.8	5.8	1932	14.8	14.8	14.8	38.5	1976	48.2	64.2	75.2	83.2
1889	4.7	5.7	5.7	5.7	1933	14.9	14.9	14.9	40.7	1977	41.9	62.9	75.9	84.9
1890	4.6	5.6	5.6	5.6	1934	14.5	14.5	14.5	42.2	1978	41.7	59.7	77.7	86.7
1891	4.6	5.6	5.6	5.6	1935	14.2	14.2	14.2	42.0	1979	45.0	62.0	78.0	87.0
1892	4.7	5.7	5.7	5.7	1936	15.0	14.2	14.2	45.4	1980	43.1	59.1	82.1	85.0
1893	4.8	5.8	6.1	6.1	1937	15.0	14.2	14.2	45.4	1981	43.6	55.6	82.6	85.0
1894	4.9	5.9	6.9	6.9	1938	16.2	15.4	15.4	47.3	1982	43.7	58.7	82.7	85.0
1895	4.8	5.8	6.8	6.8	1939	19.5	18.7	18.7	59.0	1983	40.2	53.2	75.2	84.0
1896	4.7	5.7	5.7	6.0	1940	23.0	22.2	24.0	65.4	1984	37.3	53.3	70.3	82.0
1897	4.6	5.6	5.6	5.6	1941	22.3	21.5	23.3	65.1	1985	34.4	50.4	65.4	80.0
1898	4.5	5.5	5.5	5.5	1942	21.9	21.9	24.2	72.0	1986	45.3	50.3	70.3	80.3
1899	4.3	5.3	5.3	5.3	1943	21.6	21.6	23.9	71.9	1987	43.4	50.4	70.4	77.4
1900	4.4	5.4	5.4	5.4	1944	21.6	21.6	23.8	71.9	1988	50.6	50.6	75.6	75.6
1901	4.8	5.8	5.8	6.8	1945	21.5	21.5	23.7	71.9	1989	47.8	47.8	72.8	72.8
1902	5.0	6.0	6.5	7.0	1946	21.5	21.5	23.7	71.9	1990	41.2	55.2	66.2	66.2
1903	5.2	6.2	7.2	11.2	1947	21.3	23.6	25.8	71.8	1991–2013	30.0	30.0	30.0	30.0
1904	6.2	6.2	7.2	11.2	1948	20.6	23.2	26.8	72.9	2013				
1905	6.4	6.4	7.4	11.4	1949	20.8	25.3	28.8	73.0					

Note: Based on assumptions given in the text. APW, 0.67 and 1.67 refer to the marginal tax of a taxpayer with an average annual wage of a production worker (APW) and a taxpayer earning 0.67 or 1.67 APW. Top is the highest tax rate.

Source: Du Rietz, Johansson, and Stenkula (2015); own calculations.

Table 3.19 Marginal personal tax rate on dividends, 1862–2013

Year	0.67	APW	1.67	Top	Year	0.67	APW	1.67	Top	Year	0.67	APW	1.67	Top
1862–					1938	16.2	15.4	15.4	47.3	1975	47.2	58.2	73.2	81.2
1902	n.a.	n.a.	n.a.	n.a.	1939	19.5	18.7	18.7	59.0	1976	48.2	64.2	75.2	83.2
1903	0.0	0.0	1.0	5.0	1940	23.0	22.2	24.0	65.4	1977	41.9	62.9	75.9	84.9
1904	0.0	0.0	1.0	5.0	1941	22.3	21.5	23.3	65.1	1978	41.7	59.7	77.7	86.7
1905	0.0	0.0	1.0	5.0	1942	21.9	21.9	24.2	72.0	1979	45.0	62.0	78.0	87.0
1906	0.0	0.0	1.0	5.0	1943	21.6	21.6	23.9	71.9	1980	43.1	59.1	82.1	85.0
1907	0.0	0.0	1.0	5.0	1944	21.6	21.6	23.8	71.9	1981	43.6	55.6	82.6	85.0
1908	0.0	0.0	1.0	5.0	1945	21.5	21.5	23.7	71.9	1982	43.7	58.7	82.7	85.0
1909	0.0	0.0	1.0	5.0	1946	21.5	21.5	23.7	71.9	1983	40.2	53.2	75.2	84.0
1910	0.0	0.0	1.0	5.0	1947	21.3	23.6	25.8	71.8	1984	37.3	53.3	70.3	82.0
1911	0.0	0.6	1.0	6.0	1948	20.6	23.2	26.8	72.9	1985	34.4	50.4	65.4	80.0
1912	0.0	0.6	1.2	6.0	1949	20.8	25.3	28.8	73.0	1986	45.3	50.3	70.3	80.3
1913	0.0	0.6	1.2	19.5	1950	21.6	25.1	28.7	73.0	1987	43.4	50.4	70.4	77.4
1914	0.0	0.6	1.2	6.0	1951	21.8	25.3	31.7	73.1	1988	50.6	50.6	75.6	75.6
1915	0.0	0.6	1.2	6.0	1952	25.5	28.1	36.1	73.8	1989	47.8	47.8	72.8	72.8
1916	0.4	0.8	1.4	6.0	1953	25.0	28.8	38.6	69.5	1990	41.2	55.2	66.2	66.2
1917	0.6	1.0	1.4	6.0	1954	25.3	32.9	38.4	69.3	1991	30.0	30.0	30.0	30.0
1918	0.8	1.2	1.8	23.0	1955	25.2	32.8	41.2	69.3	1992	25.0	25.0	25.0	25.0
1919	1.2	1.4	2.0	23.0	1956	29.1	32.9	41.3	69.3	1993	25.0	25.0	25.0	25.0
1920	11.7	11.8	12.1	33.3	1957	29.3	33.5	40.6	69.4	1994	0.0	0.0	0.0	0.0

1921	12.9	13.0	13.0	36.4	1958	30.1	35.3	41.3	69.8	1995–	30.0	30.0	30.0	30.0
1922	12.9	13.0	13.0	36.5	1959	31.6	38.2	41.7	70.0	2013				
1923	13.1	13.2	13.2	36.6	1960	32.0	38.5	41.9	70.1					
1924	13.5	13.5	13.5	36.9	1961	32.3	38.8	45.6	70.3					
1925	13.3	13.4	13.4	36.2	1962	34.9	39.0	45.8	70.3					
1926	13.1	13.2	13.2	35.0	1963	35.1	39.1	50.1	70.4					
1927	13.1	13.2	13.2	35.1	1964	35.9	43.9	50.7	70.8					
1928	12.6	12.7	12.7	33.8	1965	36.4	42.1	51.2	71.0					
1929	12.3	12.3	12.3	32.9	1966	38.8	42.7	52.9	71.4					
1930	12.7	12.7	12.7	33.1	1967	43.3	46.4	53.4	71.5					
1931	14.1	14.1	14.1	34.5	1968	44.1	47.1	54.0	71.8					
1932	14.8	14.8	14.8	38.5	1969	44.7	47.7	55.3	72.1					
1933	14.9	14.9	14.9	40.7	1970	45.2	48.2	55.8	72.4					
1934	14.5	14.5	14.5	42.2	1971	35.9	47.3	60.6	76.5					
1935	14.2	14.2	14.2	42.0	1972	42.8	57.7	61.8	77.8					
1936	15.0	14.2	14.2	45.4	1973	40.1	62.3	61.9	77.9					
1937	15.0	14.2	14.2	45.4	1974	42.3	61.6	62.0	78.0					

Note: n.a. = not applicable.
Based on assumptions given in the text. Dividends were tax exempt before 1903. APW, 0.67, and 1.67 refer to the marginal tax of a taxpayer with an average annual wage of a production worker (APW) and a taxpayer earning 0.67 or 1.67 APW. Top is the highest tax rate.

Source: Du Rietz, Johansson, and Stenkula (2015); own calculations.

Table 3.20 Effective accrued capital gains tax for an average production worker, 1862–2013 (long-term possession)

Year	%	Year	%
1862–		1989	9.9
1965	0	1990	9.2
1966	5.0	1991	13.0
1967	6.0	1992	13.7
1968	6.7	1993	12.4
1969	7.2	1994	6.6
1970	5.2	1995	16.5
1971	5.4	1996	18.2
1972	7.1	1997	18.1
1973	7.5	1998	18.6
1974	6.7	1999	18.7
1975	6.3	2000	17.8
1976	10.4	2001	17.2
1977	9.8	2002	16.7
1978	9.7	2003	17.2
1979	12.6	2004	18.5
1980	8.4	2005	18.6
1981	9.2	2006	17.7
1982	11.2	2007	15.5
1983	10.8	2008	14.7
1984	10.9	2009	17.4
1985	10.2	2010	16.1
1986	11.8	2011	15.2
1987	11.8	2012	16.4
1988	10.9	2013	17.0

Note: Based on assumptions given in the text.

Source: Du Rietz, Johansson, and Stenkula (2015); own calculations.

METR

Table 3.21 Marginal effective tax rate (METR) on capital income, 1862–2013

Year	New share issues			Retained earnings			Debt		
	0.67	APW	Top	0.67	APW	Top	0.67	APW	Top
1862	1.1	1.1	1.1	1.1	1.1	1.1	–0.2	1.1	1.1
1863	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.5	0.5

continued

Table 3.21 Continued

Year	New share issues			Retained earnings			Debt		
	0.67	APW	Top	0.67	APW	Top	0.67	APW	Top
1864	0.6	0.6	0.6	0.6	0.6	0.6	0.0	0.6	0.6
1865	0.9	0.9	0.9	0.9	0.9	0.9	–0.1	0.9	0.9
1866	1.1	1.1	1.1	1.1	1.1	1.1	–0.2	–0.2	1.1
1867	1.3	1.3	1.3	1.3	1.3	1.3	–0.4	–0.4	1.3
1868	1.1	1.1	1.1	1.1	1.1	1.1	–0.2	–0.2	1.1
1869	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.5
1870	0.6	0.6	0.6	0.6	0.6	0.6	0.0	0.0	0.6
1871	1.3	1.3	1.3	1.3	1.3	1.3	–0.7	–0.7	1.3
1872	1.2	1.2	1.2	1.2	1.2	1.2	–0.3	1.2	1.2
1873	1.4	1.4	1.4	1.4	1.4	1.4	–0.5	1.4	1.4
1874	1.1	1.1	1.1	1.1	1.1	1.1	–0.3	1.1	1.1
1875	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.9	0.9
1876	1.1	1.1	1.1	1.1	1.1	1.1	0.0	1.1	1.1
1877	1.1	1.1	1.1	1.1	1.1	1.1	0.1	1.1	1.1
1878	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.5
1879	0.7	0.7	0.7	0.7	0.7	0.7	0.1	0.7	0.7
1880	2.2	2.2	2.2	2.2	2.2	2.2	–0.2	2.2	2.2
1881	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0
1882	1.4	1.4	1.4	1.4	1.4	1.4	0.2	1.4	1.4
1883	1.5	1.5	1.5	1.5	1.5	1.5	0.6	1.5	1.5
1884	1.1	1.1	1.1	1.1	1.1	1.1	0.5	1.1	1.1
1885	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0
1886	1.1	1.1	1.1	1.1	1.1	1.1	0.5	1.1	1.1
1887	1.3	1.3	1.3	1.3	1.3	1.3	0.6	1.3	1.3
1888	2.2	2.2	2.2	2.2	2.2	2.2	0.8	2.2	2.2
1889	2.3	2.3	2.3	2.3	2.3	2.3	0.8	2.3	2.3
1890	2.0	2.0	2.0	2.0	2.0	2.0	0.7	2.0	2.0
1891	2.1	2.1	2.1	2.1	2.1	2.1	0.7	2.1	2.1
1892	1.5	1.5	1.5	1.5	1.5	1.5	0.7	1.5	1.5
1893	1.3	1.3	1.3	1.3	1.3	1.3	0.5	1.1	1.3
1894	1.2	1.2	1.2	1.2	1.2	1.2	0.2	0.7	1.2
1895	2.4	2.4	2.4	2.4	2.4	2.4	–0.1	1.2	2.4
1896	1.7	1.7	1.7	1.7	1.7	1.7	0.5	1.5	1.7
1897	2.1	2.1	2.1	2.1	2.1	2.1	0.7	2.1	2.1
1898	2.2	2.2	2.2	2.2	2.2	2.2	0.7	2.2	2.2

continued

Table 3.21 Continued

Year	New share issues			Retained earnings			Debt		
	0.67	APW	Top	0.67	APW	Top	0.67	APW	Top
1899	2.1	2.1	2.1	2.1	2.1	2.1	0.6	2.1	2.1
1900	1.8	1.8	1.8	1.8	1.8	1.8	0.7	1.8	1.8
1901	1.7	1.7	1.7	1.7	1.7	1.7	0.1	0.9	1.7
1902	2.3	2.3	2.3	2.3	2.3	2.3	0.0	1.2	2.3
1903	3.2	3.2	8.9	3.2	3.2	3.2	–1.8	–0.5	5.7
1904	2.6	2.6	6.9	2.6	2.6	2.6	–0.2	–0.2	4.5
1905	3.4	3.4	9.3	3.4	3.4	3.4	–0.5	–0.5	6.0
1906	3.4	3.4	9.3	3.4	3.4	3.4	–0.5	–0.5	6.0
1907	4.0	4.0	11.4	4.0	4.0	4.0	–0.9	–0.9	7.3
1908	3.6	3.6	9.2	3.6	3.6	3.6	–0.1	–0.1	6.1
1909	3.2	3.2	7.6	3.2	3.2	3.2	0.3	0.3	5.1
1910	3.3	3.3	8.1	3.3	3.3	3.3	0.0	0.0	5.4
1911	3.9	4.7	12.4	3.9	3.9	3.9	–1.3	–0.5	8.0
1912	3.8	4.5	11.7	3.8	3.8	3.8	–1.1	–0.3	7.6
1913	3.3	3.9	37.2	3.3	3.3	3.3	–0.8	–0.2	35.2
1914	3.7	4.3	11.1	3.7	3.7	3.7	–0.9	–0.2	7.3
1915	6.4	7.9	21.9	6.4	6.4	6.4	–3.8	–2.2	13.5
1916	6.7	7.6	20.2	5.8	5.8	5.8	–2.6	–1.6	12.3
1917	9.2	10.6	29.2	7.1	7.1	7.1	–5.3	–3.8	16.8
1918	15.7	17.9	143.3	11.2	11.2	11.2	–23.9	–21.3	122.6
1919	11.1	11.5	57.2	8.7	8.7	8.7	–8.8	–8.3	45.5
1920	21.6	21.7	49.6	8.7	8.7	8.7	–3.6	–3.4	30.5
1921	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
1922	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
1923	10.2	10.2	24.5	4.7	4.7	4.7	0.4	0.4	17.3
1924	20.7	20.8	46.8	8.3	8.3	8.3	–1.3	–1.2	30.8
1925	23.7	23.8	53.0	9.2	9.2	9.2	–2.3	–2.2	33.8
1926	14.1	14.2	31.5	6.2	6.2	6.2	–0.5	–0.4	20.6
1927	18.2	18.3	40.3	7.5	7.5	7.5	–1.3	–1.3	25.7
1928	21.8	21.9	47.8	8.7	8.7	8.7	–2.9	–2.8	29.0
1929	16.4	16.4	35.9	7.0	7.0	7.0	–1.7	–1.7	22.1
1930	13.5	13.5	29.4	6.0	6.0	6.0	–0.8	–0.8	18.5
1931	15.6	15.6	32.4	6.7	6.7	6.7	–0.6	–0.6	20.1
1932	20.0	20.0	43.4	8.1	8.1	8.1	–1.1	–1.1	28.3

continued

Table 3.21 Continued

Year	New share issues			Retained earnings			Debt		
	0.67	APW	Top	0.67	APW	Top	0.67	APW	Top
1933	17.3	17.3	39.8	7.2	7.2	7.2	–0.1	–0.1	27.6
1934	23.5	23.5	56.0	9.3	9.3	9.3	–1.8	–1.8	38.9
1935	25.5	25.5	61.6	9.8	9.8	9.8	–2.6	–2.6	42.6
1936	25.2	24.3	62.9	9.5	9.5	9.5	–1.1	–2.3	46.0
1937	28.9	27.8	72.0	10.5	10.5	10.5	–1.9	–3.3	52.2
1938	29.1	28.2	68.8	11.6	11.6	11.6	–3.8	–5.1	48.1
1939	27.1	26.1	83.1	1.8	1.8	1.8	–16.7	–18.2	60.8
1940	56.3	54.5	161.0	2.2	2.2	2.2	–62.0	–65.0	107.8
1941	54.6	52.7	159.9	2.2	2.2	2.2	–61.4	–64.4	107.8
1942	39.2	39.2	129.3	2.3	2.3	2.3	–50.0	–50.0	97.3
1943	24.8	24.8	82.9	2.3	2.3	2.3	–30.0	–30.0	63.3
1944	22.9	22.9	76.7	2.3	2.3	2.3	–27.3	–27.3	58.7
1945	22.8	22.8	76.7	2.3	2.3	2.3	–27.3	–27.3	58.7
1946	25.7	25.7	83.8	3.3	3.3	3.3	–28.9	–28.9	64.3
1947	31.2	34.1	102.2	3.5	3.5	3.5	–36.5	–31.6	77.9
1948	38.5	42.7	121.3	6.0	6.0	6.0	–68.1	–60.2	85.0
1949	27.6	32.2	81.9	6.0	6.0	6.0	–42.7	–34.1	58.0
1950	30.9	35.1	90.4	6.0	6.0	6.0	–46.3	–38.6	63.8
1951	75.6	84.6	206.5	20.0	20.0	20.0	–95.3	–78.5	147.6
1952	86.0	89.2	145.8	54.3	54.3	54.3	2.4	8.5	116.4
1953	61.1	63.6	90.8	44.4	44.4	44.4	15.6	20.4	72.2
1954	53.2	59.0	87.3	33.5	33.5	33.5	0.9	12.1	65.9
1955	65.8	72.5	105.0	43.4	43.4	43.4	–5.5	8.5	75.7
1956	83.2	87.2	125.7	52.4	52.4	52.4	–12.9	–3.8	84.1
1957	81.4	85.7	122.0	51.8	51.8	51.8	–10.7	–0.9	82.2
1958	74.6	80.2	118.0	41.6	41.6	41.6	–26.1	–13.1	74.4
1959	61.1	66.4	91.7	35.8	35.8	35.8	–11.6	0.7	59.8
1960	71.0	78.5	114.7	34.4	34.4	34.4	–3.1	11.5	82.1
1961	58.0	64.9	98.4	32.1	32.1	32.1	0.0	12.6	73.0
1962	71.4	76.6	117.5	35.6	35.6	35.6	1.9	11.5	85.8
1963	66.2	70.8	106.3	35.4	35.4	35.4	6.2	14.5	78.9
1964	67.9	77.1	107.8	36.0	36.0	36.0	6.6	23.4	79.9
1965	77.5	84.9	123.4	39.1	39.1	39.1	4.7	18.6	90.2
1966	90.0	95.7	137.2	50.3	50.9	55.7	10.9	21.7	100.3
1967	80.3	84.4	116.8	47.6	48.1	52.0	23.2	30.3	88.1

continued

Table 3.21 Continued

Year	New share issues			Retained earnings			Debt		
	0.67	APW	Top	0.67	APW	Top	0.67	APW	Top
1968	71.6	75.0	102.2	44.7	45.2	48.7	24.1	30.0	78.2
1969	66.8	69.8	94.2	43.1	43.5	46.8	24.2	29.6	72.7
1970	107.0	112.2	153.6	55.7	56.3	60.5	24.5	34.2	112.0
1971	87.7	105.7	151.9	55.3	57.2	62.2	–3.2	31.0	118.6
1972	92.1	113.7	142.8	55.2	57.6	60.9	16.9	58.0	113.6
1973	91.4	125.1	148.7	55.9	59.5	62.2	8.2	72.7	118.0
1974	115.0	149.8	179.4	65.9	69.1	72.2	21.4	83.7	141.6
1975	123.7	143.3	184.4	67.2	69.1	73.4	31.0	70.0	151.5
1976	113.8	147.5	187.5	51.2	56.3	62.7	5.3	72.5	152.3
1977	105.6	151.6	199.8	51.2	57.9	65.4	–24.4	68.6	165.9
1978	99.9	137.3	193.4	50.5	56.1	65.2	–28.0	48.9	164.2
1979	103.0	130.5	171.0	70.2	75.2	82.9	19.4	72.8	151.3
1980	113.8	154.1	219.3	52.7	57.9	66.9	–34.0	47.8	180.3
1981	120.5	145.0	205.3	71.8	75.4	84.9	0.2	50.4	173.4
1982	108.3	134.3	179.9	72.5	76.9	85.2	11.9	63.7	154.3
1983	118.6	141.5	195.8	88.0	92.2	102.9	13.0	58.8	167.6
1984	101.5	127.9	175.3	79.9	84.5	93.6	–19.3	38.0	140.6
1985	92.0	118.3	167.1	72.7	77.3	86.6	–9.0	42.0	136.3
1986	92.7	99.5	140.3	70.1	71.5	80.2	29.0	41.6	117.4
1987	90.1	99.7	136.3	69.6	71.5	79.3	24.2	41.9	110.0
1988	110.7	110.7	148.8	75.0	75.0	82.6	42.5	42.5	115.1
1989	108.4	108.4	148.0	72.8	72.8	80.4	39.8	39.8	112.2
1990	103.5	131.0	152.6	58.7	62.9	66.3	25.3	71.4	107.6
1991	84.8	84.8	84.8	65.5	65.5	65.5	42.2	42.2	42.2
1992	44.8	44.8	44.8	43.4	43.4	43.4	27.9	27.9	27.9
1993	50.7	50.7	50.7	45.8	45.8	45.8	29.3	29.3	29.3
1994	26.7	26.7	26.7	34.1	34.1	34.1	29.9	29.9	29.9
1995	61.8	61.8	61.8	46.1	46.1	46.1	30.2	30.2	30.2
1996	54.8	54.8	54.8	43.4	43.4	43.4	28.3	28.3	28.3
1997	55.2	55.2	55.2	43.5	43.5	43.5	28.4	28.4	28.4
1998	53.4	53.4	53.4	42.8	42.8	42.8	27.9	27.9	27.9
1999	53.1	53.1	53.1	42.6	42.6	42.6	27.8	27.8	27.8
2000	56.6	56.6	56.6	44.1	44.1	44.1	28.8	28.8	28.8
2001	59.0	59.0	59.0	45.1	45.1	45.1	29.5	29.5	29.5

continued

Table 3.21 Continued

Year	New share issues			Retained earnings			Debt		
	0.67	**APW**	**Top**	**0.67**	**APW**	**Top**	**0.67**	**APW**	**Top**
2002	61.1	61.1	61.1	45.9	45.9	45.9	30.0	30.0	30.0
2003	58.7	58.7	58.7	44.9	44.9	44.9	29.4	29.4	29.4
2004	53.8	53.8	53.8	42.9	42.9	42.9	28.0	28.0	28.0
2005	53.5	53.5	53.5	42.8	42.8	42.8	28.0	28.0	28.0
2006	56.9	56.9	56.9	44.2	44.2	44.2	28.9	28.9	28.9
2007	44.7	44.7	44.7	28.7	28.7	28.7	14.7	14.7	14.7
2008	48.9	48.9	48.9	30.3	30.3	30.3	15.8	15.8	15.8
2009	35.5	35.5	35.5	24.4	24.4	24.4	13.5	13.5	13.5
2010	41.0	41.0	41.0	26.7	26.7	26.7	15.4	15.4	15.4
2011	45.5	45.5	45.5	28.5	28.5	28.5	16.8	16.8	16.8
2012	39.6	39.6	39.6	26.2	26.2	26.2	14.9	14.9	14.9
2013	35.3	35.3	35.3	23.2	23.2	23.2	17.0	17.0	17.0

Note: Based on assumptions given in the text. APW and 0.67 refer to the marginal tax of a taxpayer with an average annual wage of a production worker (APW) and a taxpayer earning 0.67 APW. Top is the highest tax rate.

Source: Own calculations.

Notes

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1. King and Fullerton (1984, 7–8).
2. Most of these studies analyze the tax system during the 1980s or 1990s. Södersten (1984) analyzes the years 1980, 1970, and 1960. No study goes further back in time.
3. Wealth tax tables are presented in Du Rietz and Henrekson (2015).
4. Schön (2000).
5. See Du Rietz, Johansson, and Stenkula (2015).
6. The possibilities to reduce corporate taxes through different forms of allowances were limited. There were no formal rules, and the estimation of taxable profit was rudimentary, although some companies were required to send account statements with information about profits to the tax authorities. For a further discussion, see, for example, Malmer (2003), who calls the 1862–1902 period, "*den fria uppskattningens tid*" (the period of unrestricted assessment).
7. There was also an average tax cap of 4 percent.
8. 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 a few exceptions, oscillated between six and nine kronor to the dollar.
9. In addition, there was a so-called War Business Cycle Tax between 1915 and 1920, but this tax is excluded from the calculation of the METR because it was a firm, industry-,

and region-specific tax that was not generally implemented. Instead, it was used to tax supernormal profits that had arisen in certain industries—such as the steel, shipping, and military industries—because of the war. Part of the tax was later remitted (Rodriguez 1980, 46).

10. Between 1919 and 1926, there was also a so-called B-tax. This tax was based on profits that were retained in the company. This tax can be considered a temporary tax payment in advance because it was refunded after profits were distributed as dividends. The basic tax rate was 2 percent, but, as with the ordinary tax system, the actual tax rate was flexible and was determined on an annual basis (SOU 1931:40, 77f). The revenue from this tax was small compared with the regular corporate tax and accounted for less than 5 percent of total corporate tax revenue (see, e.g., Statistics Sweden 1928, 283). This tax is not included in our calculations of the METR. At the most, adding in this tax would increase the METR by less than 2 percentage points, given that profits will never be distributed.
11. Hence, the total statutory tax rate was equal to $\tau^{total} = \tau^{local} + (1 - \tau^{local}) \cdot \tau^{state}$, where τ^{local}, and τ^{state} refer to the local and the state corporate tax, respectively, and include all relevant temporary taxes described in the next section.
12. This tax initially had an average tax cap of 5 percent.
13. It is difficult to give a general estimate of the extent to which different allowances and grants reduced the statutory corporate tax rate since it is contingent on firm-specific characteristics, such as types of assets invested in and profitability. Corporate tax, depreciation allowances, and other grants will be discussed in more detail in Section 3 and in Appendix B. See SOU 1927:23 or SOU 1937:42 for a further discussion of these issues.
14. As with the previous tax system, the tax rate was flexible, determined by Parliament on an annual basis.
15. In 1951, the tax rate was 10 percent on machinery and equipment. The tax base was the deduction applied (as defined by tax law) minus 10 percent of the investment (estimated as true economic depreciation). Hence, if immediate write-offs were used, almost the entire value of the investment was taxed by 10 percent. Only companies with a turnover above SEK 300,000 (corresponding to approximately SEK 4.5 million in 2013) had to pay this tax. In 1952, the tax rate was changed to 12 percent of the investment value, and the tax was called an investment fee. Investments below SEK 20,000 (corresponding to approximately SEK 300,000 in 2013) and investments in most publicly owned companies were tax exempt. The investment fee was temporarily abolished in 1954 but was reintroduced between 1955 and 1957. The fee was deductible. The possibility to use immediate write-offs was also limited, reducing the possible deduction on machinery and equipment to 20 percent between 1952 and 1954. See, for example, Arvidsson (1956), Eliasson (1967), Statistisk Sentralbyrå (1958) or SOU 1954:19 for further discussion. We will include investment taxes/fees in our calculation of the METR. Hence, the METR will be somewhat lower for small firms during the 1950s because these taxes did not affect small firms or small investments.
16. The enacted wage-earner funds were a considerably watered-down version of the original proposal, which can be regarded as an instrument to fulfill the vision of leading Social Democrats to convert large corporations into "social enterprises without owners" (Henrekson and Jakobsson 2001, 352–354; Lindbeck 2012).
17. The base of the PST was obtained by reducing taxable corporate income by corporate tax payments with several adjustments for inflation (see Södersten 1993, 275–276).
18. Agell, Englund, and Södersten (1995) and Henrekson (1996). We will use this estimate in our calculations of the METR.
19. These income levels correspond to those reported in OECD (2011), and they are used in the companion chapters analyzing the evolution of other components of the Swedish tax

system. The tax rate for the average production worker will be used to calculate the METR in Section 3 (see Du Rietz, Johansson, and Stenkula 2015 for the wages of an average production worker).

20. For instance, 400 APWs was required to pay the top marginal tax rate in 1938, 36 in 1950, 13 in 1960, 7 in 1970, and a mere 2.5 APWs in 1980.
21. However, during World War I, additional temporary taxes were introduced that could be up to 17 percent on the margin in 1919.
22. The state tax was progressive, but the first tax bracket was very wide (the upper limit corresponded to more than 3 APWs in 1920), and it included the majority of all taxpayers (see Du Rietz, Johansson, and Stenkula 2015). By regular income, we refer to an income between 0.67 and 1.67 APW.
23. The marginal income tax rate for an average production worker increased, for instance, from just below 25 percent in 1947 to almost 50 percent in 1970.
24. An interesting measure of progressivity is the elasticity of after-tax income. Jakobsson and Normann (1974, 54) calculate this measure for the years 1953, 1960, 1970, and 1971.
25. A comprehensive description of the evolution of marginal income taxation is provided in Du Rietz, Johansson, and Stenkula (2015).
26. In 2006, the tax on dividends from nonpublic companies was reduced to 25 percent. For an entrepreneur in a closely held, limited liability company, the marginal tax on dividends depends on several parameters after the tax reform in 1990–1991. We do not focus on the taxation of entrepreneurs and closely held limited liability companies in this chapter.
27. In addition, between 1984 and the end of 1991, there was a turnover tax on shares that required both buyers and sellers to pay a tax of (initially) 0.5 percent of the value of the shares. We have not included this tax in the METR calculation below.
28. See, for example, the discussion in SOU 1965:72.
29. Between 1966 and 1990, there was also a small tax-free amount on long-term gains.
30. Since 2006, capital gains on nonpublic companies have been taxed at 25 percent.
31. See Söderberg (1996, 11), SOU 1969:54, 77–79. See Du Rietz and Henrekson (2015) for an extensive description and analysis of Swedish wealth taxation.
32. The tax exempt allowance amounted to SEK 50,000, corresponding to slightly more than 20 APWs in 1934.
33. See Appendix A for a more formal treatment of the King and Fullerton (1984) framework.
34. Tax exempt institutions by definition pay no tax on dividends, capital gains or interest income. This category includes charities, scientific and cultural foundations, foundations for employee recreation set up by companies, pension funds for supplementary occupational pension schemes, and national pension funds.
35. Or, more correctly, the METR can be calculated either given a fixed p (pretax real rate of return) or given a fixed r (real interest rate); see Appendix A for a further description.
36. Normally, between 15 and 28 percent of investments in buildings were financed with IF. The share of IF-financed investments in machinery and equipment was lower (Agell, Englund, and Södersten 1995, 115).
37. HINK is an abbreviation for *Hushållens inkomster*, which is a Swedish income distribution survey conducted by Statistics Sweden in 1975, 1978, and annually since 1980. After 1970, joint taxation of households was abolished in Sweden. Hence, the household cannot be associated with one unique marginal tax rate; rather, the marginal tax rate differs among the individuals in the household.
38. For example, Södersten (1984) reports a marginal tax rate of 64 percent for equity financing and 49 percent for debt financing in 1980; we use 59 percent.
39. This is inline with Södersten (1984) and Öberg (2004).

40. This level roughly corresponds to the average taxable wealth among households with taxable wealth in 1968.
41. Forsling (1996) finds that the average rate of utilization of tax allowances was 72 percent during the 1980s. Bergström and Södersten (1984) and Kanniainen and Södersten (1994) discuss why firms do not fully utilize all available provisions to reduce the effective tax rate and how it would affect the corporate tax paid on a marginal investment.
42. That is, given that $A = 0$; see Appendix A and B for further details.
43. This will always be the case when the statutory corporate tax rate is higher than the ordinary income tax rate (Södersten and Lindberg 1983, 19), which was the case in Sweden from 1939 to 1951 for an average production worker.
44. The METR in the case of debt is actually higher than in the case of retained earnings for some years around 1980. Debt financing is typically more tax favored than retained earnings, as interest payments are deductible for firms. However, this effect is counteracted by the fact that the saver's capital gains tax may be lower than the tax rate on interest income. Depending on the size of these offsetting effects, either debt or retained earnings may be the most favorable source of finance.
45. See King and Fullerton (1984, Chapter 2) for a more thorough description.
46. The choice of δ is less important for our results. Using, for example, $\delta = 12$ as in Öberg (2004), the METR would increase by, at the most, less than 15 percentage points.
47. A is discussed in Appendix B.
48. Occasionally, there have also been temporary taxes or subsidies on specific types of investment to stimulate or discourage investments. We have ignored these taxes and subsidies in our calculations.
49. It might also be argued that the effective tax rate increases and approaches the statutory tax rate as the profit rate increases, see, for example, Södersten (2004, 195) or Devereux and Griffith (1998). In addition, the scope for using these allowances and grants depends on the industry and firm size, which introduced large distortions in the economy and affected the evolution of the industry and size distribution of firms (Davis and Henrekson 1999; Henrekson and Johansson 1999; Heshmati, Johansson, and Bjuggren 2010).
50. As described at the end of Section 3.2, these kinds of calculations assume that corporations take full advantage of depreciation allowances and other allowances to defer corporate taxation. However, empirical studies indicate that most firms are not able to take full advantage of these allowances (Södersten 1984, 147–148; Forsling 1996; Heshmati, Johansson, and Bjuggren 2010).
51. See Norrman and Virin (2007). However, the tax law was rather rudimentary and unclear at this time. Specific rules were missing, and there were often disputes between the tax authority and companies. Depreciation that was accepted by the tax authority was frequently considered insufficient from companies' point of view (Artsberg 1996). Before 1910, no formal allowances were allowed, but costs for investment regarded as replacements for deteriorated assets were deductible (see SOU 1954:19).
52. As described earlier, the rules were temporarily abolished in 1952 to restrain investments.
53. SOU 1993:29. The average dividend for firms issuing new shares was less than 10 percent. Södersten (1984, 324) reports that the average dividend was 6 percent on new shares in the late 1970s.
54. Södersten (1984, 100–103).
55. The allocations to RUF typically entailed a one-year tax credit. The deduction was included in the taxable base for the following year. In 1980, the introduction of the RUF option could have diminished corporate taxes by several percentage points, but it had no impact on the effective marginal corporate tax rate thereafter unless the company increased its wage expenses.

56. In 1951–1953 and 1955–1957, there were also temporary investment taxes that can be regarded as negative investment subsidies. We have not included RUF, SURV or periodization funds in our calculations. As described earlier, RUF will not have any impact on the effective marginal corporate tax rate unless it increases the company's wage bill. We have assumed that the change in tax-free allocations (from RUF to SURV and from SURV to periodization funds) would not significantly change the effective marginal corporate tax rate.
57. If the maximum provisions between 1979 and 1993 are used instead, that is, $h = 10$ and $\omega = 10$, the METR decreases further by approximately four to eight percentage points.
58. Between 1952 and 1954, there were also temporary restrictions in the use of immediate write-offs, thus reducing the maximum deduction on machinery and equipment to 20 percent.
59. This corresponds to how Södersten analyzes investments in machinery and equipment (Södersten 1984, 96). This method ignores the 20 percent rule, but Södersten notes that this assumption is nevertheless reasonable and that it corresponds well to the conditions facing growing firms with young vintages of capital.
60. This method will probably overestimate the allowances and hence somewhat underestimate the effective tax rate. Because the corporate tax rate is rather low during this period, it will only slightly influence the results.
61. See Bergström and Södersten (1984) or Södersten (1989) for a more thorough discussion of the IF system.
62. Occasionally, there were also extra investment allowances—amounting to 10 percent—when the IF funds were used.
63. Most importantly, it requires that a firm finance all its current investment from its IF and that it will never exhaust its own fund (see Södersten 1989 for an in-depth discussion).
64. The adjusted corporate tax can include three terms: (1) the proportion of profits that may not be allocated to the funds, (2) the present value of interest forgone on the central bank deposits, and (3) the present value of increased taxes because of forgone depreciation allowances (Södersten 1984, 101–102). If the company were allowed to use the funds continuously, as was mostly the case during the 1970s and 1980s, the second term could be dropped.
65. The proportion of profits that could be allocated to the funds was 40 percent in 1955–1979 and 50 percent in 1980–1990 (see Table 3.2). Ignoring the implicit costs associated with the IF system, a rough robustness test could also be done, in which the corporate tax rate is reduced by this percentage. With these lower corporate tax rates, the METR could be reduced by up to 25 percentage points. There will be a more pronounced decrease during the late 1950s and early 1960s, but the same pattern with a relatively high level of the METR during the 1970s and 1980s would persist.

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Chapter 4

Taxation of Goods and Services in Sweden (1862–2013)

Mikael Stenkula

1. Introduction

The tax systems of most developed countries are highly complex, consisting of a mixture of income taxes (personal and corporate), payroll taxes, property taxes, and consumption taxes (taxes on goods and services). The division between these taxes differs across countries, and these divisions have changed substantially over time. Consumption taxes (including customs duties) have historically been an important source of tax revenue. After a decline that lasted until the turn of the millennium, they are once again growing in importance. Consumption taxes, unlike income taxes, do not reduce incentives to save (see, e.g., Slemrod and Bakija 2008).

The purpose of this chapter is to analyze consumption taxes in Sweden between 1862 and 2013. The chapter offers a detailed description of the various components of consumption taxes—including general and specific consumption taxes in addition to customs duties—and how they have evolved over time. This chapter is the first attempt to calculate an annual series of the evolution of consumption taxes for a timespan that is this long.

This chapter is organized as follows. In Section 2, the data and methodology are discussed. Section 3 presents the general evolution of consumption taxes. Section 4 provides an in-depth discussion covering customs duties, general consumption taxes, and specific consumption taxes. Section 5 concludes.

2. Data and Methodology

Data is obtained from several sources. The main source concerning tax revenues is Statistics Sweden (*Statistiska centralbyrån*, SCB), complemented by information from

the Swedish National Financial Management Authority (*Ekonomistyrningsverket*, ESV) and the Organisation for Economic Co-operation and Development (OECD).[1] Tax revenues will be divided between customs duties, general consumption taxes (i.e., consumption taxes not directed at particular goods or services, such as a general sales tax or VAT), and specific consumption taxes (sometimes called excise duties, i.e., consumption taxes on a particular (type of) commodity or service, such as a tax on liquor or fuel). GDP data is taken from Statistics Sweden and Edvinsson, Jacobson, and Waldenström (2014).

This chapter will focus on central state (national) taxation. Consumption taxation at the local (municipality) level was limited during the period examined (and can also differ substantially across municipalities). According to Statistics Sweden (1914, 177), at the beginning of the period examined there were no consumption taxes at the local level. According to Gårestad (1987, 234), citing a tax committee from 1900, municipalities did not have the legal right to indirectly tax people through consumption taxes.[2] Nevertheless, the sales tax on liquor from this time period can be understood as a form of semi-local tax. Formally, it was a state tax collected by the state, but it was distributed to the municipalities based on how much liquor was sold in the municipalities. This tax is included in the analysis.

Consumption tax revenue will be shown as a percentage of state and total (i.e., state and local combined) tax revenue, and will also be shown as a percentage of GDP.[3] GDP is rather straightforward to use, but there have been some methodological changes in how to measure tax revenues.[4] Many of these changes generate temporary and small changes that will not affect the overall pattern. There are, however, some changes that should be mentioned.

One major problem concerns the distinction between reporting gross and net revenues. Some revenues are (or have been) reported as a net figure, correcting for different types of costs or deductions. During the 1990s, an increasing number of figures were reported as gross figures, which mainly affects the evolution of total tax revenue and, to a lesser extent, the tax revenue from different consumption taxes. This reporting change mostly affects general consumption taxes (such as VAT). From 2006, ESV reports VAT as a gross figure without any correction for the VAT paid by authorities and organizations within the governmental (state and local) sector. Prior to 2006, VAT was reported as a net figure, that is, the VAT paid by governmental organizations was reduced from the reported total revenue that VAT generated.[5]

There were several other changes during the 1990s that make a comparison over time less straightforward. One concern relates to accounting principles. Before 2006, tax revenues were based on actual taxes paid each year, that is, cash flow. From 2006 onward, an accrued revenue system for taxes collected was implemented.[6] This procedure is now normal in the business sector, but it was not used by the government until 2006. Nevertheless, its usage does not affect consumption taxes very much. Membership in the EU also affected state revenues and its costs, but this change is a real event that should affect the outcome. In regard to specific consumption taxes, there are some reclassification problems that are mainly related to the fuel tax.[7]

Other notable changes concern the treatment of social security revenues and costs, which does not affect consumption taxes *per se* but does affect consumption

tax as a share of total *state* tax revenue, impairing comparability over time. Hence, the consumption tax share of state tax revenue must be interpreted with caution for the last 20 years of the period examined. This problem does not arise when we use *total* tax revenue in the denominator, and the different tax components as a share of GDP are also less affected.

3. General Development

Figure 4.1 depicts the evolution of consumption tax revenue as a percentage of state tax revenue and as a percentage of total tax revenue over the entire period. Figure 4.2 depicts the evolution as a share of GDP.

As a share of state tax revenue, consumption taxes have been high. During the late 1800s, this share was as high as 75–85 percent. At the beginning of the 1900s, the share began to decline. During World War I, it declined sharply to as low as 12 percent. There were several reasons for this precipitous decline. Customs duties decreased because of restrictions on international trade. Income from taxes on sugar and alcohol, which had been the most important specific consumption taxes (see Section 4.2), declined due to rationing. Many consumption taxes were unit taxes (i.e., a constant nominal amount per unit consumed). Due to extremely high inflation during World War I (which was almost 50 percent annually in 1918), tax revenue declined rapidly in real terms. Temporary income taxes were introduced to cover government expenses, including increased military outlays.

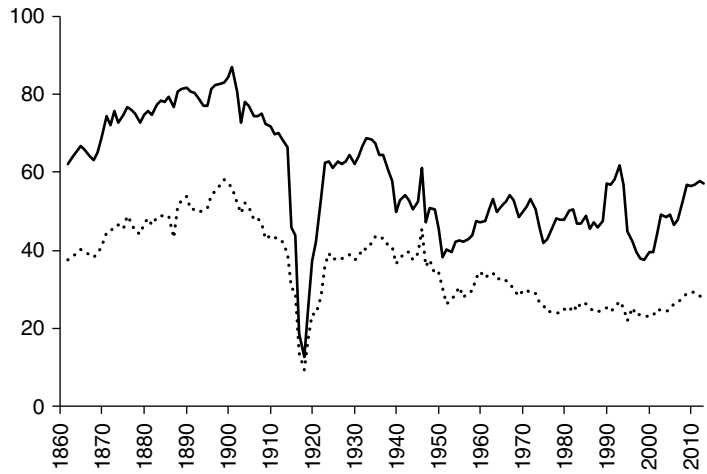

Figure 4.1 Consumption tax revenue as a percentage of state tax revenue and total tax revenue, 1862–2013.

Source: Statistics Sweden (1914–2011), Rodriguez (1980), Gårestad (1987), Ekonomistyrningsverket (2010–2014), Edvinsson, Jacobson, and Waldenström (2014), and OECD stat extracts. http://stats.oecd.org/Index.aspx?DataSetCode=REV.

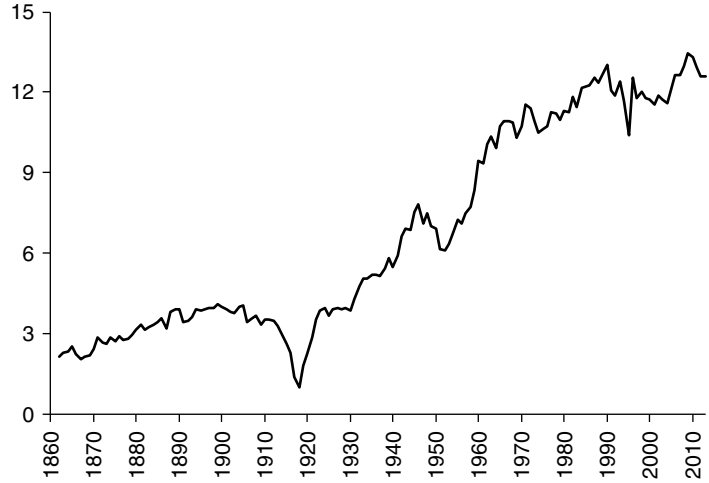

Figure 4.2 Consumption tax revenue as a percentage of GDP, 1862–2013.
Source: Statistics Sweden (1914–2011) and Ekonomistyrningsverket (2010–2014).

Many of the temporary income tax increases were made permanent after World War I, and the consumption tax share of state tax revenue increased but did not return to its pre-war level. Just after World War I, it was approximately 40 percent. In the 1920s and 1930s, many new consumption taxes were introduced, and this share grew further. In the mid-1930s, the share approached its pre-war levels. During World War II, the share fell again (to nearly 50%), but the fall was far less precipitous than during World War I. A temporary general sales tax was also introduced during this time to compensate for the decline in tax revenue and to strengthen the budget. After World War II, the tax share hovered around 50 percent, after a brief dip to 40 percent in the early 1950s.[8] Consumption tax revenue as a percentage of total tax revenue follows the same pattern but at a lower level.

As a share of GDP, the evolution of consumption tax revenue looks very different. Although consumption tax as a share of state and total tax revenue was high during the 1800s, tax revenue as a share of GDP was rather small, oscillating in the 3–4 percent range until the outbreak of World War I. Revenue declined during World War I but began to increase rapidly after the war; by the mid-1920s, the ratio exceeded the pre-war level. This revenue growth occurred despite the fact that consumption tax revenue as a share of total tax revenue never returned to its pre-war levels. Ignoring the time just after World War II, the consumption tax revenue continued to increase, and its share of GDP oscillated over a range of approximately 12 percent during the last three decades examined.

At the beginning of the period, consumption taxes were thus the most important source of revenue for the central government, although total tax revenue as a share of GDP was rather small. By the end of the period, consumption tax revenue was slightly less important in relative terms (though still important, as it constituted 50 percent of state tax revenue), but the consumption tax revenue was now four

times larger when measured as a share of GDP. Despite the pronounced increase of consumption tax revenue as a share of GDP since World War II, its share of state tax revenue did not increase to the same extent. One reason for this modest increase is the importance of employer-paid social security contributions and payroll taxes that were introduced toward the end of the 1950s and that increased sharply during the 1960s and 1970s (Du Rietz, Johansson, and Stenkula 2015).

4. The Composition of Consumption Taxes

Figures 4.3 and 4.4 show the different types of consumption taxes (customs duties, general consumption taxes, and specific consumption taxes) as a share of state and total tax revenues. Each of these types of consumption taxes is discussed in more detail below.

4.1 Customs Duties

Figure 4.3 shows that customs duties have been an important source of income for the state government. Customs duties in Sweden have had both fiscal (to raise revenue) and protectionist purposes (to protect vital or infant industries). In the mid-1850s, customs duties decreased internationally, and Sweden followed this trend. By the end of the nineteenth century, political opinions had changed, and customs duties were raised in response to protectionist demands from industry and the

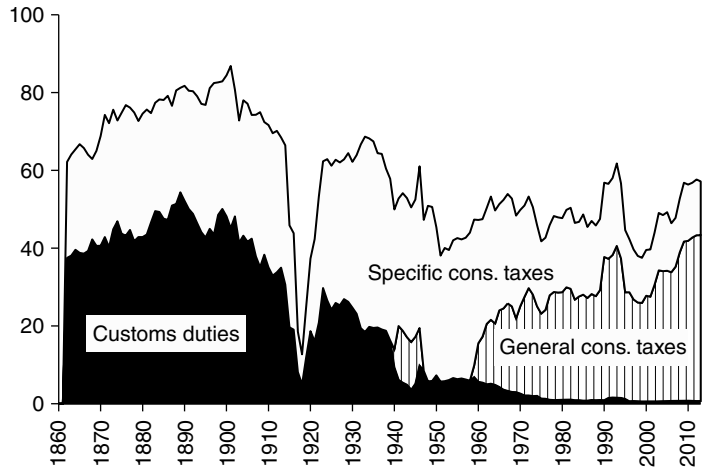

Figure 4.3 Composition of consumption tax revenue as a percentage of state tax revenue, 1862–2013.

Source: See Figure 4.1.

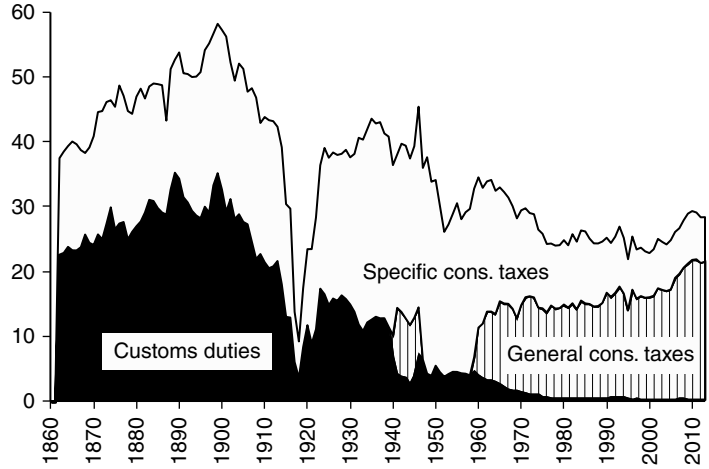

Figure 4.4 Composition of consumption tax revenue as a percentage of total tax revenue, 1862–2013.

Source: See Figure 4.1.

general population.[9] During the 1800s, up to 50 percent of state revenue consisted of customs duties, and this proportion grew during the late 1800s. However, this share decreased sharply during World War I (together with all other consumption taxes). After World War I, the share of customs duties increased again (to approximately 20%) but never returned to pre-war levels.

During World War II, the share of customs duties declined to between 5 and 10 percent. The share increased slightly after the war, but only temporarily. A 1952 tax committee claimed that the main motivation for existing customs duties was to protect Swedish industry. Customs duties were thus no longer understood as a way to generate tax revenue.[10] Since the 1990s, the share has been negligible and amounts to less than 1 percent of state tax revenue and less than one-half of 1 percent of total tax revenue. As a share of GDP (Figure 4.5), income from customs duties was, at the most, 2.5 percent (at the end of the nineteenth century).

4.2 Specific Consumption Taxes

Together with customs duties, specific consumption taxes were the most important tax categories during the nineteenth century. Figure 4.6 specifies the types of commodities that were taxed, and shows that alcohol-related taxes were the most important specific consumption tax until World War I.[11] Some 25–30 percent of state tax revenue consisted of some form of alcohol tax.[12] There was also a specific tax on sugar that amounted to 10 percent of state tax revenue. Thus, up to 40 percent of state tax revenue was attributable these taxes before World War I. There was a slight upward trend in the share until World War I. The share of specific consumption taxes decreased dramatically during World War I. After the war,

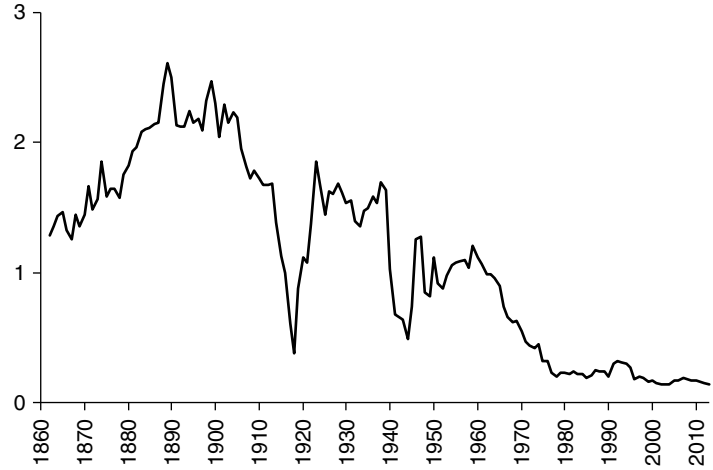

Figure 4.5 Customs duties as a percentage of GDP, 1862–2013.
Source: See Figure 4.2.

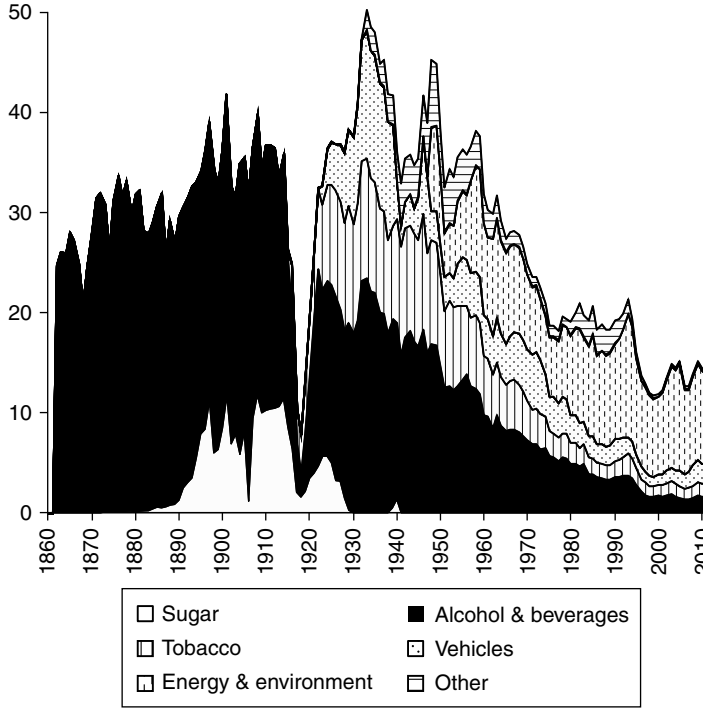

Figure 4.6 Specific consumption taxes as a percentage of state tax revenue, 1862–2013.
Note: Due to problems with classification, fuel tax is included in "Vehicles" until 1947 and in "Energy & environment" thereafter.
Source: See Figure 4.1.

the share quickly reverted to high levels, reaching 30–40 percent during the 1920s and peaking at almost 50 percent in the 1930s—clearly higher than before World War I.[13] However, the goods that were subject to consumption taxes had changed. Taxes on sugar decreased, and ultimately disappeared. Taxes on alcohol decreased (to approximately 15–20%) but remained the most important consumption tax base during the interwar period. Two other specific taxes now contributed to a sizeable share of the government budget: taxes on tobacco and taxes on vehicles (automobiles). Tobacco taxes were first introduced during World War I. Their importance was relatively modest at first (a few percentage points, at most). After World War I, tobacco tax revenue increased rapidly to more than 10 percent of state tax revenue. A vehicle tax was introduced at the beginning of the 1920s.[14] The changing economic structure and the rapid increase in the use of cars made vehicles an important tax base. During the 1930s, the share of this tax base increased to more than 10 percent. Vehicle taxes were also progressive, as they mostly affected high-income earners, which made it easier for the population (and politicians) to accept them. Alcohol (and tobacco) taxes were also motivated by public health concerns.

During World War II, specific taxes declined in importance when measured as a share of state tax revenue. However, as a share of GDP, income from specific taxes continued to increase even during World War II (see below), but revenue from other taxes increased more rapidly. Tax revenue from vehicles almost disappeared during World War II. This decrease was offset by the introduction of new taxes on, for instance, "entertainment" (cinemas, theater, concerts etc.), and by raising the tax on tobacco and alcohol.

Following World War II, specific tax revenue as a share of state tax revenue increased but never again reached 50 percent despite higher taxes on many goods and the introduction of new taxes, such as a general consumption tax on electricity (introduced in the 1950s). During the 1960s, the share of specific consumption tax revenue began to decrease rapidly as the sales tax/value added tax was introduced and continuously raised. The importance of alcohol, tobacco, and vehicle taxes has continued to decrease since that time. By the end of the period examined, these taxes combined contributed only about 5 percent of state tax revenue. However, new specific consumption taxes have been introduced in recent decades, mainly related to energy and/or the environment. These taxes constitute almost 10 percent of total state tax revenue. Despite these new specific taxes, the share trended downward after World War II until the turn of the millennium. Increased taxes on energy and activities detrimental to the environment have reversed the trend. Almost 15 percent of state tax revenue came from specific consumption taxes in 2013.

As a share of GDP (Figure 4.7), revenue from specific taxes peaked at almost 7 percent in the late 1950s. The share increased sharply between the wars (from roughly 2–4%). It has decreased since the late 1950s, dropping to roughly 3 percent by the end of the period. Although revenue from specific consumption taxes constitutes a much smaller share of total tax revenue today compared to the nineteenth century, its share of GDP has more than doubled since the beginning of the period.

Until World War I, sugar and alcohol were the most important tax bases. During the interwar period, alcohol, tobacco, and vehicles became the most important. In the postwar period, these tax bases continued to be important but decreased

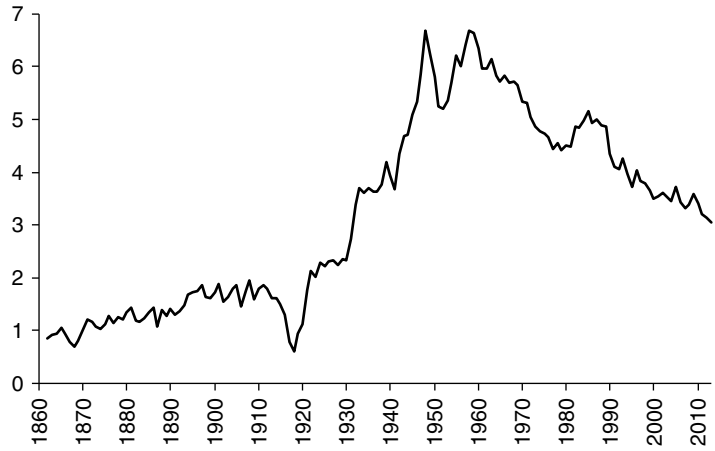

Figure 4.7 Specific consumption taxes as a percentage of GDP, 1862–2013.
Source: See Figure 4.2.

in importance during the 1960s, whereas the importance of taxes on energy and environment increased. As a share of total tax revenue, specific consumption taxes peaked during the 1930s. As a share of GDP, specific consumption taxes peaked in the 1950s.

4.3 General Consumption Taxes

Figure 4.3 shows that general consumption taxes are a recent component of the Swedish system compared with other types of taxes. One important objection to general consumption taxes is that they are allegedly regressive, hitting people with low incomes the hardest. A temporary general sales tax was first introduced during World War II, and the tax rate was set at 5 percent. It contributed more than 10 percent of state tax revenue and was high enough to compensate for the drop in customs duties during the war. However, the sales tax was abolished after the war.

After World War II, there was an intense debate among politicians, and several official reports analyzed the expected effect of a general consumption tax. It had become more difficult to raise direct income taxes, and a general consumption tax was considered a viable alternative and complementary to regular income taxes. Several arguments were put forward in favor of a general consumption tax. The consumption tax avoided bracket creep, that is, when price and wage inflation in combination with a progressive tax schedule pushes taxpayers into income brackets with higher marginal tax rates. This problem was severe because, at the time, Sweden had a highly progressive income tax system and high inflation.[15] Consumption taxes were less noticeable to taxpayers (and hence easier to introduce and increase without taxpayer objection) and could also encourage savings. If (part of) the revenue from such a tax was used to support low-income groups, the introduction of a general

Table 4.1 Sales tax rates and value added tax rates, 1941–2013

Year	Percentage of sales price	Percentage of purchase price
1941	5.0	
1942	5.0	
1943	5.0	
1944	5.0	
1945	5.0	
1946	5.0	
1947–1959	–	
1960	4.0	
1961	4.0	
1962	6.0	
1963	6.0	
1964	6.0	
1965	9.1	
1966	9.1	
1967	10.0	
1968	10.0	
1969	10.0	11.1
1970[a]	10.0	11.1
1971	15.0	17.65
1972	15.0	17.65
1973	15.0	17.65
1974[b]	15.0	17.65
1975	15.0	17.65
1976	15.0	17.65
1977	17.1	20.63
1978	17.1	20.63
1979	17.1	20.63
1980	17.1	20.63
1981	19.0	23.46
1982	17.7	21.51
1983	19.0	23.46
1984	19.0	23.46
1985	19.0	23.46
1986	19.0	23.46

continued

Table 4.1 Continued

Year	Percentage of sales price	Percentage of purchase price
1987	19.0	23.46
1988	19.0	23.46
1989	19.0	23.46
1990–2013	20.0	25.0

Note: The change did not always occur on January 1 each year.
[a]In 1970, the VAT had previously increased first to 14 and then to 15 percent for some "luxury" commodities (TV sets, cars, etc.)
[b]In 1974, the VAT was temporarily reduced to 12 (13.64) percent during part of the year.
Source: Rodriguez (1980), SOU 2005:57, and Skatteverket (2011).

consumption tax could be acceptable from a distributional perspective. A general consumption tax was easier to collect and required less control compared with a system with highly differentiated tax rates on specific goods and services. A general consumption tax could also be used as a countercyclical mechanism.[16] After intense debate, a sales tax was introduced in 1960. Initially, the tax rate was 4 percent, but it was soon raised and reached 10 percent in 1963 (see Table 4.1). As a result, the sales tax share of state tax revenue increased to approximately 20 percent during the 1960s.

In 1969, the sales tax was transformed into a value-added tax (VAT) due to practical and technical reasons. A VAT would not discourage investment, and it paved the way for further increases during the 1970s. The VAT rate almost doubled from 10 percent at the beginning of the 1970s to 19 percent at the beginning of the 1980s (see Table 4.1). The VAT share of state tax revenue continued to increase and varied between 25 and 30 percent during the 1980s. Thus, the revenue from general consumption taxes exceeded the revenue from specific consumption taxes by the beginning of the 1970s, that is, about ten years after its introduction.

In 1990–1991, a major tax reform was implemented. The VAT was raised to 20 percent and its base was broadened with tax exemptions for only a handful of services, such as dental care and other social services. Later, the VAT was differentiated with a decreased tax rate on items such as food, hotels, passenger transportation, and books (see Table 4.2). Conversely, some goods and services, such as newspapers, cinemas, and concerts, which were previously tax-exempt, began to be taxed, although at a low rate.[17] The VAT share of state tax revenue has continued to increase and constituted more than 40 percent of state tax revenue at the end of the period examined (Table 4.6).

Figure 4.8 depicts general consumption tax revenue as a percentage of GDP. The tax share increased sharply during the 1960s and 1970s. When the sales tax was raised from 4 to more than 9 percent, the share increased from approximately 2 to 4 percent. When the VAT increased from 10 to 15 percent, its share of GDP increased from 4 to 6 percent. It continued to increase until it stabilized around 8 percent of GDP in the mid-1980s. In addition, a new increase is discernible at the end of the period examined.

Table 4.2 Differentiated value added tax rates 1991–2013 (%)

	1991	1992	1993	1994	1995	1996	1997–2000	2001	2002–2006	2007–2011	2012–2013
General	25	25	25	25	25	25	25	25	25	25	25
Food	25	18	21	21	21	12	12	12	12	12	12
Restaurants	25	18	21	21	25	25	25	25	25	25	12
Hotel and camping	25	18	21	12	12	12	12	12	12	12	12
Passenger transportation	25	18	21	12	12	12	12	6	6	6	6
Transports in skilifts	25	18	21	12	12	12	12	12	12	6	6
Newspapers	0	0	0	0	0	6	6	6	6	6	6
Cinemas	–	–	–	–	–	6	6	6	6	6	6
Concerts, opera etc.	–	–	–	–	–	–	6	6	6	6	6
Sports	–	–	–	–	–	–	6	6	6	6	6
Entrance fee zoo	25	25	25	25	25	25	25	6	6	6	6
Books and magazines	25	25	25	25	25	25	25	25	6	6	6

Source: Skatteverket (2013).

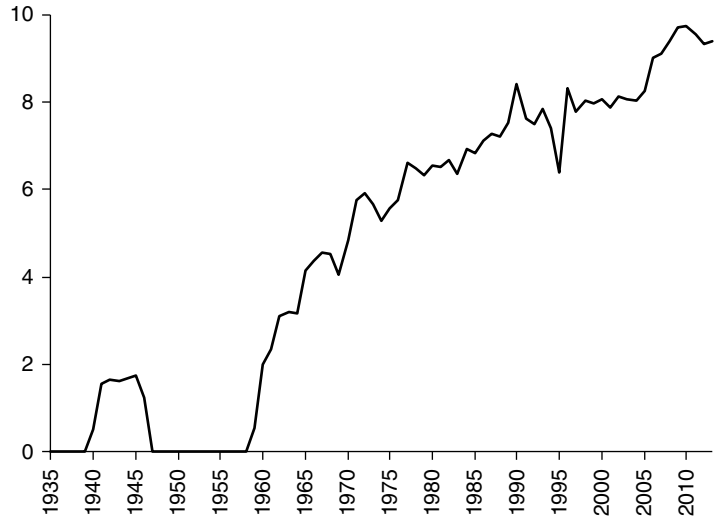

Figure 4.8 General consumption taxes as a percentage of GDP, 1935–2013.

Note: The share was zero percent until 1940.

Source: See Figure 4.2.

5. Conclusion

This chapter has described the evolution of Swedish consumption taxes between 1862 and 2013. The development has been traced for customs duties, general consumption taxes (sales taxes and VAT), and specific consumption taxes (notably, taxes on alcohol, sugar, tobacco, vehicles, and energy).

At the beginning of the period, revenue from consumption taxes constituted a substantial (and increasing) share of state and total tax revenue. At the turn of the nineteenth century, it peaked at 85 percent of state tax revenue. Because the state sector remained small, the share of GDP was rather moderate—at approximately 3 percent. Revenue from customs duties fell precipitously during World War I but swiftly rebounded after the war. Consumption tax revenue as a share of total tax revenue decreased during and after World War II, whereas it decreased as a share of GDP only after the war. Tax revenue from consumption taxes continued to increase during the war, but revenue from other taxes increased even more.

After World War II, consumption taxes as a share of GDP increased substantially. However, only recently is there also an increasing trend as a share of total tax revenue. One reason for this increase is the importance of social security contributions—introduced at the end of the 1950s—which have increased rapidly. This implied that consumption taxes as a share of tax revenue have been relatively constant although their share of GDP has increased. The highest share of tax revenue (state or total) was reached in or near 1900, whereas the highest share of GDP was realized at the end of the period examined.

With respect to the type of consumption taxes, customs duties were the most important component before World War I and specific consumption taxes assumed this role just before World War I, whereas general consumption taxes have been the most important component since the 1970s.

Customs duties were initially used both as a fiscal device and for protectionist purposes. The importance of customs duties increased near the end of the nineteenth century due to more protectionist demands from industry and the population at large. Revenue from custom duties decreased sharply during the World Wars, but remained an important source of revenue between them. After World War II, its importance fell rapidly and it became fiscally insignificant.

The importance of specific consumption taxes has also decreased. At the beginning of the period, alcohol and sugar were the primary specific consumption taxes. In the interwar period, when specific taxes were the most important consumption tax component, vehicles, alcohol, and tobacco were primarily taxed. After World War II, when the importance of specific consumption taxes began to decline, the composition changed and environmental and energy taxes now dominate.

General consumption taxes were first introduced temporarily during World War II and then permanently beginning in 1960. The tax rate increased quickly during the 1960s and 1970s, and the share of state tax revenue and of GDP attributable to general consumption taxes increased accordingly. In 1980, general consumption taxes constituted almost 30 percent of state tax revenue and almost 7 percent of GDP. Its share has continued to increase at the end of the period examined.

Appendix

Table 4.3 Customs duties, specific consumption taxes, and general consumption taxes, percent of state tax revenue

Year	Customs duties	Specific taxes	General taxes	Total
1862	37.5	24.7	–	62.2
1863	38.1	26.0	–	64.1
1864	39.6	25.8	–	65.4
1865	38.8	27.9	–	66.7
1866	38.6	27.2	–	65.7
1867	39.3	24.7	–	64.0
1868	42.2	20.7	–	62.9
1869	40.6	24.4	–	65.0
1870	40.6	28.2	–	68.8
1871	42.8	31.4	–	74.3
1872	40.3	31.8	–	72.1
1873	44.8	30.7	–	75.6
1874	46.9	25.9	–	72.8
1875	43.7	31.1	–	74.8
1876	43.2	33.6	–	76.8
1877	44.7	31.4	–	76.1
1878	41.8	33.1	–	74.9
1879	42.8	29.8	–	72.7
1880	42.8	31.7	–	74.6
1881	43.5	32.1	–	75.6
1882	46.6	28.1	–	74.7
1883	49.5	27.9	–	77.4
1884	49.3	28.9	–	78.2
1885	47.6	30.5	–	78.1
1886	47.3	31.9	–	79.2
1887	50.9	25.6	–	76.6
1888	51.3	29.2	–	80.5
1889	54.3	26.9	–	81.2
1890	52.1	29.6	–	81.7
1891	50.1	30.4	–	80.5
1892	48.8	31.5	–	80.3
1893	46.4	32.6	–	79.0

continued

Table 4.3 Continued

Year	Customs duties	Specific taxes	General taxes	Total
1894	44.1	33.0	–	77.1
1895	42.7	34.1	–	76.8
1896	45.0	36.2	–	81.1
1897	43.5	38.9	–	82.4
1898	48.5	34.1	–	82.6
1899	50.1	32.8	–	82.9
1900	48.2	36.3	–	84.4
1901	45.1	41.7	–	86.8
1902	48.2	32.6	–	80.7
1903	41.4	31.4	–	72.8
1904	43.2	34.8	–	78.0
1905	41.6	35.5	–	77.1
1906	42.4	31.8	–	74.2
1907	37.9	36.4	–	74.3
1908	35.1	39.8	–	74.9
1909	38.3	34.1	–	72.4
1910	35.0	36.6	–	71.6
1911	32.9	36.6	–	69.5
1912	33.8	36.4	–	70.1
1913	35.0	33.5	–	68.5
1914	30.6	35.8	–	66.4
1915	19.6	26.2	–	45.8
1916	19.0	24.8	–	43.8
1917	8.13	10.4	–	18.5
1918	4.94	7.75	–	12.7
1919	12.1	13.1	–	25.2
1920	18.7	18.6	–	37.3
1921	16.0	26.3	–	42.3
1922	20.9	32.4	–	53.3
1923	29.7	32.6	–	62.3
1924	26.6	36.3	–	62.9
1925	24.1	37.0	–	61.2
1926	25.9	36.8	–	62.7
1927	25.3	36.7	–	62.0
1928	26.9	35.9	–	62.8
1929	26.2	38.2	–	64.4

continued

Table 4.3 Continued

Year	Customs duties	Specific taxes	General taxes	Total
1930	24.7	37.5	–	62.2
1931	23.1	40.8	–	63.9
1932	19.4	47.3	–	66.7
1933	18.4	50.2	–	68.7
1934	19.8	48.4	–	68.2
1935	19.5	48.0	–	67.4
1936	19.6	44.8	–	64.4
1937	19.1	45.1	–	64.2
1938	18.7	41.7	–	60.4
1939	16.3	41.6	–	57.8
1940	9.35	36.0	4.63	49.9
1941	6.06	32.8	13.9	52.8
1942	5.39	35.4	13.4	54.1
1943	4.86	35.8	12.2	52.9
1944	3.59	34.6	12.3	50.5
1945	5.11	35.3	12.1	52.5
1946	9.79	41.6	9.67	61.0
1947	8.45	38.8	–	47.3
1948	5.74	45.1	–	50.9
1949	5.84	44.7	–	50.6
1950	7.29	38.1	–	45.4
1951	5.67	32.4	–	38.1
1952	5.79	34.2	–	40.0
1953	6.07	33.4	–	39.5
1954	6.59	35.4	–	42.0
1955	6.30	36.3	–	42.6
1956	6.48	35.8	–	42.2
1957	6.21	36.5	–	42.7
1958	5.92	38.1	–	44.0
1959	6.80	37.5	2.99	47.3
1960	5.61	31.7	9.92	47.2
1961	5.39	30.2	11.8	47.4
1962	4.93	29.8	15.6	50.3
1963	5.10	31.7	16.5	53.2
1964	4.80	29.1	15.8	49.7
1965	4.27	27.3	19.7	51.3

continued

Table 4.3 Continued

Year	Customs duties	Specific taxes	General taxes	Total
1966	3.56	27.9	20.9	52.4
1967	3.26	28.1	22.5	53.9
1968	3.01	27.7	22.0	52.7
1969	2.94	26.5	19.0	48.4
1970	2.56	24.8	22.5	49.8
1971	2.09	23.5	25.4	51.0
1972	2.07	23.5	27.6	53.3
1973	1.92	22.5	26.1	50.5
1974	1.96	20.9	23.1	45.9
1975	1.27	18.6	21.9	41.7
1976	1.26	18.6	22.8	42.7
1977	0.95	18.1	26.9	45.9
1978	0.86	19.5	27.9	48.2
1979	1.00	19.3	27.6	47.9
1980	0.98	19.1	27.7	47.7
1981	0.97	19.9	28.9	49.8
1982	1.04	20.8	28.5	50.4
1983	0.88	19.7	25.8	46.5
1984	0.86	19.2	26.7	46.8
1985	0.78	20.6	27.3	48.7
1986	0.78	18.3	26.4	45.4
1987	0.94	18.8	27.3	47.0
1988	0.89	18.2	26.7	45.8
1989	0.90	18.3	28.3	47.5
1990	0.89	19.1	36.8	56.8
1991	1.43	19.3	35.8	56.5
1992	1.55	19.8	36.7	58.0
1993	1.53	21.2	39.0	61.8
1994	1.47	19.3	35.9	56.7
1995	1.16	16.0	27.5	44.6
1996	0.63	13.6	28.0	42.3
1997	0.66	12.9	26.1	39.6
1998	0.59	12.0	25.4	38.0
1999	0.53	11.6	25.4	37.5
2000	0.57	11.8	27.2	39.5
2001	0.53	12.1	27.0	39.7

continued

Table 4.3 Continued

Year	Customs duties	Specific taxes	General taxes	Total
2002	0.53	13.4	30.1	44.0
2003	0.57	14.8	33.7	49.0
2004	0.59	14.4	33.5	48.5
2005	0.68	15.1	33.5	49.2
2006	0.65	12.6	33.2	46.4
2007	0.71	12.6	34.5	47.8
2008	0.75	13.8	38.2	52.7
2009	0.70	15.1	41.0	56.8
2010	0.72	14.5	41.1	56.3
2011	0.72	14.1	42.0	56.8
2012	0.68	14.3	42.6	57.6
2013	0.65	13.8	42.7	57.1

Source: See Figure 4.1.

Table 4.4 Customs duties, specific consumption taxes, and general consumption taxes, percent of total tax revenue

Year	Customs duties	Specific taxes	General taxes	Total
1862	22.6	14.9	–	37.4
1863	22.9	15.6	–	38.5
1864	23.8	15.5	–	39.3
1865	23.3	16.8	–	40.0
1866	23.2	16.4	–	39.6
1867	23.7	15.0	–	38.7
1868	25.7	12.6	–	38.2
1869	24.4	14.7	–	39.1
1870	24.1	16.7	–	40.8
1871	25.7	18.8	–	44.5
1872	25.0	19.7	–	44.7
1873	27.3	18.7	–	46.1
1874	29.9	16.5	–	46.4
1875	26.5	18.9	–	45.4
1876	27.4	21.3	–	48.6
1877	27.6	19.4	–	47.0
1878	24.9	19.8	–	44.7

continued

Table 4.4 Continued

Year	Customs duties	Specific taxes	General taxes	Total
1879	26.1	18.2	–	44.3
1880	27.0	20.0	–	46.9
1881	27.7	20.5	–	48.2
1882	29.1	17.6	–	46.6
1883	31.0	17.5	–	48.5
1884	30.8	18.1	–	48.9
1885	29.8	19.1	–	48.8
1886	29.1	19.6	–	48.7
1887	28.8	14.5	–	43.2
1888	32.6	18.5	–	51.2
1889	35.2	17.4	–	52.6
1890	34.3	19.4	–	53.7
1891	31.4	19.1	–	50.5
1892	30.6	19.8	–	50.4
1893	29.3	20.6	–	49.9
1894	28.6	21.4	–	50.0
1895	28.2	22.5	–	50.7
1896	30.0	24.1	–	54.1
1897	29.1	26.0	–	55.1
1898	33.3	23.3	–	56.6
1899	35.1	23.0	–	58.1
1900	32.6	24.6	–	57.2
1901	29.2	27.0	–	56.2
1902	31.1	21.1	–	52.2
1903	28.1	21.3	–	49.4
1904	28.8	23.2	–	52.0
1905	27.6	23.6	–	51.2
1906	27.3	20.4	–	47.7
1907	24.6	23.6	–	48.2
1908	21.9	24.9	–	46.8
1909	22.7	20.2	–	42.9
1910	21.4	22.4	–	43.8
1911	20.5	22.8	–	43.3
1912	20.8	22.4	–	43.1
1913	21.6	20.7	–	42.3
1914	18.0	21.1	–	39.1

continued

Table 4.4 Continued

Year	Customs duties	Specific taxes	General taxes	Total
1915	13.0	17.4	–	30.4
1916	12.9	16.8	–	29.7
1917	6.04	7.72	–	13.8
1918	3.59	5.62	–	9.21
1919	8.35	9.08	–	17.4
1920	11.7	11.7	–	23.4
1921	8.88	14.6	–	23.4
1922	11.1	17.2	–	28.3
1923	17.3	19.0	–	36.4
1924	16.5	22.5	–	39.0
1925	14.8	22.7	–	37.5
1926	15.8	22.5	–	38.3
1927	15.5	22.5	–	37.9
1928	16.3	21.8	–	38.1
1929	15.7	23.0	–	38.7
1930	14.9	22.7	–	37.6
1931	13.8	24.3	–	38.1
1932	11.8	28.8	–	40.6
1933	10.8	29.5	–	40.3
1934	12.1	29.8	–	41.9
1935	12.6	31.0	–	43.5
1936	13.0	29.8	–	42.8
1937	12.8	30.2	–	43.0
1938	12.8	28.5	–	41.2
1939	11.5	29.3	–	40.8
1940	6.81	26.2	3.37	36.4
1941	4.37	23.6	10.0	38.0
1942	3.95	25.9	9.79	39.7
1943	3.62	26.6	9.12	39.4
1944	2.66	25.6	9.08	37.4
1945	3.83	26.4	9.03	39.3
1946	7.27	30.9	7.19	45.4
1947	6.43	29.5	–	35.9
1948	4.24	33.3	–	37.6
1949	3.91	29.9	–	33.8

continued

Table 4.4 Continued

Year	Customs duties	Specific taxes	General taxes	Total
1950	5.47	28.6	–	34.1
1951	4.48	25.6	–	30.1
1952	3.77	22.3	–	26.1
1953	4.19	23.0	–	27.2
1954	4.53	24.3	–	28.8
1955	4.52	26.0	–	30.5
1956	4.30	23.7	–	28.0
1957	4.24	24.9	–	29.1
1958	3.99	25.6	–	29.6
1959	4.71	26.0	2.07	32.7
1960	4.09	23.2	7.24	34.5
1961	3.73	20.9	8.20	32.9
1962	3.32	20.1	10.5	33.9
1963	3.27	20.3	10.5	34.1
1964	3.13	19.0	10.3	32.4
1965	2.74	17.5	12.7	32.9
1966	2.19	17.2	12.9	32.2
1967	1.89	16.4	13.1	31.4
1968	1.72	15.8	12.5	30.0
1969	1.71	15.4	11.0	28.2
1970	1.51	14.6	13.3	29.4
1971	1.22	13.7	14.8	29.7
1972	1.13	12.8	15.0	29.0
1973	1.09	12.8	14.9	28.8
1974	1.13	12.0	13.3	26.4
1975	0.79	11.5	13.5	25.8
1976	0.71	10.5	13.0	24.2
1977	0.50	9.55	14.2	24.3
1978	0.43	9.70	13.8	24.0
1979	0.50	9.70	13.8	24.0
1980	0.51	9.91	14.4	24.8
1981	0.47	9.60	14.0	24.0
1982	0.53	10.6	14.6	25.7
1983	0.47	10.4	13.7	24.6
1984	0.48	10.8	15.0	26.3
1985	0.42	11.1	14.7	26.2

continued

Table 4.4 Continued

Year	Customs duties	Specific taxes	General taxes	Total
1986	0.43	10.1	14.5	25.1
1987	0.49	9.72	14.1	24.3
1988	0.47	9.65	14.2	24.3
1989	0.47	9.48	14.7	24.6
1990	0.39	8.46	16.3	25.2
1991	0.62	8.31	15.4	24.4
1992	0.68	8.65	16.0	25.3
1993	0.66	9.23	17.0	26.9
1994	0.65	8.58	15.9	25.2
1995	0.57	7.84	13.5	21.9
1996	0.38	8.19	16.8	25.4
1997	0.39	7.58	15.4	23.4
1998	0.37	7.46	15.8	23.7
1999	0.32	7.15	15.6	23.1
2000	0.33	6.80	15.7	22.8
2001	0.31	7.16	15.9	23.4
2002	0.30	7.61	17.1	25.0
2003	0.28	7.39	16.9	24.5
2004	0.30	7.18	16.7	24.2
2005	0.34	7.59	16.9	24.8
2006	0.36	7.08	18.6	26.1
2007	0.40	7.02	19.2	26.6
2008	0.39	7.29	20.2	27.9
2009	0.36	7.68	20.9	28.9
2010	0.37	7.52	21.4	29.3
2011	0.37	7.21	21.5	29.1
2012	0.33	7.05	21.0	28.3
2013	0.32	6.86	21.2	28.4

Source: See Figure 4.1.

Table 4.5 Customs duties, specific consumption taxes, and general consumption taxes, percent of GDP

Year	Customs duties	Specific taxes	General taxes	Total
1862	1.29	0.85	–	2.13
1863	1.36	0.93	–	2.28

continued

Table 4.5 Continued

Year	Customs duties	Specific taxes	General taxes	Total
1864	1.43	0.93	–	2.36
1865	1.46	1.05	–	2.51
1866	1.33	0.94	–	2.26
1867	1.25	0.79	–	2.04
1868	1.45	0.71	–	2.16
1869	1.36	0.82	–	2.18
1870	1.44	1.00	–	2.44
1871	1.66	1.22	–	2.88
1872	1.49	1.18	–	2.67
1873	1.56	1.07	–	2.64
1874	1.86	1.03	–	2.88
1875	1.58	1.12	–	2.70
1876	1.64	1.27	–	2.91
1877	1.64	1.15	–	2.79
1878	1.57	1.25	–	2.82
1879	1.75	1.22	–	2.97
1880	1.82	1.35	–	3.17
1881	1.93	1.43	–	3.36
1882	1.96	1.18	–	3.14
1883	2.08	1.17	–	3.26
1884	2.10	1.23	–	3.33
1885	2.11	1.35	–	3.46
1886	2.14	1.45	–	3.59
1887	2.15	1.08	–	3.23
1888	2.45	1.39	–	3.84
1889	2.61	1.29	–	3.90
1890	2.50	1.42	–	3.92
1891	2.13	1.29	–	3.42
1892	2.12	1.37	–	3.49
1893	2.12	1.49	–	3.62
1894	2.24	1.68	–	3.92
1895	2.15	1.72	–	3.87
1896	2.18	1.76	–	3.94
1897	2.09	1.87	–	3.96
1898	2.32	1.63	–	3.95
1899	2.47	1.62	–	4.09

continued

Table 4.5 Continued

Year	Customs duties	Specific taxes	General taxes	Total
1900	2.30	1.73	–	4.03
1901	2.04	1.89	–	3.93
1902	2.29	1.55	–	3.84
1903	2.15	1.63	–	3.79
1904	2.23	1.80	–	4.03
1905	2.19	1.87	–	4.06
1906	1.96	1.47	–	3.42
1907	1.81	1.75	–	3.56
1908	1.72	1.96	–	3.68
1909	1.78	1.58	–	3.36
1910	1.72	1.80	–	3.52
1911	1.68	1.87	–	3.54
1912	1.68	1.80	–	3.48
1913	1.69	1.61	–	3.30
1914	1.38	1.62	–	3.00
1915	1.13	1.51	–	2.64
1916	1.00	1.30	–	2.30
1917	0.61	0.78	–	1.38
1918	0.38	0.60	–	0.99
1919	0.87	0.95	–	1.82
1920	1.12	1.12	–	2.23
1921	1.08	1.77	–	2.84
1922	1.38	2.14	–	3.52
1923	1.85	2.03	–	3.88
1924	1.68	2.29	–	3.97
1925	1.44	2.22	–	3.66
1926	1.62	2.30	–	3.92
1927	1.61	2.33	–	3.94
1928	1.68	2.25	–	3.94
1929	1.62	2.36	–	3.98
1930	1.53	2.33	–	3.86
1931	1.55	2.74	–	4.30
1932	1.39	3.39	–	4.78
1933	1.35	3.69	–	5.04
1934	1.47	3.61	–	5.08
1935	1.50	3.69	–	5.18

continued

Table 4.5 Continued

Year	Customs duties	Specific taxes	General taxes	Total
1936	1.58	3.62	–	5.21
1937	1.53	3.63	–	5.16
1938	1.69	3.76	–	5.45
1939	1.64	4.19	–	5.83
1940	1.03	3.96	0.51	5.49
1941	0.68	3.68	1.56	5.92
1942	0.66	4.35	1.64	6.65
1943	0.64	4.69	1.61	6.94
1944	0.49	4.71	1.67	6.87
1945	0.74	5.08	1.74	7.56
1946	1.26	5.34	1.24	7.84
1947	1.27	5.84	–	7.11
1948	0.85	6.67	–	7.51
1949	0.81	6.22	–	7.03
1950	1.11	5.81	–	6.92
1951	0.92	5.24	–	6.16
1952	0.88	5.21	–	6.09
1953	0.97	5.36	–	6.34
1954	1.06	5.69	–	6.75
1955	1.08	6.20	–	7.28
1956	1.09	6.00	–	7.09
1957	1.09	6.40	–	7.50
1958	1.04	6.67	–	7.71
1959	1.20	6.63	0.53	8.36
1960	1.12	6.33	1.98	9.43
1961	1.06	5.96	2.34	9.37
1962	0.99	5.96	3.12	10.1
1963	0.99	6.15	3.20	10.3
1964	0.96	5.82	3.16	9.94
1965	0.89	5.72	4.13	10.7
1966	0.74	5.82	4.36	10.9
1967	0.66	5.69	4.56	10.9
1968	0.62	5.72	4.54	10.9
1969	0.63	5.64	4.04	10.3
1970	0.55	5.34	4.85	10.8
1971	0.47	5.31	5.74	11.5

continued

Table 4.5 Continued

Year	Customs duties	Specific taxes	General taxes	Total
1972	0.44	5.03	5.91	11.4
1973	0.41	4.86	5.65	10.9
1974	0.45	4.77	5.27	10.5
1975	0.32	4.73	5.57	10.6
1976	0.32	4.67	5.75	10.7
1977	0.23	4.43	6.61	11.3
1978	0.20	4.54	6.48	11.2
1979	0.23	4.42	6.31	11.0
1980	0.23	4.51	6.54	11.3
1981	0.22	4.49	6.53	11.3
1982	0.24	4.87	6.66	11.8
1983	0.22	4.85	6.35	11.5
1984	0.22	4.98	6.92	12.2
1985	0.19	5.16	6.82	12.2
1986	0.21	4.92	7.11	12.3
1987	0.25	5.01	7.26	12.5
1988	0.24	4.90	7.20	12.4
1989	0.24	4.86	7.52	12.6
1990	0.20	4.35	8.39	13.0
1991	0.30	4.11	7.63	12.1
1992	0.32	4.05	7.50	11.9
1993	0.31	4.26	7.84	12.4
1994	0.30	3.97	7.39	11.7
1995	0.27	3.72	6.40	10.4
1996	0.19	4.04	8.30	12.5
1997	0.20	3.83	7.77	11.8
1998	0.19	3.78	8.03	12.0
1999	0.17	3.65	7.98	11.8
2000	0.17	3.50	8.07	11.7
2001	0.16	3.54	7.87	11.6
2002	0.14	3.61	8.12	11.9
2003	0.14	3.53	8.06	11.7
2004	0.14	3.45	8.01	11.6
2005	0.17	3.71	8.25	12.1
2006	0.18	3.42	9.01	12.6
2007	0.19	3.32	9.11	12.7

continued

Table 4.5 Continued

Year	Customs duties	Specific taxes	General taxes	Total
2008	0.18	3.39	9.37	13.0
2009	0.17	3.58	9.71	13.5
2010	0.17	3.42	9.72	13.3
2011	0.16	3.20	9.55	12.9
2012	0.15	3.13	9.31	12.6
2013	0.14	3.04	9.39	12.6

Source: See Figure 4.2.

Table 4.6 Specific consumption taxes, percent of state tax revenue

Year	Alcohol and beverages	Sugar	Tobacco	Vehicles	Energy and environment	Other
1862	24.7	–	–	–	–	–
1863	26.0	–	–	–	–	–
1864	25.8	–	–	–	–	–
1865	27.9	–	–	–	–	–
1866	27.2	–	–	–	–	–
1867	24.7	–	–	–	–	–
1868	20.7	–	–	–	–	–
1869	24.4	–	–	–	–	–
1870	28.2	–	–	–	–	–
1871	31.4	–	–	–	–	–
1872	31.8	–	–	–	–	–
1873	30.7	0.07	–	–	–	–
1874	25.8	0.10	–	–	–	–
1875	31.0	0.06	–	–	–	–
1876	33.5	0.07	–	–	–	–
1877	31.4	0.09	–	–	–	–
1878	33.0	0.07	–	–	–	–
1879	29.8	0.07	–	–	–	–
1880	31.6	0.11	–	–	–	–
1881	32.0	0.15	–	–	–	–
1882	28.0	0.17	–	–	–	–
1883	27.7	0.19	–	–	–	–
1884	28.6	0.38	–	–	–	–

continued

Table 4.6 Continued

Year	Alcohol and beverages	Sugar	Tobacco	Vehicles	Energy and environment	Other
1885	30.0	0.55	–	–	–	–
1886	31.4	0.48	–	–	–	–
1887	25.1	0.58	–	–	–	–
1888	28.4	0.75	–	–	–	–
1889	26.0	0.83	–	–	–	–
1890	28.3	1.24	–	–	–	–
1891	27.9	2.47	–	–	–	–
1892	28.5	3.00	–	–	–	–
1893	29.1	3.46	–	–	–	–
1894	27.5	5.48	–	–	–	–
1895	26.3	7.85	–	–	–	–
1896	27.8	8.34	–	–	–	–
1897	27.8	11.1	–	–	–	–
1898	28.1	5.96	–	–	–	–
1899	26.5	6.30	–	–	–	–
1900	27.8	8.44	–	–	–	–
1901	30.0	11.7	–	–	–	–
1902	25.7	6.87	–	–	–	–
1903	23.6	7.81	–	–	–	–
1904	29.0	5.82	–	–	–	–
1905	27.5	8.03	–	–	–	–
1906	30.7	1.15	–	–	–	–
1907	27.0	9.44	–	–	–	–
1908	28.1	11.7	–	–	–	–
1909	24.1	9.97	–	–	–	–
1910	26.4	10.2	–	–	–	–
1911	26.3	10.4	–	–	–	–
1912	25.9	10.4	–	–	–	–
1913	22.9	10.6	–	–	–	–
1914	24.4	11.4	–	–	–	–
1915	16.7	8.54	0.94	–	–	–
1916	13.7	6.34	4.78	–	–	–
1917	4.73	2.04	3.60	–	–	–
1918	2.30	1.55	3.89	–	–	–
1919	5.75	2.12	5.25	–	–	–

continued

Table 4.6 Continued

Year	Alcohol and beverages	Sugar	Tobacco	Vehicles	Energy and environment	Other
1920	9.33	3.44	5.88	–	–	–
1921	15.8	3.94	6.54	–	–	–
1922	19.7	4.65	8.11	–	–	–
1923	16.6	5.63	8.58	1.81	–	–
1924	17.4	5.64	9.68	3.57	–	–
1925	17.7	4.97	10.1	4.26	–	–
1926	18.4	3.20	10.7	4.52	–	–
1927	17.1	3.15	10.8	5.68	–	–
1928	16.6	1.45	10.9	6.95	–	–
1929	18.7	0.24	11.8	7.51	–	–
1930	17.9	–	11.0	8.60	–	–
1931	19.1	–	11.8	9.88	–	–
1932	23.1	–	12.1	12.1	–	0.07
1933	23.3	–	12.1	12.8	–	2.02
1934	22.1	–	11.4	12.7	–	2.29
1935	21.9	–	11.0	12.7	–	2.26
1936	20.0	–	10.4	12.5	–	1.90
1937	19.8	–	10.3	12.4	–	2.63
1938	17.9	–	9.36	11.8	–	2.65
1939	18.8	0.47	9.41	10.1	–	2.86
1940	17.6	1.32	10.4	3.66	–	2.99
1941	15.7	–	11.0	2.05	–	4.10
1942	17.4	–	11.0	2.61	–	4.34
1943	18.1	–	10.6	3.09	–	3.92
1944	17.1	–	10.8	2.57	–	4.15
1945	16.6	–	10.8	4.21	–	3.78
1946	18.2	–	11.7	7.64	–	4.01
1947	15.8	–	10.2	7.55	–	5.26
1948	16.8	–	10.5	2.83	8.32	6.68
1949	16.7	–	10.3	3.09	8.55	6.12
1950	14.6	–	9.28	2.83	7.22	4.18
1951	12.5	–	7.70	3.39	4.39	4.48
1952	12.6	–	8.63	2.77	4.83	5.42
1953	12.2	–	8.32	2.87	5.24	4.78
1954	12.6	–	8.10	4.14	6.19	4.35

continued

Table 4.6 Continued

Year	Alcohol and beverages	Sugar	Tobacco	Vehicles	Energy and environment	Other
1955	13.3	–	7.37	4.93	6.56	4.14
1956	13.8	–	6.84	4.65	6.49	3.98
1957	12.6	–	6.87	4.45	9.15	3.35
1958	12.4	–	7.37	4.36	10.5	3.45
1959	11.9	–	7.18	4.52	10.8	3.21
1960	9.76	–	5.98	3.99	9.21	2.78
1961	9.53	–	5.88	3.98	8.09	2.73
1962	8.36	–	5.43	3.88	9.66	2.46
1963	9.76	–	5.21	4.56	9.92	2.22
1964	8.68	–	4.97	4.32	9.22	1.91
1965	8.10	–	4.73	4.02	9.10	1.37
1966	8.30	–	4.88	4.50	8.91	1.33
1967	8.23	–	5.11	4.75	8.72	1.32
1968	8.00	–	4.82	5.10	8.56	1.25
1969	7.56	–	4.52	5.17	8.11	1.11
1970	7.18	–	4.09	5.10	7.43	0.96
1971	6.76	–	3.58	5.43	6.82	0.90
1972	6.84	–	3.57	5.63	6.67	0.83
1973	6.32	–	3.53	5.43	6.06	1.13
1974	6.39	–	3.24	4.20	5.81	1.23
1975	5.61	–	2.61	3.40	5.96	1.00
1976	5.44	–	2.50	3.69	5.93	1.00
1977	5.09	–	2.48	3.39	6.18	0.90
1978	5.51	–	2.46	3.64	7.11	0.81
1979	5.41	–	2.46	3.53	7.12	0.80
1980	4.79	–	2.22	2.80	7.88	1.36
1981	4.84	–	2.20	2.78	8.68	1.41
1982	4.55	–	1.89	2.50	9.37	2.53
1983	4.78	–	2.16	2.15	8.50	2.16
1984	3.77	–	1.76	2.13	8.98	2.56
1985	3.77	–	1.69	2.22	10.1	2.79
1986	3.50	–	1.48	1.94	8.79	2.57
1987	3.42	–	1.55	1.96	9.22	2.63
1988	3.27	–	1.50	1.88	9.09	2.44
1989	3.25	–	1.53	1.95	9.22	2.36

continued

Table 4.6 Continued

Year	Alcohol and beverages	Sugar	Tobacco	Vehicles	Energy and environment	Other
1990	3.56	–	1.68	2.15	9.55	2.16
1991	3.57	–	1.71	2.12	9.93	1.94
1992	3.59	–	1.91	2.09	10.7	1.53
1993	3.69	–	2.26	1.64	12.3	1.35
1994	3.35	–	2.11	1.68	11.5	0.70
1995	2.74	–	1.72	1.38	9.64	0.52
1996	2.10	–	1.29	1.25	8.50	0.50
1997	1.71	–	1.34	1.12	8.43	0.27
1998	1.56	–	1.17	1.00	8.04	0.22
1999	1.58	–	1.10	0.99	7.75	0.19
2000	1.62	–	1.16	1.06	7.73	0.21
2001	1.61	–	1.17	1.12	8.06	0.16
2002	1.68	–	1.27	1.24	9.04	0.15
2003	1.80	–	1.35	1.37	10.1	0.16
2004	1.61	–	1.28	1.38	9.98	0.17
2005	1.48	–	1.18	1.62	10.6	0.18
2006	1.34	–	1.08	1.47	8.42	0.29
2007	1.33	–	1.18	1.58	8.20	0.28
2008	1.45	–	1.26	2.04	8.82	0.23
2009	1.65	–	1.44	2.23	9.53	0.26
2010	1.54	–	1.34	2.08	9.25	0.25
2011	1.54	–	1.42	1.99	8.87	0.26
2012	1.59	–	1.52	2.01	8.98	0.23
2013	1.52	–	1.39	2.06	8.64	0.20

Note: Due to classification problems, fuel tax is included in "Vehicles" until 1947 and in "Energy and environment" thereafter.

Source: See Figure 4.1.

Table 4.7 Specific consumption taxes, percent of total tax revenue

Year	Alcohol and beverages	Sugar	Tobacco	Vehicles	Energy and environment	Other
1862	14.86	–	–	–	–	–
1863	15.61	–	–	–	–	–
1864	15.52	–	–	–	–	–
1865	16.76	–	–	–	–	–

continued

Table 4.7 Continued

Year	Alcohol and beverages	Sugar	Tobacco	Vehicles	Energy and environment	Other
1866	16.36	–	–	–	–	–
1867	14.95	–	–	–	–	–
1868	12.56	–	–	–	–	–
1869	14.70	–	–	–	–	–
1870	16.75	–	–	–	–	–
1871	18.85	–	–	–	–	–
1872	19.74	–	–	–	–	–
1873	18.71	0.04	–	–	–	–
1874	16.43	0.06	–	–	–	–
1875	18.83	0.04	–	–	–	–
1876	21.21	0.04	–	–	–	–
1877	19.38	0.06	–	–	–	–
1878	19.73	0.04	–	–	–	–
1879	18.13	0.04	–	–	–	–
1880	19.89	0.07	–	–	–	–
1881	20.37	0.09	–	–	–	–
1882	17.45	0.11	–	–	–	–
1883	17.34	0.12	–	–	–	–
1884	17.87	0.24	–	–	–	–
1885	18.75	0.35	–	–	–	–
1886	19.32	0.30	–	–	–	–
1887	14.15	0.33	–	–	–	–
1888	18.07	0.48	–	–	–	–
1889	16.87	0.54	–	–	–	–
1890	18.63	0.81	–	–	–	–
1891	17.54	1.55	–	–	–	–
1892	17.90	1.88	–	–	–	–
1893	18.42	2.19	–	–	–	–
1894	17.84	3.56	–	–	–	–
1895	17.33	5.18	–	–	–	–
1896	18.56	5.56	–	–	–	–
1897	18.59	7.45	–	–	–	–
1898	19.27	4.08	–	–	–	–
1899	18.59	4.42	–	–	–	–
1900	18.86	5.72	–	–	–	–

continued

Table 4.7 Continued

Year	Alcohol and beverages	Sugar	Tobacco	Vehicles	Energy and environment	Other
1901	19.43	7.55	–	–	–	–
1902	16.62	4.44	–	–	–	–
1903	16.01	5.30	–	–	–	–
1904	19.33	3.88	–	–	–	–
1905	18.24	5.33	–	–	–	–
1906	19.69	0.74	–	–	–	–
1907	17.52	6.13	–	–	–	–
1908	17.53	7.33	–	–	–	–
1909	14.29	5.90	–	–	–	–
1910	16.12	6.25	–	–	–	–
1911	16.36	6.44	–	–	–	–
1912	15.95	6.41	–	–	–	–
1913	14.13	6.55	–	–	–	–
1914	14.39	6.69	–	–	–	–
1915	11.09	5.66	0.63	–	–	–
1916	9.25	4.29	3.23	–	–	–
1917	3.52	1.52	2.68	–	–	–
1918	1.67	1.13	2.82	–	–	–
1919	3.98	1.47	3.63	–	–	–
1920	5.86	2.16	3.70	–	–	–
1921	8.75	2.18	3.62	–	–	–
1922	10.5	2.47	4.31	–	–	–
1923	9.7	3.28	5.01	1.06	–	–
1924	10.8	3.50	6.01	2.22	–	–
1925	10.9	3.05	6.18	2.61	–	–
1926	11.3	1.95	6.53	2.76	–	–
1927	10.5	1.93	6.62	3.47	–	–
1928	10.1	0.88	6.62	4.22	–	–
1929	11.2	0.14	7.11	4.51	–	–
1930	10.8	–	6.65	5.20	–	–
1931	11.4	–	7.03	5.89	–	–
1932	14.0	–	7.34	7.34	–	0.04
1933	13.7	–	7.13	7.48	–	1.19
1934	13.6	–	7.00	7.80	–	1.41
1935	14.2	–	7.13	8.22	–	1.46

continued

Table 4.7 Continued

Year	Alcohol and beverages	Sugar	Tobacco	Vehicles	Energy and environment	Other
1936	13.3	–	6.92	8.33	–	1.26
1937	13.2	–	6.90	8.32	–	1.76
1938	12.2	–	6.39	8.05	–	1.81
1939	13.2	0.33	6.63	7.10	–	2.02
1940	12.8	0.96	7.58	2.67	–	2.17
1941	11.3	–	7.90	1.48	–	2.96
1942	12.7	–	8.08	1.91	–	3.18
1943	13.5	–	7.90	2.30	–	2.92
1944	12.7	–	7.99	1.91	–	3.07
1945	12.4	–	8.05	3.15	–	2.83
1946	13.5	–	8.71	5.68	–	2.98
1947	12.0	–	7.75	5.74	–	4.00
1948	12.4	–	7.73	2.09	6.15	4.94
1949	11.1	–	6.89	2.06	5.71	4.09
1950	10.9	–	6.97	2.12	5.42	3.14
1951	9.83	–	6.08	2.67	3.47	3.54
1952	8.21	–	5.63	1.81	3.15	3.53
1953	8.43	–	5.73	1.98	3.61	3.30
1954	8.68	–	5.56	2.84	4.25	2.99
1955	9.51	–	5.28	3.53	4.70	2.97
1956	9.16	–	4.54	3.09	4.31	2.64
1957	8.62	–	4.69	3.04	6.24	2.28
1958	8.35	–	4.96	2.94	7.07	2.32
1959	8.20	–	4.97	3.12	7.45	2.22
1960	7.12	–	4.37	2.91	6.72	2.03
1961	6.60	–	4.08	2.76	5.61	1.89
1962	5.63	–	3.66	2.61	6.50	1.66
1963	6.25	–	3.33	2.92	6.35	1.42
1964	5.66	–	3.24	2.82	6.02	1.25
1965	5.20	–	3.04	2.58	5.84	0.88
1966	5.10	–	3.00	2.76	5.48	0.82
1967	4.79	–	2.97	2.77	5.07	0.77
1968	4.56	–	2.74	2.91	4.87	0.71
1969	4.40	–	2.63	3.01	4.73	0.64
1970	4.24	–	2.41	3.01	4.39	0.57

continued

Table 4.7 Continued

Year	Alcohol and beverages	Sugar	Tobacco	Vehicles	Energy and environment	Other
1971	3.94	–	2.09	3.17	3.98	0.52
1972	3.73	–	1.94	3.06	3.63	0.45
1973	3.60	–	2.01	3.10	3.46	0.65
1974	3.68	–	1.87	2.42	3.35	0.71
1975	3.47	–	1.61	2.10	3.69	0.62
1976	3.09	–	1.42	2.10	3.37	0.57
1977	2.69	–	1.31	1.80	3.27	0.48
1978	2.74	–	1.22	1.81	3.53	0.40
1979	2.72	–	1.23	1.77	3.57	0.40
1980	2.49	–	1.16	1.45	4.10	0.71
1981	2.33	–	1.06	1.34	4.18	0.68
1982	2.32	–	0.96	1.28	4.79	1.29
1983	2.53	–	1.14	1.14	4.49	1.14
1984	2.12	–	0.99	1.20	5.05	1.44
1985	2.03	–	0.91	1.20	5.45	1.50
1986	1.93	–	0.81	1.07	4.84	1.42
1987	1.77	–	0.80	1.02	4.77	1.36
1988	1.73	–	0.80	1.00	4.82	1.30
1989	1.68	–	0.79	1.01	4.78	1.22
1990	1.58	–	0.74	0.95	4.23	0.96
1991	1.54	–	0.74	0.91	4.28	0.84
1992	1.57	–	0.84	0.91	4.66	0.67
1993	1.61	–	0.98	0.72	5.34	0.59
1994	1.49	–	0.94	0.75	5.09	0.31
1995	1.34	–	0.84	0.68	4.72	0.25
1996	1.26	–	0.77	0.75	5.10	0.30
1997	1.01	–	0.79	0.66	4.97	0.16
1998	0.97	–	0.73	0.62	5.00	0.14
1999	0.97	–	0.68	0.61	4.77	0.12
2000	0.93	–	0.67	0.61	4.46	0.12
2001	0.95	–	0.69	0.66	4.76	0.10
2002	0.96	–	0.72	0.71	5.14	0.08
2003	0.90	–	0.68	0.68	5.04	0.08
2004	0.80	–	0.64	0.69	4.97	0.08
2005	0.74	–	0.60	0.81	5.35	0.09

continued

Table 4.7 Continued

Year	Alcohol and beverages	Sugar	Tobacco	Vehicles	Energy and environment	Other
2006	0.75	–	0.61	0.83	4.73	0.16
2007	0.74	–	0.66	0.88	4.57	0.16
2008	0.77	–	0.67	1.08	4.67	0.12
2009	0.84	–	0.73	1.13	4.85	0.13
2010	0.80	–	0.70	1.08	4.81	0.13
2011	0.79	–	0.73	1.02	4.54	0.13
2012	0.78	–	0.75	0.99	4.42	0.11
2013	0.76	–	0.69	1.02	4.29	0.10

Note: Due to classification problems, fuel tax is included in "Vehicles" until 1947 and in "Energy and environment" thereafter.

Source: See Figure 4.1.

Table 4.8 Specific consumption taxes, percent of GDP

Year	Alcohol and beverages	Sugar	Tobacco	Vehicles	Energy and environment	Other
1862	1.06	–	–	–	–	–
1863	1.12	–	–	–	–	–
1864	1.11	–	–	–	–	–
1865	1.25	–	–	–	–	–
1866	1.15	–	–	–	–	–
1867	0.94	–	–	–	–	–
1868	0.87	–	–	–	–	–
1869	0.96	–	–	–	–	–
1870	1.17	–	–	–	–	–
1871	1.43	–	–	–	–	–
1872	1.36	–	–	–	–	–
1873	1.29	–	–	–	–	–
1874	1.18	–	–	–	–	–
1875	1.29	–	–	–	–	–
1876	1.44	–	–	–	–	–
1877	1.32	–	–	–	–	–
1878	1.42	–	–	–	–	–
1879	1.37	–	–	–	–	–

continued

Table 4.8 Continued

Year	Alcohol and beverages	Sugar	Tobacco	Vehicles	Energy and environment	Other
1880	1.55	0.01	–	–	–	–
1881	1.60	0.01	–	–	–	–
1882	1.35	0.01	–	–	–	–
1883	1.30	0.01	–	–	–	–
1884	1.39	0.02	–	–	–	–
1885	1.48	0.03	–	–	–	–
1886	1.60	0.02	–	–	–	–
1887	1.16	0.03	–	–	–	–
1888	1.53	0.04	–	–	–	–
1889	1.40	0.04	–	–	–	–
1890	1.54	0.07	–	–	–	–
1891	1.34	0.12	–	–	–	–
1892	1.36	0.14	–	–	–	–
1893	1.46	0.17	–	–	–	–
1894	1.51	0.30	–	–	–	–
1895	1.45	0.43	–	–	–	–
1896	1.50	0.45	–	–	–	–
1897	1.47	0.59	–	–	–	–
1898	1.47	0.31	–	–	–	–
1899	1.43	0.34	–	–	–	–
1900	1.46	0.44	–	–	–	–
1901	1.47	0.57	–	–	–	–
1902	1.31	0.35	–	–	–	–
1903	1.33	0.44	–	–	–	–
1904	1.62	0.33	–	–	–	–
1905	1.56	0.46	–	–	–	–
1906	1.52	0.06	–	–	–	–
1907	1.36	0.48	–	–	–	–
1908	1.48	0.62	–	–	–	–
1909	1.19	0.49	–	–	–	–
1910	1.37	0.53	–	–	–	–
1911	1.42	0.56	–	–	–	–
1912	1.37	0.55	–	–	–	–
1913	1.15	0.53	–	–	–	–

continued

Table 4.8 Continued

Year	Alcohol and beverages	Sugar	Tobacco	Vehicles	Energy and environment	Other
1914	1.18	0.55	–	–	–	–
1915	1.03	0.53	0.06	–	–	–
1916	0.77	0.36	0.27	–	–	–
1917	0.37	0.16	0.28	–	–	–
1918	0.19	0.13	0.32	–	–	–
1919	0.43	0.16	0.40	–	–	–
1920	0.59	0.22	0.37	–	–	–
1921	1.07	0.27	0.44	–	–	–
1922	1.28	0.30	0.53	–	–	–
1923	1.07	0.36	0.55	0.12	–	–
1924	1.14	0.37	0.63	0.23	–	–
1925	1.11	0.31	0.63	0.27	–	–
1926	1.19	0.21	0.69	0.29	–	–
1927	1.13	0.21	0.72	0.38	–	–
1928	1.09	0.09	0.71	0.45	–	–
1929	1.19	0.02	0.76	0.48	–	–
1930	1.15	–	0.71	0.55	–	–
1931	1.31	–	0.80	0.67	–	–
1932	1.71	–	0.89	0.89	–	0.01
1933	1.72	–	0.90	0.94	–	0.15
1934	1.69	–	0.87	0.97	–	0.18
1935	1.72	–	0.86	1.00	–	0.18
1936	1.65	–	0.86	1.03	–	0.16
1937	1.64	–	0.86	1.03	–	0.22
1938	1.66	–	0.87	1.09	–	0.24
1939	1.96	0.05	0.98	1.05	–	0.30
1940	2.01	0.15	1.19	0.42	–	0.34
1941	1.80	–	1.26	0.23	–	0.47
1942	2.18	–	1.38	0.33	–	0.54
1943	2.42	–	1.41	0.41	–	0.52
1944	2.35	–	1.48	0.35	–	0.57
1945	2.42	–	1.57	0.62	–	0.55
1946	2.39	–	1.54	1.00	–	0.53
1947	2.42	–	1.56	1.15	–	0.80

continued

Table 4.8 Continued

Year	Alcohol and beverages	Sugar	Tobacco	Vehicles	Energy and environment	Other
1948	2.57	–	1.60	0.43	1.27	1.02
1949	2.38	–	1.47	0.44	1.22	0.87
1950	2.15	–	1.37	0.42	1.06	0.62
1951	1.97	–	1.22	0.54	0.69	0.71
1952	1.88	–	1.29	0.41	0.72	0.81
1953	1.92	–	1.30	0.45	0.82	0.75
1954	2.00	–	1.28	0.65	0.98	0.69
1955	2.23	–	1.24	0.83	1.10	0.70
1956	2.28	–	1.13	0.77	1.07	0.66
1957	2.18	–	1.19	0.77	1.58	0.58
1958	2.14	–	1.27	0.75	1.81	0.60
1959	2.06	–	1.25	0.79	1.88	0.56
1960	1.93	–	1.18	0.79	1.82	0.55
1961	1.87	–	1.16	0.78	1.59	0.54
1962	1.68	–	1.09	0.78	1.94	0.49
1963	1.91	–	1.02	0.89	1.94	0.43
1964	1.75	–	1.00	0.87	1.86	0.39
1965	1.72	–	1.00	0.85	1.93	0.29
1966	1.75	–	1.03	0.95	1.88	0.28
1967	1.69	–	1.05	0.98	1.79	0.27
1968	1.68	–	1.01	1.07	1.80	0.26
1969	1.64	–	0.98	1.12	1.76	0.24
1970	1.58	–	0.90	1.13	1.64	0.21
1971	1.56	–	0.83	1.26	1.58	0.21
1972	1.50	–	0.78	1.23	1.46	0.18
1973	1.40	–	0.78	1.20	1.34	0.25
1974	1.49	–	0.76	0.98	1.36	0.29
1975	1.46	–	0.68	0.88	1.55	0.26
1976	1.40	–	0.64	0.95	1.53	0.26
1977	1.28	–	0.62	0.85	1.55	0.23
1978	1.31	–	0.59	0.87	1.69	0.19
1979	1.27	–	0.57	0.83	1.66	0.19
1980	1.16	–	0.54	0.67	1.90	0.33
1981	1.11	–	0.51	0.64	2.00	0.33

continued

Table 4.8 Continued

Year	Alcohol and beverages	Sugar	Tobacco	Vehicles	Energy and environment	Other
1982	1.09	–	0.45	0.60	2.24	0.60
1983	1.20	–	0.54	0.54	2.13	0.54
1984	1.00	–	0.46	0.56	2.37	0.68
1985	0.96	–	0.43	0.57	2.58	0.71
1986	0.96	–	0.40	0.53	2.40	0.70
1987	0.92	–	0.42	0.53	2.49	0.71
1988	0.89	–	0.41	0.51	2.48	0.67
1989	0.87	–	0.41	0.52	2.48	0.63
1990	0.82	–	0.39	0.50	2.21	0.50
1991	0.77	–	0.37	0.46	2.14	0.42
1992	0.74	–	0.40	0.43	2.20	0.32
1993	0.74	–	0.45	0.33	2.46	0.27
1994	0.69	–	0.43	0.35	2.36	0.14
1995	0.64	–	0.40	0.32	2.24	0.12
1996	0.62	–	0.38	0.37	2.52	0.15
1997	0.51	–	0.40	0.33	2.51	0.08
1998	0.49	–	0.37	0.31	2.54	0.07
1999	0.50	–	0.35	0.31	2.44	0.06
2000	0.48	–	0.34	0.31	2.29	0.06
2001	0.47	–	0.34	0.33	2.35	0.05
2002	0.45	–	0.34	0.34	2.44	0.04
2003	0.43	–	0.32	0.33	2.41	0.04
2004	0.39	–	0.31	0.33	2.39	0.04
2005	0.36	–	0.29	0.40	2.62	0.04
2006	0.36	–	0.29	0.40	2.29	0.08
2007	0.35	–	0.31	0.42	2.17	0.07
2008	0.36	–	0.31	0.50	2.17	0.06
2009	0.39	–	0.34	0.53	2.26	0.06
2010	0.36	–	0.32	0.49	2.19	0.06
2011	0.35	–	0.32	0.45	2.02	0.06
2012	0.35	–	0.33	0.44	1.96	0.05
2013	0.34	–	0.31	0.45	1.90	0.04

Note: Due to classification problems, fuel tax is included in "Vehicles" until 1947 and in "Energy and environment" thereafter.

Source: See Figure 4.2.

Notes

1. Statistics Sweden (1914–2011), Ekonomistyrningsverket (2010–2014), OECD stat extracts, http://stats.oecd.org/Index.aspx?DataSetCode=REV.
2. Although municipalities were not legally entitled to tax people indirectly, they were not forbidden to tax dogs. Hence, there was a specific local dog tax paid by dog owners during the nineteenth century. This indirect tax was, however, of negligible importance. After World War I, local authorities nevertheless introduced luxury consumption taxes, which were later transformed into a state tax. Local authorities also had previously introduced a minor excise duty on forestry (*skogsaccis*) in 1909. When vehicle transportation grew into a key component of local economies, the County Administrative Board (*Länsstyrelsen*) was further allowed to introduce local road user charges. This tax was more of a fee than a tax.
3. Total (or state) revenue can be used instead, but this figure will include temporary and sometimes extraordinarily large revenues, such as sales of state-owned companies, which will result in spikes in the time series. Nonetheless, we included revenue associated with the social security system in the aggregate figure.
4. One reason for these changes is that the responsibility for maintaining the statistics concerning public finances shifted from *Statskontoret*, *Riksräkenskapsverket,* and *Riksrevisionsverket* (and published by Statistics Sweden) to a new body, ESV (*Ekonomistyrningsverket*), in 1998.
5. The VAT paid by state authorities was about SEK 20 billion in 2006. The state compensates the organizations for these VAT payments. 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 a few exceptions, oscillated between six and nine kronor to the dollar.
6. If taxes paid to the tax authority in January of year t refer to an economic event (income, sales) from December of year $t - 1$, the tax revenues are treated as revenue for the year $t - 1$, that is, the year when the economic activity generating the tax revenue was performed. See, for example, Skatteverket (2012) for a further discussion of methodological changes.
7. The statistics do not allow the separation of the vehicle tax from the fuel tax before 1947. After 1995, the fuel tax is reclassified and cannot be separated from other energy taxes. This reclassification will not distort the measure of state tax revenue or total tax revenue from specific consumption taxes, but it will make the analysis of the disaggregated categories in Section 4.2 more difficult (see Figure 4.6).
8. Of course, the share depends on the evolution of other state taxes as well. During the crisis in the early 1990s, employee-paid social security contributions, for instance, were (re)introduced to bolster the state budget. In 2007, an earned income tax credit was introduced and was extended four times during the 2008–2013 period.
9. See Gårestad (1987, Chapter 4) for a more thorough discussion of customs duties in the Swedish tax system until World War I.
10. See, for example, Rodriguez (1980, 50).
11. The share of total tax revenue follows a similar trajectory, although at a lower level.
12. Taxes could be levied on both the production and consumption sides. Initially, Swedish vodka (*brännvin*) was the most important source of the beverage tax. At the beginning of the twentieth century, a specific malt tax (beer) as well as a tax on punsch (Swedish punch) was introduced. Punsch was a sweet arrack-based liqueur that was (and remains) a popular drink among students and teachers in the university cities of Lund

and Uppsala. The punsch tax, compared to other taxes at that time, was high, at times reaching 30 percent (of the pre-tax consumer price).

13. One reason for the increase during the 1930s was that the Social Democratic Party, which won the election in 1932, primarily increased consumption taxes and not income taxes (Steinmo 1993, 86).
14. The tax on vehicles formally consisted of different parts. One tax was based on the weight of the vehicle. However, there also was a specific tax on tires. It was soon followed by a specific fuel tax. Initially, the revenue from these taxes was supposed to cover the costs of production and maintenance of the road network, that is, they could be understood as fees, but this connection was gradually attenuated.
15. See Du Rietz, Johansson, and Stenkula (2015) for a further discussion about the progressive income tax system.
16. See Rodriguez (1980, 138f) for a further discussion about indirect taxation and consumption taxes.
17. At the end of the period, there were three VAT rates: full tax, with a tax rate of 25 percent (20% of sales price), and two lower tax rates of 12 (10.71) and 6 (5.67) percent (see Table 4.2).

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Chapter 5

Swedish Inheritance and Gift Taxation (1885–2004)

Gunnar Du Rietz, Magnus Henrekson, and Daniel Waldenström

1. Introduction

Modern inheritance taxation was introduced in Sweden in 1885, in the form of a single tax—the 1884 Stamp Ordinance. 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.[1] This chapter provides a detailed analysis of the evolution of Swedish gift, inheritance, and estate taxes from 1885 until 2004 when they were abolished.

The main purpose of this chapter is to calculate the first long-term series of effective tax rates covering each year during the full period under study. Unlike previous studies where mostly statutory tax rates—typically the statutory top rate—are used, our effective rates both cover different inheritance amounts and account for the full spectrum of institutional factors affecting tax rates—such as deductions, exemptions, and valuation rules. We also present tax rates paid by heirs of individual fortunes as well as family firms.

Our long-run series provides new insights regarding the evolution of inheritance taxation in Sweden. Although the tax was quadrupled to 4 percent in 1915, it is fair to say that taxes were relatively low even for the largest inherited fortunes until 1934. In the postwar era, tax rates were raised gradually, reaching peak levels in the early 1970s. Thereafter, new valuation rules, especially concerning inherited family firms, lowered effective tax rates, and additional reliefs in the 1990s and 2000s led to further tax reductions until the final abolition in 2004. Looking at the aggregate amounts of receipts of the gift, inheritance, and estate taxes during the period of study, we find that these taxes were never fiscally important when compared to

personal income or wealth taxes. Instead, it seems that the ambition with the inheritance tax was primarily to reduce large intergenerational transfers at the top of the distribution.

The chapter is organized as follows. In Section 2, we present the main ideas behind the inheritance, gift, and estate taxes in Sweden. The third and fourth sections present in some detail the rules governing the valuation of assets and liabilities and the tax schedules. Section 5 quantifies the importance of the inheritance and gift taxes as sources of government revenue. In Section 6, we examine the impact of gift and inheritance taxation by computing average inheritance tax rates, including gift and estate taxes, for synthetically constructed family firms and individuals. Most of the focus is on an assessment of the tax burden on owners of family firms of different sizes. Section 7 consists of a brief summary and our main conclusions.

2. Main Ideas and Aims behind the Inheritance, Gift, and Estate Taxes

2.1 Inheritance and Estate Taxation

The starting point for calculating an inheritance tax is the remainder of a deceased person's estate, after settling outstanding debtors' accounts and, if the deceased was married, the spouse's right to his/her marital property (*giftorätt*). The remainder is then apportioned among the heirs and beneficiaries under the will, and as a final step, the inheritance tax is calculated for each heir. Among the assets included in the taxable estate are real and financial assets, consumer durables, and most private insurances. The tax-free property of the spouse removed from the taxable estate usually amounted to half of the estate; from 1960, this amounted to at least four price basic amounts.[2]

There are in general two different systems for taxing inheritance. The first is *estate taxation* (*kvarlåtenskapsbeskattning*), in which the estate is taxed in its entirety. This system is effectively a tax on the wealth of the deceased. This system is used in the United States, and was also practiced in Sweden during 11 years in the 1940s and 1950s (see below). The second system is *inheritance taxation* (*arvslottsbeskattning*) where the acquisitions of heirs and beneficiaries are taxed. When the Swedish 1884 Stamp Ordinance was implemented, legislators discussed which of the two alternative tax systems to apply. Inheritance taxation was preferred, and the actual tax was thus imposed on the lots received by the heirs. Inheritance taxation is internationally the most common form of taxation of intergenerational transfers and is used for example in France, the Netherlands, and the Nordic countries.

The allotment of the taxable part of the estate is typically made according to a provisional (schematic) distribution of the estate inventory. The deceased's estate is then partitioned according to the legal rules of inheritance order and stipulations in the deceased's will (if any). If there are three children, the estate is thus split into

three equal parts, unless there is a will stipulating differently. If an heir abstains from his or her inheritance, the estate is passed on to his or her children. Assets emanating from insurance policies are taxed jointly with the deceased's estate, except for certain tax-exempt allowances. Alternatively, the heirs can refer to a so-called real allotment of property as a base for the inheritance tax, but the allotment and the valuation of assets have to agree with inheritance law (SOU 2004:66, 84).[3]

2.2 Gift Taxation

In order to avoid substantial tax avoidance through gifts, it is necessary to also tax gifts that the deceased may transfer to the heirs during the years before the time of death. Several legal aspects need to apply if one is to talk about an *inter vivos* gift (a gift between the living). For an *inter vivos* gift to be taxable, it is required that it is associated with an ability to pay the tax, that it does not concern parents' obligation to support their children, and that it is not referring to estate division transfers between spouses or periodical transfers (Englund 1975, 155f).

Its main motivation, however, refers to the risk of tax avoidance if donors partition their wealth before the time of death in order to minimize inheritance taxes. In some countries, gift taxation is uniquely associated with inheritance and estate taxation, but in Sweden gift taxes had to be paid from 1914 until 2004 on all kinds of gifts, not just those related to intergenerational transfers.

2.3 Summation Rules

If every gift were considered as independent of earlier acquisitions, large tax gains could be obtained simply by splitting up gifts into smaller installments spread over time. Analogously, inheritance and will acquisitions could then be split up into one acquisition in connection with the demise of the owner and several subsequent gifts and delayed inheritances. As a result, the progressivity of the inheritance, estate, and gift tax schedules would largely be avoided and tax payments substantially reduced (Englund 1975, 116).

To counteract any tendencies toward avoidance of inheritance, estate, and gift taxes in this way, rules were constructed in the Inheritance and Gift Tax Ordinance (AGL) and the Estate Tax Ordinance (KVL), stipulating that gifts and bequests from the same donor should be added to inheritance lots and be taxed jointly. In the rules in the AGL, a distinction was made between immediate acquisitions (made before or at the time of death of the deceased) and cases when a tax liability arose later, so-called delayed acquisitions.

The first summation rules (*sammanläggningsregler*) for immediate acquisitions in the inheritance and gift legislation were introduced in 1911 and concerned combining inheritance lots with earlier gifts. The period of summation was two years. The value of gifts should be added on to the value of the inheritance lots and the inheritance tax calculated, as if all acquisitions had occurred at the same time (*Betänkande* 1910, 15).[4]

In the 1914 Inheritance and Gift Tax Ordinance (AGF 1914), the summation rules were expanded to include consecutive gifts, but the summation period was still two years until 1934 when it was extended to four years.[5] The summation period was prolonged, because two years had turned out to be too short to effectively prevent taxpayers from escaping part of the tax through avoidance strategies (SOU 1957:48, 85). Transfers of possessions were in many cases arranged as a series of gifts at intervals somewhat longer than two years.

Special summation rules applied for delayed acquisitions taking place at some future point in time. Such a rule was first introduced in AGF 1941, when a ten-year period was decided to apply for such delayed transfers. The 1941 AGF also expanded the tax liability for gifts with future transfers. Beneficiary promissory notes regarding such (future) gifts were also considered taxable gifts.

2.4 The Ability-to-Pay Principle of Taxation

The ability-to-pay principle of taxation has played an important role for the Swedish income tax system since the 1910 Ordinance of Income and Wealth Taxation. Taxes should be levied so as to minimize aggregate sacrifice and maximize welfare.[6] Traces of the ability-to-pay principle in the inheritance area can be found in the 1894 Stamp Ordinance as well as in the 1914 Inheritance and Gift Tax Ordinance. Acquisitions through inheritance and gifts normally provide the recipient with the ability to pay the ensuing tax. This equity consideration was decisive for the progressivity of the inheritance and state income tax schedules and it also provided an important rationale for the origin of tax exemptions.

3. Valuation of Assets and Liabilities

3.1 General

The starting point for the valuation of assets and liabilities of estate inventories is that they should be listed at market values at the time of death of the deceased.

However, for certain types of assets, special valuation rules also applied. Real estate was taken up at tax-assessed value in the year preceding the death. The value of co-operative building society flats corresponded to members' share of wealth of the society. Personal property corresponded to market value, and a business was valued as its sales value, estimated by trustees. Some asset types were listed at a fraction of their value. For example, shares registered on a stock exchange were listed at less than their full market value from 1978: at 80 percent in 1997–2004 and at 75 percent in 1978–1996. From 1978 unlisted shares (on the so-called O-list; an informal listing) and other over-the-counter (OTC) shares were assessed at only 30 percent of their quoted or book value. Forest holdings (*skogskonto*) were listed at half their market value. Small firm inventories and stock-in-trade have, at times, also been valued below market prices (see more below).

3.2 Insurance with Beneficiaries

Insurance policies without provision for beneficiaries were taxed in the same way as other inherited assets. If a deceased person left behind insurance without beneficiaries, the value of the insurance, or the insurance disbursements, was simply included in the estate inventory. The same principle normally applied for insurances possessed by a surviving spouse. However, insurances with beneficiaries—which are in fact included in most insurance contracts—are typically tax exempt following the Insurance Contract or Marriage Codes. Beneficiary acquisitions were regulated in the Inheritance and Gift Tax Code and were among the most complicated elements in the taxation of inheritance (Englund 1975, 99).

Insurance acquisitions were initially tax exempt according to the Inheritance and Gift Tax Codes of both 1914 and 1941. The motivation was that insurance disbursements, after the decease of the owner, should not be included in the estate if beneficiaries were provided for. During a period from 1931, acquisitions were taxed although with a basic exemption of SEK[7] 15,000 for each beneficiary (SOU 1957:48, 134).

Individual private pension insurance was exempted from taxation. Specifically, disbursements were not taxed if fee payments had been initiated more than ten years before the time of death. The same rule applied for pension plans entered into during employment if the yearly disbursement fell short of SEK 10,000 (basic exemption). Other life insurances were tax exempt if disbursements fell short of SEK 2,500 per year. The deductions for beneficiaries and the surviving spouse's marital property implied that insurances could be higher and still be tax exempt.

The main rule after the 1914 inheritance and gift taxation ordinance was that beneficiary acquisitions were taxed as inheritance, though with a basic exemption. Tax liability arose at the death of the policyholder (Eberstein 1956). Before 1931, ordinary old-age insurance was included in the estate inventory, but if beneficiaries were included, no inheritance tax had to be paid. The tax-free exemption was increased in 1962 from SEK 15,000 to 32,000 (SOU 1969:54, 68), in 1974 from 41,000 to 45,000 (Bratt and Fernström 1975, 328), and in 2004 to six price basic amounts (SOU 2004:66, 66).[8] This exemption was adjusted so that ordinary group insurances would be exempt from inheritance tax.

Employment old-age insurances and certain pension insurances with beneficiaries were exempt from inheritance tax even after 1931 (SOU 1969:54, 68). During the period 1948–1958, estate taxation was applicable according to certain special rules for pension insurances; employment old-age insurances were exempt from estate tax as well as from inheritance lots taxation. Other life insurances were tax exempt if they were older than ten years, or if the fees fell short of SEK 50,000 (SEK 80,000 from 1958). Life insurance wrappers (*kapitalförsäkringar*) were tax exempt up to a basic exemption of SEK 15,000. Accident and sickness insurances were wholly exempt from estate tax; other insurance policies from inheritance and gift tax were exempted up to SEK 15,000. In the case of income from interest, the exempted amount was limited to SEK 1,500 per year.

3.3 Tax and Valuation Reliefs for Small Firm Business Capital

In the corporate tax code, reliefs in the valuation of business capital existed during the entire twentieth century in the form of favorable rules for valuation of machinery, inventories, and stock-in-trade (Du Rietz, Johansson, and Stenkula 2015b).[9] However, reliefs for inheritance of small closely held (private) companies were not introduced until 1971. The purpose of the reliefs was to facilitate takeover of family firms by heirs. The reliefs applied to both gifts and bequests and regardless of whether companies were sole proprietorships (*enskild firma*), partnerships (*handelsbolag*), or private joint-stock companies. The tax relief was designed as a conditional tax concession of 10 percent of the inheritance tax on the recipient's lot. Initially, this was set up as a payment deferral, but later the relief was made permanent had the firm been held by the heirs for more than four years, provided that the net worth of the firm did not exceed SEK two million. Another requirement for tax relief was that at least 75 percent of the remainder of the estate be invested in the firm.[10]

In 1974, the 1971–1973 tax relief was extended by an option to explicitly allow stock-in-trade and inventories to be undervalued. The new valuation rules stipulated that the lowest of either acquisition cost or replacement value was to be used as a basis for taxation, and then an additional 5 percent was deducted for obsolescence, and finally, the remaining value was written down to 40 percent (Englund 1975, 62). In the tax rate computations below, we have interpreted the deliberate underestimation of stock-in-trade and inventories in 1974–1977 to result in an assessment at 40 percent of equity.

In 1978, the valuation relief for small businesses became more generous. Small firms were valued at 30 percent of book net equity value (assets less liabilities). This valuation rule was in force until the inheritance and gift tax was repealed on December 17, 2004.

4. Tax Schedules

4.1 Early Tax Schedules Up to 1914

The inheritance and gift tax schedules were initially proportional, but the tax depended on consanguinity, that is, the relationship and other personal relations between the deceased and the heirs. Before 1885, there were stipulations about taxation of the deceased's estates in the so-called appropriations (Du Rietz, Johansson, and Stenkula 2015a, b). In 1810, when the Swedish tax system was reformed, the inheritance tariff rate was increased to 3 percent and the estate report (*bouppteckningen*) was also liable to a stamp duty. Half a century later under the income tax reform of 1861, the income taxes as well as the inheritance tax were reduced to a flat rate at 1 percent.

With the 1884 Stamp Ordinance, all previous variants of estate taxes including stamp duties and inheritance lot taxes were merged into a single tax in the form of a stamp on the total estate value. As shown in Table 5.1, there were two inheritance

Table 5.1 Inheritance tax schedule, 1885–1894

Class	Tax rate, %
Direct heir	0.5
Other heirs	0.6

Source: Eberstein (1956, 5).

tax classes having different tax rates during the period 1885–1894, one for direct heirs (0.5 percent) and another for other heirs (0.6 percent).[11]

The guiding principles of the Inheritance and Gift Law (AGL) were laid down in the 1894 Stamp Ordinance. It was in force in 1895–1909 and is considered to be the first modern inheritance tax as it had progressive tax schedules that were based on the estate report and on a provisional distribution of inheritance lots. A stamp duty on gifts of personal property was also introduced in case there was a gift deed (*gåvobrev*).[12] The AGL defined three classes of taxpayers (see Table 5.2). Class I, which had the lowest tax rates, included surviving spouse, cohabiter (*sammanboende*), children, and descendants. Class III consisted of juridical persons such as public utilities, private nonprofit foundations, and associations, of which some (e.g., public institutions and religious communities) were tax exempt. Class II, strictly speaking, encompassed all other heirs; that is, those not belonging to Class I and III. In practice, this meant parents, brothers, and sisters. Gifts to public authorities, religious communities, and foundations promoting research, education, culture, or sports were tax exempt.

The 1894 Stamp Ordinance introduced a single inheritance lot system in force through 1947. In 1948 the estate taxation was added alongside the then existing inheritance lot taxation, which made the taxation of deceased person's estate a dual tax system.[13] The lowest marginal tax rate was 0.5 percent in Class I and II. For lots above SEK 75,000, the rate was 1.5 percent in Class I. The rate was 3 percent for inheritances exceeding SEK 50,000 in Class II. The top marginal tax rate was 6 percent, levied on lots in Class III for amounts exceeding SEK 40,000. The tax-exempt amounts (*bottenbelopp*) were not yet deductible exemptions, but a taxable limit.[14]

The progressivity of the tax schedule, introduced with the 1894 tax, was increased in 1910, when tax rates were raised in all three tax classes (Table 5.3). At the same time, the taxable limit was raised in Class I from SEK 400 to 1,000, while it remained at SEK 200 in Class II and III. The top marginal tax rates were set to 4 percent in Class I and 8 and 16 percent in Class II and Class III, respectively.

In 1911, a fourth tax class was added, with a taxable limit of SEK 200 (Table 5.4). The new Class IV was broken out from the preceding Class III in 1895–1910, and got a minimum tax rate of 1 percent and a top tax rate of 16 percent on amounts exceeding SEK 260,000. Class IV was abolished after three years, that is, it only existed in the 1911–1913 period (and reappeared again in 1959–1970).

Since the tax schedules and taxable limits/exemptions are expressed in nominal terms we have added an Appendix where we include data on the evolution of the consumer price index (Table 5.15) and the average annual wage for a full-time production

worker (Table 2.1 in Chapter 2) in order to facilitate comparison over time. Table 5.16 presents the taxable limits (1894–1970) and basic exemptions (1971–2004) in nominal and real terms, and Figure 5.10 shows the taxable limits and basic exemptions for descendants expressed as a share of the average annual wage of a production worker.

4.2 The Inheritance and Gift Act of 1914

In 1914, a new Inheritance and Gift Tax Ordinance was instituted, introducing the first modern inheritance and gift tax code. A new document, a so-called declaration, was also introduced for those cases when an estate inventory was missing. Liability for gift tax was deemed to arise, whether or not a gift deed existed. The tax classes of inheritance now also came to include gifts, and the basic exemption was raised considerably to SEK 2,000 for all classes. Furthermore, the number of tax brackets was increased (see Table 5.5). The top marginal tax rates, however, were unchanged at 4, 8, and 16 percent, respectively. A special tax exemption applied for gifts regarding the so-called beneficial partition of joint property of husband and wife (*bodelning*).

4.3 Sharply Increased Tax Rates in 1934

Throughout the 1930s, there was a public debate in Sweden concerning inequality and fairness of the wealth distribution and inheritance flows. An early example is a critical report on wealth equalization and inheritance taxation written by the leading Social Democrat Ernst Wigforss (Wigforss 1928). The Social Democrats gained governmental power in 1932. As the new Minister of Finance Wigforss immediately proposed the introduction of an estate tax alongside the inheritance tax.[15] This bill was rejected by Parliament, but instead the existing inheritance and gift taxation (*arvslottsskatten*) was increased (SOU 1957:48, 23).

As shown in Table 5.6, the 1934 tax schedules were much more progressive than the previous ones. The top marginal tax rate in Class I (children and spouse) was raised from 4.5 to 20 percent. The top tax rates in Class II (brothers, sisters, and parents) and Class III were raised to 24 and 30 percent, respectively.

In 1941, the Inheritance and Gift Tax Ordinance of 1914 was replaced. The taxable limit for inheritance and gifts in Class I was raised from SEK 1,000 to SEK 3,000 and in the other classes from SEK 200 to SEK 1,000. The inheritance marginal tax rates remained unchanged during the whole period 1934–1958, but from 1948 until 1958, as mentioned earlier, a progressive estate tax was introduced and combined with an estate tax on gifts to make it difficult to avoid the estate tax on inheritance. The taxable limits were raised in 1941, 1957, and 1958 (see Table 5.6).

4.4 The Estate Tax of 1948 and the Tax Schedules in the 1950s

The first few years following World War II were turbulent (Ohlsson 2011).[16] Two widely debated issues in Sweden concerned the extent of economic planning in

Table 5.2 Inheritance tax schedules, 1895–1909

Class I: Children, spouse, and descendants						Class II: Parents, brothers, and sisters						Class III: Nonprofit organizations and other heirs					
Taxable lot			Tax			Taxable lot			Tax			Taxable lot			Tax		
SEK		SEK	SEK		%	SEK		SEK	SEK		%	SEK		SEK	SEK		%
0	–	75,000	0	+	0.5	0	–	50,000	0	+	0.5	0	–	40,000	0	+	0.5
75,000	–		375	+	1.5	50,000	–		250	+	3	40,000	–		200	+	6
Taxable limit:			400						200						200		

Note: All amounts in the tables refer to SEK. The whole inheritance lot was taxable.
Source: SOU 1957:48, 57.

Table 5.3 Inheritance tax schedules for Classes I–II, 1910–1914, and Class III, 1910

Class I: Children, spouse, and descendants						Class II: Parents, brothers, and sisters						Class III: Nonprofit organizations and other heirs					
Taxable lot			Tax			Taxable lot			Tax			Taxable lot			Tax		
SEK		SEK	SEK		%	SEK		SEK	SEK		%	SEK		SEK	SEK		%
0	–	75,000	0	+	0.6	0	–	50,000	0	+	0.6	0	–	40,000	0	+	1.0
75,000	–	450,000	450	+	1.5	50,000	–	375,000	300	+	3.0	40,000	–	260,000	400	+	6.0
450,000	–		6,075	+	4.0	375,000	–		10,050	+	8.0	260,000	–		13,6	+	16
Taxable limit:			1,000						200						200		

Note: In this and the following tables, the taxable lot equals the inheritance lot when there is no basic exemption. The tax schedule for Class III is for 1910 only.
Source: SOU 1957:48, 57.

Table 5.4 Inheritance tax schedule for Classes III–IV, 1911–1914

Class III: Certain juridical persons					Class IV: Other heirs excluding certain juridical persons				
Taxable Lot		Tax			Taxable Lot			Tax	
SEK	SEK	SEK		%	SEK		SEK	SEK	%
0	260,000	0	+	1.0	0	–	40,000	0 +	1.0
260,000	–	260	+	12.0	40,000	–	260,000	400 +	6.0
					260,000	–		13,600 +	16.0

Source: SOU 1957:48, 57.

Table 5.5 Inheritance tax schedules, 1915–1933

Class I: Children, spouse, and descendants						Class II: Parents, brothers, sisters, descendants, and nonprofit organizations						Class III: Other heirs					
Taxable lot			Tax			Taxable lot			Tax			Taxable lot			Tax		
SEK		SEK	SEK		%	SEK		SEK	SEK		%	SEK		SEK	SEK		%
1,000	–	2,000	6	+	1.0	200	–	500	1.2	+	0.9	200	–	500	2	+	1.8
2,000	–	4,000	16	+	1.2	500	–	1,000	4	+	1.2	500	–	1,000	8	+	2.5
4,000	–	6,000	40	+	1.6	1,000	–	2,000	10	+	1.8	1,000	–	2,000	20	+	4.0
6,000	–	8,000	72	+	2.0	2,000	–	3,000	28	+	2.6	2,000	–	3,000	60	+	6.0
8,000	–	10,000	112	+	2.4	3,000	–	4,000	54	+	3.4	3,000	–	4,000	120	+	8.0

10,000	–	12,000	160	+	2.8	4,000	–	5,000	88	+	4.2	4,000	–	5,000	200	+	10
12,000	–	15,000	216	+	2.8	5,000	–	6,000	130	+	5.0	5,000	–	6,000	300	+	12
15,000	–	20,000	300	+	2.8	6,000	–	10,000	180	+	6.5	6,000	–	10,000	420	+	12
20,000	–	30,000	440	+	2.8	10,000	–	25,000	400	+	5.6	10,000	–	30,000	900	+	12
30,000	–	50,000	720	+	3.4	25,000	–	50,000	1,250	+	7.0	30,000	–	60,000	3,300	+	15
50,000	–	75,000	1,400	+	3.4	50,000	–	150,000	3,000	+	7.5	60,000	–	175,000	7,800	+	16
75,000	–	100,000	2,250	+	3.8	150,000	–	3,656,000	10,500	+	8.7	175,000	–	260,000	27,260	+	18
100,000	–	150,000	3,200	+	3.8	3,656,000	–		315,522	+	8.0	260,000	–		42,560	+	16
150,000	–	225,000	5,100	+	4.0												
225,000	–	325,000	8,100	+	4.25												
325,000	–	450,000	12,350	+	4.5												
450,000		–	18,000	+	4.0												
Taxable limit: SEK 1, 000						Taxable limit: SEK 200						Taxable limit: SEK 200					

Note: In Class I (up to SEK 1,000) and Class II (up to SEK 200) the marginal tax in the first taxable lot interval is 0.6 percent, and in Class III (up to SEK 200) it is 1 percent.

Source: SFS 1914:38, 1169.

Table 5.6 Inheritance tax schedules, 1934–1958

Class I: Children, spouse, and descendants					Class II: Parents, brothers, and sisters
Taxable lot		Tax			Marginal tax rates
SEK	SEK	SEK		%	%
0	– 1,000	0	+	1	2
1,000	– 3,000	10	+	1	4
3,000	– 6,000	30	+	2	6
6,000	– 12,000	90	+	3	8
12,000	– 20,000	270	+	4	10
20,000	– 30,000	590	+	5	12
30,000	– 40,000	1,090	+	6	15
40,000	– 50,000	1,690	+	7	18
50,000	– 60,000	2,390	+	8	18
60,000	– 75,000	3,190	+	9	21
75,000	– 100,000	4,540	+	10	21
100,000	– 150,000	7,040	+	12	24
150,000	– 200,000	13,040	+	14	24
200,000	– 300,000	20,040	+	16	24
300,000	– 400,000	36,040	+	18	24
400,000	–	54,040	+	20	24

	Spouse	Children	
Taxable limit in 1934: SEK	1,000	1,000	200
Taxable limit in 1941: SEK	25,000	3,000	1,000
Taxable limit in 1957: SEK	40,000	6,000	2,000
Taxable limit in 1958: SEK	80,000	6,000	2,000

Class III: Nonprofit organizations			Class IV: Others		
Taxable lot SEK	Tax SEK	%	Taxable lot SEK	Tax SEK	%
1,000–3,000	40	+10	1,000–3,000	40	+10
3,000–6,000	240	+15	3,000–6,000	200	+15
6,000–20,000	690	+20	6,000–12,000	690	+20
20,000–60,000	3,490	+25	12,000–20,000	1,890	+25
60,000–	13,490	+30	20,000–40,000	3,890	+30
			40,000–	9,890	+35
Taxable limit in 1934	200			200	
Taxable limit in 1941 (through 1970)	1,000			1,000	

Source: SFS 1941:416, 780ff.

the postwar era and the taxation of high incomes and wealth. In 1944, the Social Democrats launched a policy program together with the Trade Union Confederation (LO) in which one important objective was to equalize income and wealth by means of higher taxation. Large fortunes were considered capable to bear—besides the annual wealth tax—an extra charge when transferred to heirs after the death of a wealthy person. The estate tax became a complement to the inheritance taxation already in place. Through the joint use of these two systems, both the size of the estate and the size of the inherited lots determined the total tax levied.

An estate tax alongside the existing inheritance tax was instituted in 1948. The two taxes were combined such that the estate was first taxed and then the tax payment was deducted from the estate before the inheritance lots were divided and taxed.[17] The estate tax was levied on total net value of the estate after the deduction of certain tax-exempt items, such as the marital property (half of the estate) and a tax-free amount of SEK 30,000. The tax threshold was later increased to SEK 50,000 in 1953 (SOU 1957:48, 9–11) and to SEK 80,000 in 1958 (SFS 1957:107).[18] Table 5.7 shows the estate tax schedule, and as can be seen it was quite progressive reaching a top marginal tax rate of 50 percent for estates exceeding SEK five million.

Table 5.7 Estate tax schedules, 1948–1958

Taxable estate			Tax 1953–1957		Tax rate, %		
SEK		SEK	SEK		1948–1952	1953–1957	1958
0	–	30,000	0		0	0	0
30,000	–	50,000	0	+	5	0	0
50,000	–	70,000	0	+	5	5	0
70,000	–	80,000	1,000	+	10	10	0
80,000	–	100,000	2,000	+	10	10	10
100,000	–	200,000	4,000	+	15	15	15
200,000	–	300,000	19,000	+	20	20	20
300,000	–	500,000	39,000	+	25	25	25
500,000	–	1,000,000	89,000	+	30	30	30
1,000,000	–	2,000,000	239,000	+	35	35	35
2,000,000	–	5,000,000	589,000	+	40	40	40
5,000,000	–		1,789,000	+	50	50	50
Basic exemption 1948–1952: SEK 30,000							
Basic exemption 1953–1957: SEK 50,000							
Basic exemption 1958: SEK 80,000							

Note: As a further clarification the column "Tax 1953–1957" shows how the estate tax was calculated during that particular period.

Source: SOU 1957:48, 57.

Table 5.8 Inheritance tax schedules, 1959–1970

Class I: Children, spouses, descendants						Class II: Brothers, sisters, parents, and descendants					
Inheritance lot			Tax			Inheritance lot			Tax		
SEK		SEK	SEK		%	SEK		SEK	SEK		%
6,000	–	12,000	90	+	3	2,000	–	5,000	60	+	6
12,000	–	20,000	270	+	4	5,000	–	10,000	240	+	9
20,000	–	30,000	590	+	5	10,000	–	15,000	690	+	12
30,000	–	40,000	1,090	+	6	15,000	–	20,000	1,290	+	15
40,000	–	50,000	1,690	+	7	20,000	–	30,000	2,040	+	20
50,000	–	60,000	2,390	+	8	30,000	–	40,000	4,040	+	25
60,000	–	70,000	3,190	+	9	40,000	–	50,000	6,540	+	30
70,000	–	80,000	4,090	+	10	50,000	–	75,000	9,540	+	35
80,000	–	90,000	5,090	+	15	75,000	–	100,000	18,290	+	40
90,000	–	100,000	6,590	+	20	100,000	–	150,000	28,290	+	45
100,000	–	100,000	8,590	+	24	150,000	–	200,000	50,790	+	50
150,000	–	200,000	20,590	+	28	200,000	–	500,000	75,790	+	55
200,000	–	300,000	34,590	+	32	500,000	–	1,000,000	240,790	+	60
300,000	–	400,000	66,590	+	36	1,000,000	–		540,790	+	65
400,000	–	500,000	102,590	+	40						
500,000	–	1,000,000	142,590	+	44						

1,000,000	–	2,000,000	362,590	+	48
2,000,000	–	5,000,000	842,590	+	52
5,000,000	–		2,402,590	+	60

Taxable limit: SEK 6,000

Taxable limit: SEK 2,000

Class III: Nonprofit organizations						Class IV: Others					
Inheritance lot			Tax			Inheritance lot			Tax		
SEK		SEK	SEK		%	SEK		SEK	SEK		%
1,000	–	3,000	40	+	10	1,000	–	5,000	200	+	20
3,000	–	6,000	240	+	15	5,000	–	10,000	1000	+	30
6,000	–	20,000	690	+	20	10,000	–	20,000	2,500	+	40
20,000	–	60,000	3,490	+	25	20,000	–	30,000	6,500	+	50
60,000	–		13,490	+	30	30,000	–	50,000	11,500	+	60
						50,000	–		23,500	+	65

Taxable limit: SEK 1,000

Taxable limit: SEK 1,000

Note: The whole lot was taxable if the inheritance lot exceeded the taxable limit as there were no basic exemptions.

Source: SFS 1958:562, 1613–1614.

In 1956, the Minister of Finance summoned a government commission on reforming the estate and inheritance taxation (*arvsskattesakkunniga*). The recently introduced estate tax was regarded as problematic for several reasons. It did not raise as much revenue as had been originally estimated; only half of what was anticipated (SOU 1957:48, 10). Furthermore, the threshold had been set so low that nearly one-sixth of all estates were eligible for estate taxation.[19] Critique was also leveled against the fact that the tax affected people with relatively moderate income and financial wealth and whose savings were invested in real estate or family firms. It could also be expected that the number of such cases would increase.

Despite the high tax rates, tax revenue was low also because of substantial avoidance strategies by taxpayers. One measure taken to this effect was the explosion of gifts in 1947, the year before the estate tax was introduced (Ohlsson 2011). Other measures to avoid the estate tax were the establishment of tax-exempt family foundations, holding companies, and limited partnerships (SOU 1957:48, 10).[20] In addition, these measures often resulted in lower income and wealth tax. The inheritance tax experts therefore proposed that the estate tax be abolished. To prevent a fall in total revenue from removing the estate tax, inheritance tax rates were sharply increased at the same time (Table 5.8). The estate tax was repealed from 1959. The top tax rate for children and spouses was increased to 60 percent and to 65 percent in Class II and IV. The new inheritance tax schedules were based on the proposals in the inheritance experts' committee report (SOU 1957:48) and applied during the period 1959–1970.

4.5 Tax Schedules in the 1970s

The Capital Taxation Committee (*Kapitalskatteberedningen*) was summoned in 1967 to make a complete overhaul of the taxation of capital in Sweden, including the rules of wealth, inheritance, and gift taxation (SOU 1969:54). The new tax schedules, implemented in 1971, adhered closely to the Committee proposal. The fourth tax class was dropped and the heirs formerly belonging to this class were incorporated into Class II, which henceforth consisted of all individual heirs not in Class I and all juridical persons not belonging to Class III. Table 5.9 shows that the top marginal tax rate in Class I was increased from 60 to 65 percent on inheritances exceeding SEK five million. In Class II, the top rate was raised from 65 to 72 percent. The earlier taxable limits (*bottenbelopp*) were changed into deductible exemptions (*grundavdrag*), and the number of tax brackets was reduced, which resulted in a small tax increase.[21]

In 1971, reliefs in the valuation of small firm assets in the estates were introduced.[22] From 1978 onward, the taxable net worth of small firms (assets less liabilities) in wealth and inheritance taxation was further reduced to no more than 30 percent of the book value of firm equity.

Tax brackets were adjusted upward in 1981 as shown in Table 5.10, to compensate for bracket creep caused by inflation. In 1983, a final tax rate increase was instituted, when the maximum rate was raised to 70 percent in Class I and 75 percent in Class II.

Table 5.9 Inheritance tax schedules, 1971–1980

Class I: Children, spouses, descendants						Class II: Parents, brothers, sisters, and other heirs						Class III: Nonprofit organizations					
Taxable lot			Tax			Taxable lot			Tax			Taxable lot			Tax		
SEK		SEK	SEK		%	SEK		SEK	SEK		%	SEK		SEK	SEK		%
0	–	25,000	0	+	5	0	–	10,000	0	+	8	0	–	10,000	0	+	8
25,000	–	50,000	1,250	+	10	10,000	–	20,000	800	+	16	10,000	–	20,000	800	+	16
50,000	–	75,000	3,750	+	15	20,000	–	30,000	2,400	+	24	20,000	–	30,000	2,400	+	24
75,000	–	100,000	7,500	+	22	30,000	–	50,000	4,800	+	32	30,000	–		4,800	+	30
100,000	–	150,000	13,000	+	28	50,000	–	70,000	11,200	+	40						
150,000	–	250,000	27,000	+	33	70,000	–	100,000	19,200	+	45						
250,000	–	350,000	60,000	+	38	100,000	–	150,000	32,700	+	50						
350,000	–	500,000	98,000	+	44	150,000	–	200,000	57,700	+	56						
500,000	–	1,000,000	164,000	+	49	200,000	–	500,000	85,700	+	61						
1,000,000	–	2,000,000	409,000	+	53	500,000	–	1,000,000	268,700	+	67						
2,000,000	–	5,000,000	939,000	+	58	1,000,000	–		603,700	+	72						
5,000,000	–		2,679,000	+	65												

Basic exemptions were introduced in 1971.

Spouse: SEK 3,000 plus a taxable limit of SEK 40,000 and phasing in rules of marginal inheritance tax rates

Children: SEK 15,000

Other heirs: SEK 3,000

Note: The phasing in rules of marginal inheritance tax rates for a surviving spouse meant that the tax rate was 3 percent in the bracket SEK 6,000–12,000 and rose gradually. In the bracket above SEK 5,000,000 the tax rate was 60 percent (SOU 1969:54, 70). Class IV was abolished in 1971. The heirs formerly belonging to Class IV were incorporated into Class II, which henceforth consisted of all individual heirs not in Class I and all juridical persons not belonging to Class III.

Source: SOU 1977:91, 236–237.

Table 5.10 Inheritance tax schedules, 1981–1986

1981–1982						1983–1986					
Class I: Children, spouse, descendants						**Class I: Children, spouse, descendants**					
Taxable lot			**Tax**			**Taxable lot**			**Tax**		
SEK		**SEK**	**SEK**		**%**	**SEK**		**SEK**	**SEK**		**%**
0	–	50,000	0	+	5	0	–	50,000	0	+	6
50,000	–	100,000	2,500	+	10	50,000	–	100,000	3,000	+	12
100,000	–	150,000	7,500	+	15	100,000	–	150,000	9,000	+	18
150,000	–	200,000	15,000	+	22	150,000	–	200,000	18,000	+	24
200,000	–	300,000	26,000	+	28	200,000	–	300,000	30,000	+	30
300,000	–	450,000	54,000	+	33	300,000	–	450,000	60,000	+	36
450,000	–	600,000	103,500	+	38	450,000	–	600,000	114,000	+	42
600,000	–	800,000	160,500	+	44	600,000	–	800,000	177,000	+	48
800,000	–	1,200,000	248,500	+	49	800,000	–	1,200,000	273,000	+	54
1,200,000	–	2,500,000	444,500	+	53	1,200,000	–	2,500,000	489,000	+	60
2,500,000	–	6,000,000	1,133,500	+	58	2,500,000	–	6,000,000	1,269,000	+	65
6,000,000	–		3,163,500	+	65	6,000,000	–		3,544,000	+	70
Class II: Brothers, sisters, parents, and other heirs						**Class II: Brothers, sisters, parents, and other heirs**					
0	–	20,000	0	+	8	0	–	20,000	0	+	10
20,000	–	40,000	1,600	+	16	20,000	–	40,000	2,000	+	20
40,000	–	60,000	4,800	+	24	40,000	–	60,000	6,000	+	28

60,000	–	90,000	9,600	+	32	60,000	–	90,000	11,600	+	36
90,000	–	120,000	19,200	+	40	90,000	–	120,000	33,400	+	44
120,000	–	150,000	31,200	+	45	120,000	–	150,000	35,600	+	50
150,000	–	200,000	44,700	+	50	150,000	–	200,000	50,600	+	55
200,000	–	250,000	69,700	+	56	200,000	–	250,000	78,100	+	60
250,000	–	600,000	97,700	+	61	250,000	–	600,000	108,100	+	65
600,000	–	1,200,000	311,200	+	67	600,000	–	1,200,000	335,600	+	70
1,200,000	–		713,200	+	72	1,200,000	–		755,600	+	75
Class III: Nonprofit organizations						**Class III: Nonprofit organizations**					
0	–	20,000	0	+	8	0	–	20,000	0	+	8
20,000	–	40,000	1,600	+	16	20,000	–	40,000	1,600	+	16
40,000	–	60,000	4,800	+	24	40,000	–	60,000	4,800	+	24
60,000	–		9,600	+	30	60,000	–		9,600	+	30
Basic exemptions						Basic exemptions					
Spouse: SEK 50,000 Others Class I: SEK 25,000 Class II–III: SEK 5,000						Spouse: SEK 50,000 Others Class I: SEK 25,000 Class II–III: SEK 5,000					
Children below age 18: additional SEK 3,000 per year until age 18						Children below age 18: additional SEK 5,000 per year until age 18					

Note: From 1971 the heirs formerly belonging to Class IV were incorporated into Class II, which henceforth consisted of all individual heirs not in Class I and all juridical persons not belonging to Class III.

Source: SFS 1981:994, 1891ff; Skattebetalarnas förening (1986, 39).

4.6 The First Tax Rate Reduction in 1987

In 1987, the number of inheritance tax brackets was reduced and tax rates were adjusted downward (see Table 5.11). An example of the impact of the tax rates in the period 1987–1990 is that the direct inheritance tax for our large family firm—one of three model firms analyzed below—was estimated to be 20.3 percent of equity, which is less than half the inheritance and estate tax burden in 1948 (48.1 percent) and less than one-third of the maximum direct inheritance tax in 1973 (61.6 percent or 66.1 percent including the capital gains tax; see Figure 5.3).

Furthermore, in 1991 (Table 5.12) tax bracket boundaries were adjusted upward in response to the (partly inflation-driven) sharp increase in property values.[23] The taxable limit for gifts, which had been reduced from SEK 3,000 to 2,000 in 1959, was now raised to SEK 10,000.

4.7 Sharply Reduced Inheritance Tax Rates in 1992

In September 1991, a coalition of non-Socialist parties gained power. Effective from 1992 they cut inheritance tax rates substantially and adjusted bracket boundaries upward. The lower tax was motivated by the fact that inheritance taxes had reached a very high level in Sweden compared to other countries, and a perceived need to lower taxation of capital more generally (SOU 2002:52, 18).

Table 5.13 shows that the top marginal tax rate in Class I was reduced to 30 percent on taxable amounts exceeding SEK 600,000 after a basic exemption of SEK 280,000 for spouse or cohabiter, of SEK 70,000 for children, and of SEK 21,000 for others. The basic exemptions had also been raised in 1987, 1989, and 1991. Children and descendants of children were allowed an exemption of SEK 10,000 for every year remaining until the age of 18. Also in 1991, Parliament decided to abolish the wealth tax on business working capital and on stocks registered on the informal OTC listings and unlisted (private) stock from January 1, 1992. The gift tax rates were identical to the inheritance tax rates, except that the basic exemption was only SEK 10,000. Gifts to nonprofit organizations—like churches and charities—were tax exempt. A significant decline of inheritance and gift tax revenues followed the cut in tax rates.

The inheritance tax was removed for bequests to spouses in 2003. Parliament decided to abolish the inheritance and gift tax altogether in 2004.[24]

5. Revenues from the Inheritance Tax

Figure 5.1 shows revenues from inheritance, gift, and estate taxes as a share of GDP since the late nineteenth century. Figure 5.2 shows the evolution of inheritance and gift tax revenue as a share of total tax revenue and of the gift tax share of total tax revenue from gifts and inheritances. These shares indicate, admittedly a bit bluntly, the fiscal as well as economic significance of the inheritance taxation in Sweden

Table 5.11 Inheritance and gift tax schedules, 1987–1990

Class I: Children, spouse, descendants					
Taxable lot			Tax		
SEK		SEK	SEK		%
0	–	100,000	0	+	10
100,000	–	200,000	10,000	+	20
200,000	–	400,000	30,000	+	30
400,000	–	800,000	90,000	+	40
800,000	–	8,000,000	250,000	+	50
8,000,000	–		3,850,000	+	60
Class II: Brothers, sisters, parents, and other heirs					
Taxable lot			Tax		
SEK		SEK	SEK		%
0	–	25,000	0	+	15
25,000	–	50,000	3,750	+	25
50,000	–	100,000	10,000	+	35
100,000	–	200,000	27,500	+	45
200,000	–	2,000,000	72,500	+	55
2,000,000	–		1,062500	+	65
Class III: Nonprofit organizations					
Taxable lot			Tax		
SEK		SEK	SEK		%
0	–	30,000	0	+	10
30,000	–	60,000	3,000	+	20
60,000	–		9,000	+	30
Basic exemptions 1987–1988 (1989–1990)					
Spouse: SEK 100,000 (200,000)					
Children: SEK 50,000 (50,000)					
Others: SEK 15,000 (15,000)					

Note: From 1971 the heirs formerly belonging to Class IV were incorporated into Class II, which henceforth consisted of all individual heirs not in Class I and all juridical persons not belonging to Class III.

Source: Skattebetalarnas förening (1987, 40).

Table 5.12 Inheritance and gift tax schedules, 1991

Class I: Children, spouse, descendants					
Taxable lot			Tax		
SEK		SEK	SEK		%
0	–	140,000	0	+	10
140,000	–	280,000	14,000	+	20
280,000	–	560,000	42,000	+	30
560,000	–	1,200,000	126,000	+	40
1,200,000	–	11,200,000	350,000	+	50
11,200,000	–		5,390,000	+	60
Class II: Brothers, sisters, parents, and other heirs					
Taxable lot			Tax		
SEK		SEK	SEK		%
0	–	35,000	0	+	15
35,000	–	70,000	5,250	+	25
70,000	–	140,000	14,000	+	35
140,000	–	280,000	38,500	+	45
280,000	–	2,800,000	101,500	+	55
2,800,000	–		1,487,500	+	65
Class III: Nonprofit organizations					
Taxable lot			Tax		
SEK		SEK	SEK		%
0	–	42,000	0	+	10
42,000	–	84,000	4,200	+	20
84,000	–		12,600	+	30
Basic exemptions					
Spouse: SEK 280,000					
Children: SEK 70,000					
Others: SEK 21,000					
Gifts: SEK 10,000					

Note: From 1971 the heirs formerly belonging to Class IV were incorporated into Class II, which henceforth consisted of all individual heirs not in Class I and all juridical persons not belonging to Class III.

Source: Skattebetalarnas förening (1991).

Table 5.13 Inheritance and gift tax schedules, 1992–2004

Class I: Children, spouse, descendants					
Taxable lot			**Tax**		
SEK		**SEK**	**SEK**		**%**
0	–	300,000	0	+	10
300,000	–	600,000	30,000	+	20
600,000	–		90,000	+	30
Class II: Brothers, sisters, parents, and other heirs					
Taxable lot			**Tax**		
SEK		**SEK**	**SEK**		**%**
0	–	70,000	0	+	10
70,000	–	140,000	7,000	+	20
140,000	–		21,000	+	30
Class III: Nonprofit organizations					
Taxable lot			**Tax**		
SEK		**SEK**	**SEK**		**%**
0	–	90,000	0	+	10
90,000	–	170,000	9,000	+	20
170,000	–		25,000	+	30
Basic exemptions					
Spouse: SEK 280,000					
Children: SEK 70,000					
Others: SEK 21,000					
Gifts: SEK 10,000					

Note: From 1971 the heirs formerly belonging to Class IV were incorporated into Class II, which henceforth consisted of all individual heirs not in Class I and all juridical persons not belonging to Class III.

Source: Skattebetalarnas förening (1992).

over this long time period. One striking feature of the series in Figure 5.1 is the considerable short-term variation it exhibits with spikes in the tax revenue when tax receipts nearly doubled. The explanation, however, lies in the nature of estate data: the death of abnormally rich individuals can influence the cross-sectional distribution of estates (and inheritances). Furthermore, the volatility of tax revenues also reflects discrete changes in tax rates. For example, the hump in 1983–1984 results

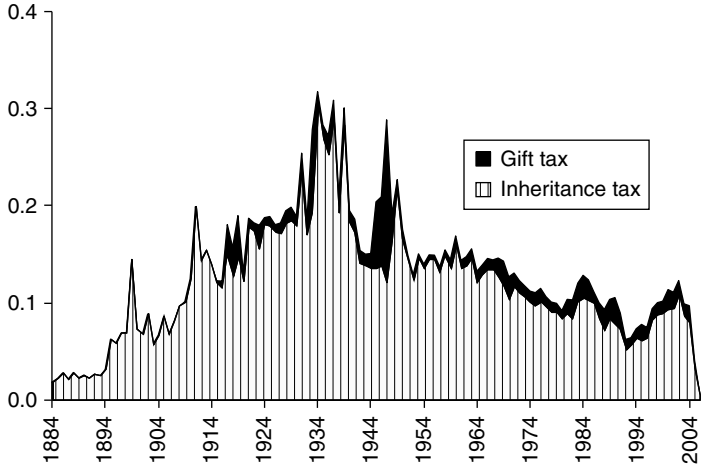

Figure 5.1 Inheritance, estate, and gift tax revenue in Sweden, 1884–2005 (% of GDP).

Note: Estate tax payments between 1948 and 1959 are classified as inheritance tax payments. Due to lags in estate inventories and in tax payments, the taxes still generated revenue for a few more years even though tax liability ceased for deaths after December 16, 2004.

Source: Data on inheritance and gift taxes are from Ohlsson (2011) and GDP is from Edvinsson, Jacobson, and Waldenström (2014).

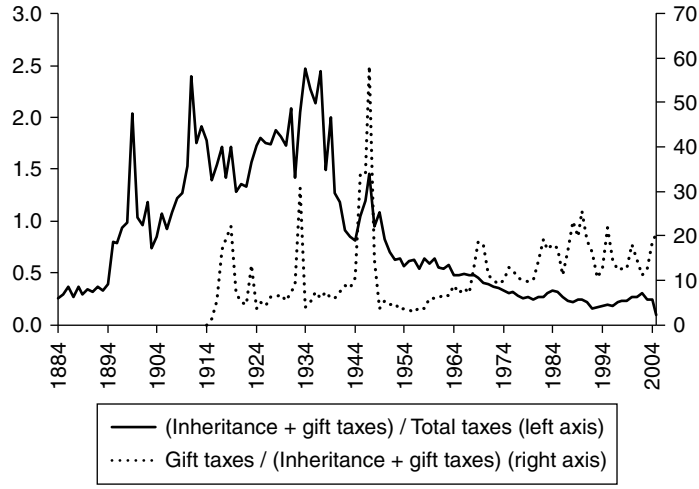

Figure 5.2 Inheritance, and gift tax revenue as a share of total taxes and gift taxes as a share of inheritance and gift taxes, 1884–2005 (%).

Note: Estate tax payments between 1948 and 1959 are classified as inheritance tax payments. Due to lags in estate inventories and in tax payments, the taxes still generated revenue for a few more years even though tax liability ceased for deaths after December 16, 2004.

Source: Data on inheritance and gift taxes are from Ohlsson (2011) and data on total tax revenue are from Gårestad (1987), Rodriguez (1980), and Statistics Sweden.

from the 1983 increase in tax rates and the drop in 1988 emanates from the lowered tax rates and reduced number of tax brackets in 1987. The 1992–1993 trough of the tax revenue curve is a result of the raise of bracket boundaries in 1991, and a considerable decrease in the marginal tax rates in 1992. From 1992, the maximum tax rate was 30 percent.

At the beginning of the period, revenue from inheritance and gift taxation amounted to some 0.02 percent of GDP. At this point, the inheritance tax was only 0.5 percent for spouses and children (recall Table 5.1). In the following years, the tax was raised, which resulted in markedly increased tax revenues up until the 1940s. Tax revenue as a percentage of GDP increased to 0.06 percent in 1895 after the 1894 Stamp Ordinance and to about 0.18 percent in 1917, when the higher marginal tax rates of the 1914 inheritance and gift ordinance became fully effective. Tax revenue peaked at about 0.3 percent of GDP in 1934 following the hikes in inheritance and gift tax rates, when top marginal tax rates for children and spouses were raised to 20 percent (Table 5.6).

Tax revenues then started to decline and returned only temporarily to almost 0.3 percent when gift taxes exploded in 1945–1948 before the introduction of the estate tax in 1948.

After 1948, the relative importance of the inheritance tax receipts continued to decline, slowly but steadily. The repeal of the estate tax in 1959 did not affect revenues much since inheritance tax rates were increased at the same time.

The increased tax revenue during the period 1993–2002 is not due to higher tax rates or reduced basic exemptions, but rather, to the fact that inheritance and gift taxes were unusually low during the recession years in 1991–1993 as well as bracket creep caused by a marked appreciation in asset values following the deregulation of financial markets. When assets, stock, and real estate appreciated substantially, higher market values of inheritance lots and gifts in combination with unchanged tax rates led to increases in tax revenue.

Gift tax revenues were more stable than inheritance tax revenues following the introduction of the gift tax in 1915. As a share of GDP, it varied mostly between 0.01 and 0.02 percent, although there were a few distinct revenue peaks. The first peak of 0.085 percent occurred in 1933, before the sharp increase in tax rates in the following years. Then gift tax receipts were almost half the size of the inheritance tax revenue. Thereafter, revenues were low from 1938 to 1944 at a level around 0.01 to 0.02 percent of GDP. In 1945, gift tax revenue—as mentioned—suddenly increased to 0.07 percent of GDP. This increase accelerated in 1947 to 0.17 percent, the year before the introduction of the estate tax on gifts and inheritances. In 1947 gift tax revenue exceeded inheritance tax revenue, which was a one-time occurrence due to the introduction of the estate tax in the following year. During the period 1948–1950, gift tax revenue receded to the previous level of about 0.01 percent of GDP, or 3–5 percent of the combined inheritance and gift tax revenue.

The new estate tax and sharply increased taxes on inheritances, wealth, and income in 1948 induced taxpayers to take offsetting measures. These high tax increases might explain the large transfer of wealth that seems to have taken place in 1947, particularly the explosion in gift tax revenue in 1947 (Bratt and Fernström 1975, 345).

It is noteworthy that the combined revenue from inheritance and gift taxation hovered around 0.1 percent of GDP from the early 1970s until the system was phased out in 2004, despite the high tax rates applicable in this period. Recall that the top marginal tax rate for spouses and descendants (who receive the bulk of all inheritances) was at least 60 percent through 1991 before it was lowered to 30 percent. Exemptions were small and tax rates increased sharply at fairly modest wealth levels (see Tables 5.8–5.13 for details). In fact, income from inheritance and gift taxation averaged roughly 2 percent of total tax income between 1911 and 1939, after that it trended downward until the mid-1960s, when its aggregate importance became negligible.

A back of the envelope calculation is sufficient to make clear that "the bite" of inheritance taxation was severely blunted. Let us assume a capital output ratio of three, which is in line with typical estimates for Sweden (e.g., Domeij and Flodén 2005), that two-thirds of the total capital stock is owned by the private sector, and that the private capital stock is ultimately owned by private individuals (the net wealth position of the private sector toward the rest of the world is assumed to be zero). Roughly one-eightieth of the population dies every year, and assuming that the wealth of an old person who dies is about double the overall average one-fortieth or 2.5 percent of the capital stock is inherited every year. With an assumed ratio of two of the private capital stock to GDP, total inheritances would amount to 5 percent of GDP.[25] This calculation is admittedly crude, but it is fair to say that total annual inheritances are on the order of 3–7 percent of GDP. Given that inheritance tax revenue was between 0.1 and 0.2 percent of GDP, this implies an effective inheritance tax rate of 2–4 percent, which can be compared to the far higher nominal rates. Given the low effective inheritance tax rate, there is reason to suspect that the tax was distortionary and had significant deadweight costs. However, estimating the size of these costs is far beyond the scope of this study.

6. The Evolution of Inheritance Tax Rates for Swedish Family Firms and Individuals

How have the Swedish inheritance tax rates evolved over the course of 120 years it existed? In this section, we present estimated average inheritance tax rates, including gift and estate taxes, for synthetically constructed family firms and individuals from 1885 up to the abolition of the tax in 2004. Throughout the analysis, we assume that there are two children, each of whom inherits half of the remainder of the estate, and that there is no surviving spouse. This implies that the heirs are not subject to the full progressivity of the tax schedule, which typically applied to heirs or testators in other inheritance classes (i.e., who were not the children of the deceased).

When calculating the tax rate, we assume that the two heirs sell off enough stock to pay the direct inheritance and capital gains taxes arising from the sale. This assumption essentially minimizes additional costs or taxes incurred. In practice, however, selling off shares or assets may not always have been possible and there were alternative ways for heirs to finance their tax payments. One commonly used

method to finance the tax payments was by means of extra dividend distributions. This was more expensive since dividends were taxed jointly with labor income until 1991, implying that heirs had to pay labor income tax on these dividends before the remainder could be used to meet inheritance tax obligations. Alternatively, heirs of family firms could exert an extra salary payment from the company to pay the inheritance tax, but this would give rise to additional taxation at an even higher rate, since in addition to the ordinary labor income taxes the firm would now also have to pay social security fees.[26] Finally, heirs could also take loans to finance the tax payments. Debt financing was favorable because it did not give rise to the extra income taxes associated with dividends. However, this strategy was normally not an option until the mid-1980s, because of the strict regulation of credit markets. In other words, in addition to the inheritance tax heirs potentially faced indirect inheritance-related taxes. During the 1970s and 1980s, when the marginal dividend tax was at, or above, 70 percent, these indirect taxes were significant.[27] Our calculations do not account for these high indirect taxes, but assume that the family firm heirs sell off shares to pay for the inheritance tax and then have to pay indirect taxes in the form of capital gains tax (see below). Before 1966 the capital gains tax was zero in our calculations, because our entrepreneurs are assumed to have had a holding period of their shares of at least five years. Since the holding period of the decreased was also inherited, capital gains tax could be avoided before the introduction of taxation of long-term capital gains in 1966 (Rundfelt 1982).

Until 1965, the total inheritance tax including the capital gains tax thus was the same as the direct inheritance tax. According to the 1966 rules, which were in force until 1976, 10 percent of the proceeds of the sale of stock held for five years or more were included in the personal income tax base of the seller. However, for stock held less than five years only a fraction of realized capital gains was taxable, depending on the holding period. As shown in Table 5.14, capital gains taxation was changed several times based on the holding period of the stock.

Table 5.14 Taxable share of capital gains on stock holdings, 1911–1990

	Holding period				
Time period	**<2 years**	**2–3 years**	**3–4 years**	**4–5 years**	**≥5 years**
1911–1950	100	100	100	100	0
1951–1965	100	75	50	25	0
1966–1975	100	75	50	25	10/25[a]
1976–1990	100	40	40	40	40

Note: Before 1911 only so-called "speculative" capital gains were taxable.

[a] Formally, 10 percent of the proceeds of the sale from the shares were included in the personal income tax base of the seller. The rate of 25 percent is an estimate of the taxable share based on assumptions made by Södersten (1984).

Source: Eberstein (1929, 154–155); Bratt and Fernström (1975); SOU 1977:91, 242–243; Rundfelt (1982); Södersten (1984, 106–107).

As capital gains were taxed together with other income until 1991, the marginal tax rate depends on the total income of the entrepreneur during this time period. Because of changes in the capital gains tax, the total inheritance tax became somewhat higher than the direct inheritance tax from 1966.

New rules in the 1970s allowed a lower equity valuation of inherited family firms. Specifically, inventories and stocks were valued at the lower level accepted in income assessment, which implied significantly lower values than according to earlier valuation rules. During 1971–1973, large firms were often not eligible for the tax relief that applied to small family firms (see Section 3.3), but from 1974 all firms were favored by the new lower valuation rules of equity capital.

Furthermore, capital gains taxation changed in 1977 from being a sales tax to being a tax on realized capital gains.[28] Forty percent of long-term nominal capital gains (in excess of an exemption of SEK 3,000) became taxable at the marginal labor income tax rate. Short-term capital gains continued to be fully taxed. The time of acquisition of the shares is when the deceased bought the shares, not the subsequent inheritance date. Total inheritance tax then became 16–27 percent larger than the direct tax (the black segment in Figure 5.3). The reason for the sharp increase of capital gains taxation in 1977 is that we assume that the top marginal income tax applies to heirs of our three firms and this tax rate rose during the 1966–1976 period (from 58.3 to 79.2 percent), and also, that 40 percent of the rise in stock value gave rise to a higher taxable income than 10 percent of the proceeds of the sale of shares for our firms that grow with the wage of the average production worker.

The 1990–1991 tax reform entailed a change in capital gains taxation in which the entire increase in value was taxable without exemptions (thus abolishing the previous exemption of 60 percent of gains for shares held for two years). Furthermore, the marginal dividend tax for entrepreneurs was cut to 50 percent (generally to 30 percent, but specific small firm regulation, the so-called 3:12 rules, was unfavorable for our entrepreneur in 1991).[29] The tax reform also reduced the value of interest cost deductions to, at the most, a tax reduction effect of 30 percent.

6.1 Family Firms

For each year during the entire period, we calculate average inheritance and estate tax rates, defined as the total tax due, as a percentage of business equity when an entrepreneurial firm is inherited by the younger generation in the family. The tax rates apply for three different stylized family firms: one large, one medium-sized, and one small firm. The large firm is assumed to have business equity equal to 1,000 average annual wages for a full-time production worker, starting at SEK 499,000 in 1885 and ending at SEK 262 million in 2004. The number of firms of this size may have been roughly one hundred in the late 1960s.[30] The medium-sized firm is assumed to have equity equal to 100 average annual worker wages, starting at SEK 49,900 in 1885 and ending at SEK 26.2 million in 2004. The number of corporations of this size can be estimated to have been three to four thousand. The small firm is assumed to have a nominal business equity amounting to SEK 4,990 in

1885, and SEK 2.62 million in 2004; there probably existed more than 200,000 firms of this size in Sweden in the late 1960s.

Figure 5.3 depicts the long-run evolution of both the direct and the total inheritance tax rates (defined as a percentage of firm equity) paid by the two heirs of a large family firm with equity of SEK 262 million in 2004, almost 30 million euros at the time. The assessed tax rate varied tremendously over time, increasing in the postwar era with a peak in the early 1970s, and falling quickly from 1992. Beginning from a very low level at 0.5 percent in the early decades, the tax rate was raised in 1915 to a level of 4 percent. A further sharp rise in the average tax rate occurred in 1934 when the average inheritance tax rate incurred by the heirs more than quadrupled to 18 percent of firm equity. The next hike occurred in 1948. The introduction of the estate tax led to more than a doubling of the tax rate to 48 percent. The tax rate continued slowly upward to 55 percent in 1958, the last year of the estate tax.

During the period 1958–1973, the tax rate was further increased from 55 to 66 percent. This was mainly due to the fact that the inheritance tax schedule remained nominally unchanged in 1959–1970, in spite of considerable inflation and real growth, and that the tax schedule of the Capital Taxation Committee (*Kapitalskatteberedningen*) led to an increase in the effective tax rate first, when it was introduced in 1971, and subsequently until 1973 because it remained nominally unchanged.

In 1974, the inheritance tax fell sharply to 24.7 percent because tax authorities accepted a greater undervaluation of an inherited firm's stock-in-trade and inventories than before.[31] The tax burden on corporate equity dropped further in 1978 to 22.4 percent when only 30 percent of the net worth (*substansvärdet*) of the company

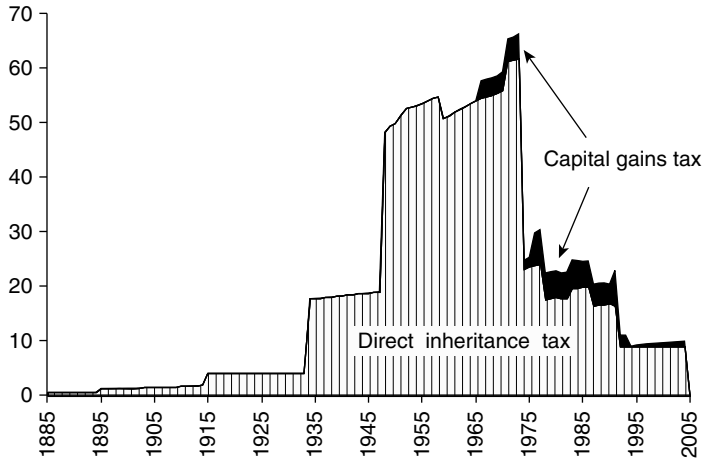

Figure 5.3 Direct and total inheritance tax: large firm, percent of equity.

Source: Calculations made by the authors. A large-sized family firm had net business equity amounting to SEK 262 million in 2004, which implied a taxable value after basic exemption of 39.8 million per heir.

was subject to inheritance taxation. The tax burden rose by 2 percentage points in 1983 as a consequence of increased tax rates in that year. The 1987 tax reform eliminated this increase and in 1992, the government dramatically reduced the tax schedule from rates between 10 and 60 percent in a great number of brackets to only three brackets with tax rates of 10, 20, and 30 percent. This lowered the tax rate for the heirs to our large firm to 11 percent of firm equity.

In the 13 years from 1992 until the repeal of the inheritance tax in December 2004, the inheritance tax rate remained around 10 percent. The capital gains tax from the sale of shares peaked in 1976–1990, but the total inheritance tax peaked in 1973 reaching 66 percent of net equity, of which the capital gains tax was a mere 3 percentage points.

If the firm was instead transferred to heirs as a gift, the tax was usually not lower, because the exemption was smaller and the tax rates were identical. It was also difficult to reduce gift taxation by transferring ownership of a company by means of a combination of inheritance and multiple gifts, because of the summation rules discussed above. It should be pointed out, however, that the inheritance tax was not immediately payable. It could be paid in installments over a period of ten years.

Turning to the medium-sized firm (having equity of SEK 26.2 million, or about three million euros, in 2004), Figure 5.4 shows the average tax rate paid by heirs of such a firm. The long-run trend closely resembles that of the large family firm, but the level is lower. Before 1934, heirs paid about 3 percent of the inherited capital in tax. In 1934, the effective tax rate increased to 8 percent. In the postwar era, the tax rate increased until 1973 when it peaked at 44 percent. In 1974–1977, the inheritance tax rates declined to below 20 percent due to much lower valuation of inventories and stock-in-trade. From 1978 and onward, tax rates were further reduced because the valuation of business capital in private firms was decreased to 30 percent of net worth. This lowered the inheritance tax to 15 percent. The lower inheritance tax schedule in 1992 cut the tax burden to not fully 10 percent.

Turning to the small-sized firm (with an equity of SEK 2.62 million or about 0.3 million euro in 2004), Figure 5.5 shows the average tax rate paid by heirs of such a firm. The average tax rate started at 0.5 percent in 1885 was raised to 0.6 percent in 1910 and to 1.2 percent in 1915. The effective tax rate rose to 2.2 percent in 1934. One would expect a new sharp rise in 1948. However, the introduction of the estate tax only led to a small increase of the tax burden to 3.5 percent, but the average tax rate continued upward and peaked in 1973 at 16.3 percent in spite of the tax relief in 1971–1973 of 10 percent of the inheritance tax, before it fell precipitously in 1974 and once more in 1978 due to favorable valuation rules for business capital.[32] After the tax reform in 1992, the tax burden for this small firm hovered just below 3 percent until the repeal of the tax at the end of 2004.

Finally, if one would pull together the inheritance tax rates of all three firm types, both similarities and differences become apparent. First of all, they follow largely the same time trend in taxation, starting at a relatively low level in the period before World War II. After the war, tax rates increased sharply up to the 1970s when tax

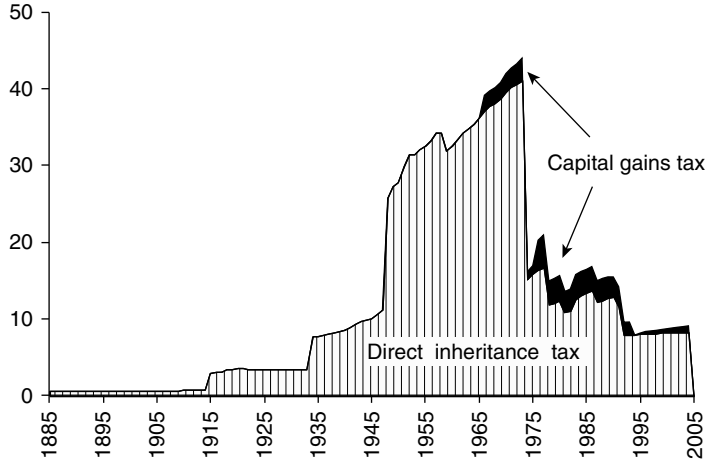

Figure 5.4 Direct and total inheritance tax: medium-sized firm, percent of equity.

Source: Calculations made by the authors. A medium-sized family firm had net business equity of approximately SEK 26.2 million in 2004, which implied a taxable value of 3.9 million per heir after basic exemptions.

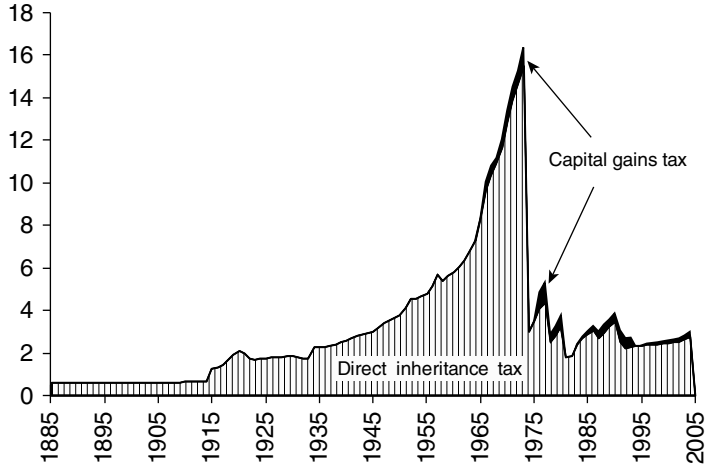

Figure 5.5 Direct and total inheritance tax: small firm, percent of equity.

Source: Calculations made by the authors. A small family firm had a net business equity of SEK 2.62 million in 2004.

rates dropped due to comprehensive valuation reductions. In terms of tax levels, the experience of the three differently sized family firms diverge noticeably. Comparing the small and the large firm, the inheritance tax rate paid by heirs to the large firm was roughly four times larger than the rate paid by heirs to the small firm.

6.2 Non-Corporate Wealth

Figures 5.6, 5.7, and 5.8 present inheritance tax rates paid by the heirs of three deceased individuals with different wealth corresponding in value to the corporate wealth of the heirs to the large, medium-sized, and small family firm in the previous section. Unlike for family firms, we—for simplicity—only calculate the direct inheritance tax for individuals since the heirs of partly liquid assets typically can use some assets—or borrow—in order to pay the inheritance tax.

However, in practice heirs are often forced to pay capital gains tax, which would mean that we tend to underestimate the total tax burden for individuals.

The results show that heirs of wealthy individuals faced the same tax rates as heirs of family firms in all years up to the 1960s, but after that, the tax rates began to diverge significantly. First, the increased capital gains tax paid by firm heirs when realizing accrued gains implied that they paid a relatively higher tax. The first divergence appeared in 1966 because of the capital gains tax that had to be paid by firm heirs when realizing accrued capital gains on the business equity. The second divergence occurred in 1976 when the capital gains tax was increased. The third, and more significant divergence, appears in 1974 after a large valuation discount was introduced in the tax code for family business equity. 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, heirs of such wealth paid between two times (super-rich deceased) and almost three times (moderately rich deceased) more in inheritance tax rates than heirs of similarly sized family firms did.

Figure 5.6 Direct and total inheritance tax as a percentage of pretax inheritance: non-corporate assets equivalent to the large firm.

Note: A large-sized family firm had net business equity worth of SEK 262 million in 2004. The size of the corresponding inheritance of non-corporate assets is thus SEK 131 million (per heir).

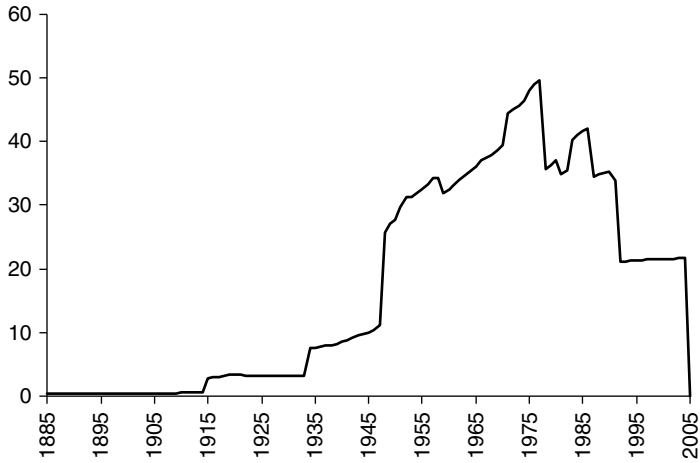

Figure 5.7 Direct and total inheritance tax as a percentage of pretax inheritance: non-corporate assets equivalent to the medium-sized firm.

Note: A medium-sized family firm had net business equity worth of SEK 26.2 million in 2004. The size of the corresponding inheritance of non-corporate assets is thus SEK 13.1 million (per heir).

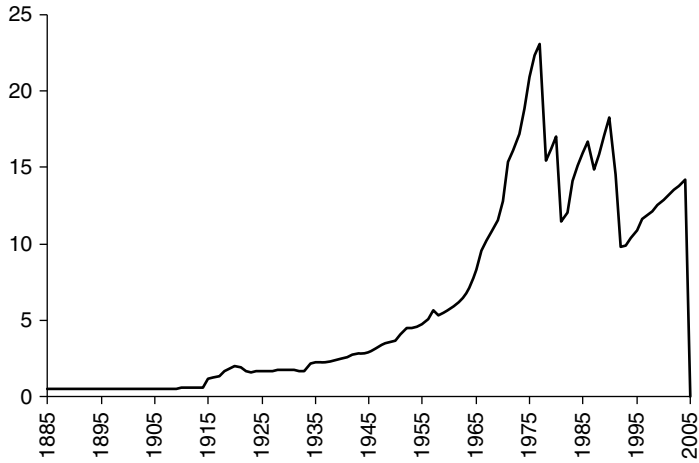

Figure 5.8 Direct and total inheritance tax as a percentage of pretax inheritance: non-corporate assets equivalent to the small firm.

Note: A small-sized family firm had net business equity worth of SEK 2.62 million in 2004. The size of the corresponding inheritance of non-corporate assets is thus SEK 1.31 million (per heir).

Finally, Figure 5.9 presents the inheritance tax burden for a person of average wealth. The inheritance tax rate was 0.5 percent in 1885–1894, since the tax was proportional and there was no taxable limit. The assessed tax rate dropped to zero in 1895, because of the introduction of a tax-exempt limit of

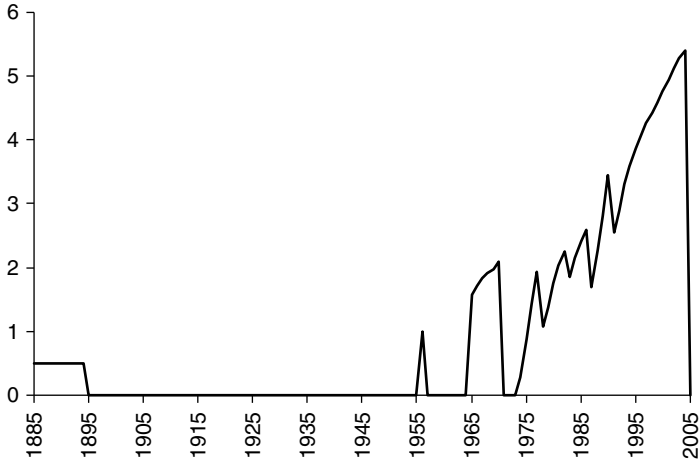

Figure 5.9 Direct inheritance tax as a percentage of total wealth for a person of average wealth.

Note: The average personal wealth is computed using total taxable personal wealth for all years divided by the number of households (see further Roine and Waldenström 2009, for sources). An inheritance tax of zero means that average personal wealth for deceased persons in that year is below the taxable limit or the exemption level, respectively.

SEK 400, and our two heirs inherited only SEK 300 each, which was below the taxable limit.

In 1956, the inheritance lots of our two heirs again exceeded the taxable limit (then SEK 3,000), resulting in a tax rate of 1 percent. When the taxable limit was raised to SEK 6,000 in 1957, the inheritance became tax-free, but in 1965–1970, the inheritance tax increased to about 2 percent, as the size of the average inheritance exceeded the taxable limit. In 1971, the taxable limit was replaced by a deductible exemption, amounting to SEK 15,000 for descendants. As the average inheritance lot per heir was somewhat smaller, no tax was levied in 1971–1973. The inheritance tax again turned positive in 1974 at 0.3 percent, increased to 1.9 percent in 1977, and then trended slowly upward, exceeding 5 percent in 2002–2004.

7. Summary and Conclusions

In this chapter, we have analyzed gift, inheritance, and estate taxation in Sweden. The analysis begins in 1885 when inheritance taxation was first introduced in Sweden. In the 1910s, a formal gift tax was launched and, during the period 1948–1958, there was also an estate tax in addition to the inheritance and gift taxes. The analysis stops in 2004, when the Swedish inheritance and gift taxation was abolished.

The inheritance tax was introduced in 1885 as a single tax—the 1884 Stamp Ordinance—with the estate report as the tax base. The first modern inheritance tax was introduced in the form of the 1894 Stamp Ordinance. It increased the maximum tax rate for spouses and children to 1.5 percent of taxable inheritance lots and to 6 percent for other heirs. The 1914 Inheritance and Gift Tax Ordinance—introduced in 1915—integrated the inheritance and gift tax. The maximum marginal tax rate was set to 4.5 percent for spouses and descendants, and 18 percent for other nonlegal heirs.

The first substantial tax hike (for spouses and children) took place in 1934. After having failed to introduce an estate tax, the new Social-Democratic minority government instead substantially raised the tax on gifts and on inheritance lots. The maximum rate for children and spouses was raised from 4 to 20 percent and, the maximum rate for others, from 18 to 35 percent.

The second major tax increase occurred in 1948, when an estate tax was introduced. The estate tax was imposed side by side with the existing taxation of gifts and inheritance lots. The estate tax was deducted before the inheritance tax was calculated. The maximum marginal tax rate (the sum of inheritance and estate taxes) for descendants and spouses was raised in 1948 from 20 to 60 percent and for others from 35 to 67.5 percent.

The marginal inheritance tax rate peaked in 1971–1973 at 65 percent for descendants and at 72 percent for other family members. During the 1948–1973 period, the *average* inheritance tax for wealthy persons and owners of large closely held firms exceeded 48 percent. Owing to the introduction of a tax relief for small firms in 1971, and a reduced valuation of business capital in 1974, the inheritance tax rate peaked in 1973 for heirs to small family firms. In 1978, the valuation of business equity was reduced to 30 percent of book value. Even though this caused the tax burden for family firms to drop, the high and progressive inheritance tax continued to make it difficult to transfer firms to family successors. For large individual estates, the inheritance tax continued to be around 40–50 percent of the estate through 1991. Tax rates were substantially reduced in 1992; the tax on bequests to spouses was removed in 2003 followed by the final abolition of the entire inheritance and gift tax in December 2004.

Inheritance and gift tax revenues were never particularly important as a source of revenue for the central government; with a few exceptions, less than 2 percent of total tax revenue was raised this way, and in the last 40 years before abolition, the share was around one-tenth of that level. These taxes were primarily motivated by distributional concerns, relating to an urge to even out large inequalities of opportunity arising from inherited wealth at the top of the wealth distribution. However, the low revenue from this source in the postwar period casts doubt on the effectiveness of the inheritance and gift tax in this regard.

Exactly what factors that can explain the removal of the inheritance tax in 2004 have not been analyzed systematically by researchers. According to Lodin (2011), the tax was abolished as part of a logrolling scheme between the Social Democrats and the Left Party, but whether there were other, more structural determinants related to taxpayers' avoidance or to the public opinion remains to be established by future research.

Appendix

Table 5.15 Swedish consumer price index, 1884–2005 (1884 = 100)

Year	CPI	Year	CPI	Year	CPI
1884	100.0	1925	211.7	1966	620.8
1885	95.33	1926	204.5	1967	645.9
1886	90.67	1927	202.2	1968	659.1
1887	87.44	1928	204.5	1969	677.0
1888	90.55	1929	201.0	1970	723.7
1889	94.62	1930	193.8	1971	777.5
1890	96.65	1931	187.8	1972	824.2
1891	99.64	1932	185.4	1973	879.2
1892	97.85	1933	180.6	1974	966.5
1893	93.90	1934	181.8	1975	1,061
1894	89.11	1935	185.4	1976	1,171
1895	90.79	1936	187.8	1977	1,304
1896	90.07	1937	193.8	1978	1,435
1897	92.94	1938	197.4	1979	1,538
1898	97.37	1939	203.3	1980	1,748
1899	101.7	1940	230.9	1981	1,959
1900	102.9	1941	262.0	1982	2,127
1901	100.4	1942	279.9	1983	2,317
1902	101.2	1943	281.1	1984	2,502

1903	102.9	1944	279.9	1985	2,687
1904	101.7	1945	278.7	1986	2,800
1905	103.8	1946	279.9	1987	2,919
1906	106.0	1947	288.3	1988	3,089
1907	111.5	1948	305.0	1989	3,287
1908	113.2	1949	306.2	1990	3,632
1909	112.1	1950	311.0	1991	3,970
1910	112.1	1951	363.6	1992	4,061
1911	115.4	1952	390.0	1993	4,250
1912	117.8	1953	392.3	1994	4,343
1913	118.2	1954	394.7	1995	4,453
1914	119.6	1955	405.5	1996	4,474
1915	137.6	1956	425.8	1997	4,498
1916	155.5	1957	445.0	1998	4,490
1917	196.2	1958	464.1	1999	4,512
1918	288.3	1959	467.7	2000	4,556
1919	318.2	1960	486.8	2001	4,667
1920	324.2	1961	497.6	2002	4,768
1921	264.4	1962	521.5	2003	4,860
1922	220.1	1963	537.1	2004	4,878
1923	208.1	1964	553.8	2005	4,901
1924	208.1	1965	582.5		

Source: Statistics Sweden.

Table 5.16 Taxable limits (1894–1970) and basic exemptions (1971–2004) for children in nominal and real terms, 1894–2004

	1894	1895	1910	1915	1933	1941	1957	1958	1959	1970	1971	1980	1981	1983	1986	1987	1990	1991	1992	2004
Nominal taxable limit	0	0.4	0.4	1.0	1.0	3.0	6.0	6.0	6.0	6.0	0	0	0	0	0	0	0	0	0	0
Nominal basic exemption	0	0	0	0	0	0	0	0	0	0	15.0	15.0	25.0	25.0	25.0	50.0	50.0	70.0	70.0	70.0
CPI (Index)	89.11	90.79	112.1	137.6	180.6	262.0	445.0	464.1	467.7	723.7	777.5	1,748	1,959	2,317	2,800	2,919	3,632	3,970	4,061	4,878
Nominal APW, thousand SEK	0.573	0.583	0.975	1.105	2.134	3.037	11.2	11.9	12.7	27.5	30.3	71.0	77.2	88.2	110.4	118.2	152.7	158.5	167.9	262.2
Taxable limit 2004 prices	0	20.5	17.4	43.51	27.01	55.85	65.77	63.08	62.58	40.44	0	0	0	0	0	0	0	0	0	0
Basic exemption 2004 prices	0	0	0	0	0	0	0	0	0	0	94.1	41.9	37.4	52.6	43.6	83.7	67.2	86.1	84.1	70.0
Basic exemption/ APW	0	0	0	0	0	0	0	0	0	0	0.495	0.211	0.194	0.283	0.226	0.423	0.327			
Taxable limit/APW	0	0.686	0.474	0.905	0.469	0.988	0.536	0.504	0.472	0.218	0	0	0	0	0	0	0	0	0	0

Note: All nominal figures are in thousand SEK. APW = Average annual wage of a production worker (see Table 2.1 in Chapter 2).

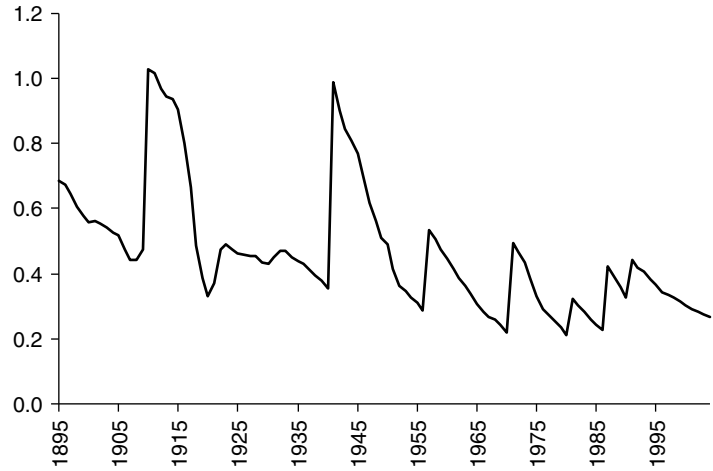

Figure 5.10 Taxable limits (1894–1970) and basic exemptions (1971–2004) for descendants expressed as a share of the average annual wage of a production worker.

Note: The taxable limit system, applied until 1970, meant that as soon as the limit was exceeded inheritance tax was levied on the entire inheritance received.

Notes

1. The earliest Swedish estate tax was the "poverty percentage," a fee of 1/8 of one percent levied on the gross estate value. This tax was imposed between 1698 and the 1830s by local governments to fund local social spending. Probates were also taxed by a stamp duty (*Charta Sigillata*), but this was paid per sheet and had no relation to the value of the estate. See Rydin (1882), Eberstein (1915), and Ohlsson (2011) for further details.
2. The price basic amount (previously the basic amount) is calculated based on changes in the general price level, in accordance with the National Insurance Act (1962:381). Many transfer payments, tax rates, entitlements etc. are determined by the price basic amount. The price basic amount was first introduced in September 1957 and set to SEK 4,000 (SOU 1977:91, 235–238). SOU (*Statens offentliga utredningar*) is the Swedish official series of reports of committees appointed by the Swedish Government. In 2004, the price basic amount was SEK 39,300, and an average worker annual salary was SEK 262,200 (Table 2.1 in Chapter 2). The non-taxed spouse's marital property that year thus amounted to $4 \cdot 39{,}300/260{,}200 = 60$ percent of the average annual worker salary.
3. However, the definition of lots in the real allotment cannot violate the rules of the Inheritance Code (*Ärvdabalken*), nor can they violate the valuation rules in the Inheritance and Gift Tax Ordinance (AGL), and the estate division document must be handed in to the tax authorities before its ruling on the matter. A referral to a real allotment also typically means that tax levels are higher since assets are included at full market values. For this reason, such real allotments were rarely used when taxing inheritance lots.
4. These rules implied a change of the 1908 Stamp Duty Ordinance. The rules meant that inheritance lots should be added to earlier gifts.

5. The name or abbreviation AGF was changed in the 1970s to AGL (SOU 1977:91, 233).
6. The ability-to-pay principle was advocated by many groups of writers, including reformists and socialists. To them, this approach seemed a promising base from which to push for progressive taxation and income redistribution (Musgrave 1959, 112).
7. 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 a few exceptions, oscillated between six and nine kronor to the dollar.
8. The increase of the tax-free exemption from SEK 15,000 to 32,000 corresponded almost exactly to an increase from one to two average annual wages before tax for a full-time production worker, but due to the combined effect of inflation and real wage increases, the exemption had once more declined to one annual wage by 1975 (see Table 2.1 in Chapter 2).
9. The wealth tax on the net worth of companies was abolished in 1991, whereas it was completely repealed for all kinds of assets/wealth in 2007 (Du Rietz and Henrekson 2015).
10. In order to reduce the threshold effect, there was as a second size limit where firms with equity between SEK 2 and 2.5 million were allowed a payment respite and late remittance of 5 percent of the recipient's inheritance tax. Firms eligible for a lower wealth valuation were only smaller family firms, where at least 75 percent of the equity was held by the entrepreneur, alone or jointly with a maximum of nine persons. Firms having equity exceeding SEK two million did not get any relief (SOU 1971:46, 128–134).
11. Complete tables are presented in the main text below.
12. Earlier, there existed a stamp fee on gifts of real estate (SOU 1957:48, 77). Stamp duty on gifts of personal property was introduced as a means to prevent avoidance of inheritance tax (SOU 1969:54, 84).
13. The dual tax system lasted from 1948 to 1958, when the estate tax was abolished.
14. Deductible exemptions were introduced much later, not until the estate tax in 1948 and the inheritance lot tax in 1971.
15. For a more systematic (cross-country) analysis of why inheritances are taxed, see Scheve and Stasavage (2012). Henrekson and Waldenström (2014) explore the role of ideology vs. other proposed explanation for the increase in Swedish inheritance taxation.
16. The objective of the 1946 appreciation (by 17 percent) was to restrain cost increases (Lundberg 1953, 295). However, the demand side proved to be a greater problem than costs and caused an excess of imports over exports that led to a currency devaluation in 1949.
17. A highly progressive income tax schedule was also introduced in 1948 (see Du Rietz, Johansson, and Stenkula 2015a) and a new wealth tax schedule more than doubled the statutory wealth tax rates (see Du Rietz and Henrekson 2015).
18. SFS (*svensk författningssamling*) is the Swedish code of statutes and official publication of laws enacted by the Swedish Parliament (*Riksdag*).
19. This primarily holds true for the period up to 1958 (see Table 5.6). According to tabulated estate sizes in 1966 in SOU 1969:54, Table 50, 249, about 20 percent of all estates excluding martial property amounted to SEK 30,000 or more.
20. Feldt (2012) documents in some detail the drastic plans considered and measures eventually taken in the Johnson dynasty in order to avoid being too hard hit by the combined effect of the estate and inheritance tax, in case of the decease of Axel Ax:son Johnson, the patriarch and sole owner of the industry group.
21. If the inheritance lot was below the taxable limit (*bottenbelopp*), there was no inheritance tax. If the inheritance lot exceeded the taxable limit, the entire lot was taxed.
22. Provisional reliefs in the assessment of taxable wealth in small companies were introduced in 1971, implying a relief of 25 percent of book equity value. From 1974, a

deliberate underestimation of stock-in-trade and inventories was introduced which we have interpreted as an assessment (of equity) at 40 percent.

23. Regeringens proposition 1990/1991:54, SFS 1990:1430. Because of high inflation, the adjustments in 1991 were not sufficiently large to impede higher real inheritance tax burdens.
24. The tax was abolished effective from December 17, 2004, not January 1, 2005, which was originally decided by Parliament. This was motivated by a concern for the heirs of the Swedish victims of the tsunami disaster in the Indian Ocean on December 26, 2004. More than 500 Swedes, most of them on vacation in Thailand, were killed in the disaster.
25. Total inheritances of 5 percent of GDP is in line with the findings of Ohlsson, Roine, and Waldenström (2014). They estimate that annual inheritances amounted to slightly less than 5 percent of GDP after 1950.
26. In extreme cases, the total inheritance tax (direct inheritance tax plus indirect inheritance tax in form of extra income tax and social security fees) could be so high as to exceed total firm equity. After the tax reform in 1990–1991, the required withdrawal from the firm to pay inheritance tax fell substantially, but in 1990, the top marginal tax rate was still as high as 65–66 percent, which means that almost three SEK had to be withdrawn from the firm in extra dividend to pay one SEK in inheritance tax. Total inheritance tax was 20 percent of equity while the direct inheritance tax was 16 percent. In 1991, two SEK had to be withdrawn from the firm per SEK in inheritance tax, depending on the more stringent 3:12 rules in that year. See further Du Rietz, Johansson, and Stenkula (2015b).
27. At the most, the marginal dividend tax rate was 86 percent (in 1978–1979), which means that for every SEK in inheritance tax, seven SEK had to be withdrawn from the firm in extra dividends (see Du Rietz, Johansson, and Stenkula 2015a).
28. The increase in value is calculated as the equity value increase over the last 20 years per heir.
29. See Du Rietz, Johansson, and Stenkula (2015b).
30. According to the report of the Capital Taxation Committee (*Kapitalskatteberedningen*, SOU 1969:54, 209) in 1968, there were 377 private fortunes larger than SEK 5 million. A considerable part of these was probably in the form of corporate equity. Each of our two heirs inherited SEK 11.7 million in 1968. This indicates, roughly, that in 1968 there may have existed some 100 corporations at least as large as our large firm. Our medium-sized corporation had equity per heir of about SEK 1.2 million in 1968. According to the same source, in 1968, there existed 4,800 fortunes exceeding 1 million. On this basis, one might estimate that there were some 3,000–4,000 firms as large as our medium-sized firm.
31. However, this alleviation was not uniform as it disfavored service firms with small stocks and limited inventories.
32. The tax relief for small firms in 1971–1973 was too small to prevent the inheritance tax rate from rising, because the inflation rate was high (above 7 percent; see Table 5.15 in the Appendix), tax rates were raised in 1971 and tax brackets were not adjusted for inflation.

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Chapter 6

Swedish Wealth Taxation (1911–2007)

Gunnar Du Rietz and Magnus Henrekson

1. Introduction

Modern wealth taxation was introduced in Sweden in 1911 by the *1910 Ordinance of Income and Wealth Taxation*, SFS 1910:115.[1] Various kinds of duties and fees on estates had existed previously, but only for small and specific parts of the tax base and population strata.[2] The 1910 reform conferred an important role to the ability-to-pay principle in the Swedish income tax system, thus making it natural to take advantage of the greater ability to pay tax that possession of wealth gave the taxpayer (SOU 1969:54, 78).[3] A second motive was to compensate for the erosion of other tax bases and growing government financing needs. Likewise, several types of wealth tax were introduced during and between the World Wars in order to fund the military. Finally, beginning in the early 1930s, the wealth tax was motivated as a means of redistribution (SOU 1969:54, 8–9).[4]

This chapter provides a detailed analysis of the evolution of Swedish wealth taxation from 1911 to 2007, when it was abolished. The main purpose of the chapter is to calculate long-term annual series of average wealth tax rates for each year during the full period.[5] Such calculations are presented for different representative levels of wealth, accounting for institutional factors affecting tax rates such as reduction rules, deductions, exemptions, and valuation rules. Wealth tax rates are presented both for owners of family firms and for owners of individual fortunes.

Our long-run series provides new insights regarding the evolution of wealth taxation in Sweden. Until 1934, taxes were low even for entrepreneurs owning very large firms and for individuals with the largest fortunes. In 1934, unreduced wealth tax rates were sharply increased for owners of larger firms, and fortunes rose gradually through the war years and up to 1948, when tax rates were once more sharply raised. The reduced tax rates did not increase significantly before 1940, when the reduction rule did not apply, nor did these tax rates increase in 1948. A third wealth tax

hike occurred in 1971 affecting both the reduced and the unreduced rate. Effective tax rates peaked in 1973 for entrepreneurs and in 1983 for other wealth owners. Thereafter, new valuation rules concerning net business equity in family firms lowered tax rates. Additional tax relief was enacted in 1991 and 1992 that led to further tax reductions. This trend continued until the final abolition of the entire wealth tax, effective from January 1, 2007.[6] Taken together, the wealth tax was never fiscally important when compared to taxes on income, consumption, and social security fees (from 1948, when data exists for aggregate wealth tax revenue).

The chapter is organized as follows. Section 2 presents the rules governing the valuation of assets and liabilities, and in Section 3, we present the different wealth tax schedules from 1911 to 2006. In Section 4, we examine the impact of the wealth tax by computing average wealth tax rates—including the income wealth tax when applicable—for synthetically constructed family firms and individuals. Most of the focus is on computing the average tax rate on owners of family firms of different sizes (a large, medium-sized, and small firm, respectively). Section 5 consists of a brief summary and our main conclusions.

2. Valuation Rules

2.1 General Principles

Wealth taxes were applied exclusively to households, the amount due based on the amount of net wealth. The net wealth of dependent children living with their parents (below the age of 21 until 1968, below 20 from 1969 to 1973, and below 18 from 1974) was included in household wealth. The capital values of insurance and pension rights were excluded from the tax base. For certain types of assets, special valuation rules applied. Real estate was valued at the so-called tax-assessed value (*taxeringsvärdet*), which was supposed to be roughly 75 percent of the market value. The value of co-operative building society flats was set to the member's share of the society's wealth. Personal property was to correspond to the market value, and a business was valued as its market value, estimated by trustees. Some asset categories were listed at a fraction of their market value. For example, stocks registered on a stock exchange were (in some periods) listed at less than their full market value (at 80% from 1997 to 2006; at 75% from 1978 to 1996; and at 100% prior to 1978). From 1978, unlisted shares (on the so-called O-list, an informal listing) and other OTC (over-the-counter) shares were assessed at only 30 percent of their quoted or book value. Forest holdings (*skogskonto*) were listed at half their market value. The inventories of small firms and stock-in-trade were at times also valued below market value.

The principal valuation rule for the wealth tax was that companies should be valued at expected sales value. For public companies that implied the market capitalization of the firm. For private companies, where the expected sales value is difficult to assess, the alternative valuation made in practice was book net equity value (net worth).

2.2 Reduction Rules and Total Tax Caps

Certain reduction rules were enacted to mitigate the effect of the wealth tax for individuals with low current income in relation to wealth. The first reduction rule was introduced in 1934, jointly with the 1934 separate wealth tax. If taxable wealth exceeded 25 times taxable income from labor and capital, taxable wealth was lowered to that limit. The reduction rule often significantly reduced the taxable wealth and thus the wealth tax for many wealthy individuals. To prevent the tax caps from becoming overly generous, a minimum tax floor was introduced, stipulating that the wealth tax could never be reduced below the tax due on half of taxable wealth.[7] This minimum tax floor was temporarily lowered to 40 percent in 1938–1939. During World War II and just afterward, from 1940 to 1947, no reduction rule applied (SOU 1969:54, 79–81).

In connection with the 1947 state income tax reform, the maximum taxable wealth was changed to 30 times taxable income. In addition, a new provisional *total* tax cap rule was introduced. This rule, effective from 1948, limited the sum of local plus state income taxes and wealth tax for individuals to, at the most, 80 percent of the income subject to state income tax.[8] However, this total tax limit was restricted in that the tax reduction could not exceed the amount of the state income tax (SOU 1969:54, 82–83).

From 1971 and onward, there was a total tax cap of 80/85 percent of total state taxable income (labor plus capital income), inclusive of wealth tax. The cap amounted to 80 percent of state taxable income below SEK 200,000,[9] and 85 percent on exceeding income (SOU 1977:91, 231–233). The main objective of the 80/85 percent rule was the same as for the earlier reduction rules, to ease taxation on low-yield assets. Beginning in 1984 the average total tax cap was lowered to 75/80 percent.

After the 1990–1991 tax reform, the tax cap was significantly lowered: Total tax payments, including wealth tax, were capped to 55 percent of taxable income (labor plus capital income). This cap was raised to 60 percent in 1995, and remained at that level until the wealth tax was repealed (SOU 2002:47, 441).

However, throughout the entire 1948–2006 period the wealth tax could not be reduced below the amount due on 50 percent of taxable wealth (SOU 1969:54, 83). This rule provided a well-defined floor on wealth tax payments.

To account for the effect of the reduction rules in a tractable manner we make the following two reasonable assumptions: (i) the reduction rules exclusively applied to owners of large and medium-sized firms and equally wealthy individuals; and (ii) when the reduction rules applied, the individuals in question paid the minimum wealth tax, that is, the tax due on half their taxable wealth. The reduction rules could significantly lower the wealth tax due, but not necessarily sufficiently in all cases to avoid having a total tax load exceeding 80 percent of total taxable income (85% after 1971 for high-income earners). For the owners of the large and medium-sized firms and persons with comparable noncorporate wealth, we will calculate total wealth tax in both sets of circumstances; that is, when no reduction rule applied and when the tax floor was binding. That combination gives for each year a well-defined interval for the actual payment of wealth tax for a particular individual at that wealth level.

2.3 Valuation Reliefs for Net Business Equity of Unlisted Firms

Throughout the twentieth century the corporate tax code has granted relief in the valuation of business capital in the form of favorable rules for valuation of machinery, inventories, and stock-in-trade (see Du Rietz, Johansson, and Stenkula 2015b). However, in the wealth tax code such relief was not introduced for closely held (private) companies until 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 (SOU 1971:46, 127). The owner obtained a 25 percent reduction on the part of net corporate assets exceeding SEK 500,000, but, for corporate assets below this level, there was no reduction. Eligibility for such valuation relief was well defined: Total firm equity had to be below SEK two million, and at least 75 percent of the firm had to be owned by the entrepreneur alone or together with a maximum of eight other persons (SOU 1971:46, 128–134).

In 1974, the 1971–1973 tax relief was modified and extended by allowing stock-in-trade and inventories to be undervalued. The new valuation rules stipulated that the lower value of either acquisition cost or replacement value were to be used as a basis for taxation. An additional 5 percent was then deducted for obsolescence, and finally the remainder was written down by a further 60 percent (Englund 1975, 62). In the tax rate computations below, we have interpreted the deliberate underestimation of stock-in-trade and inventories from 1974 to 1977 to result in an assessment at 40 percent of net business equity.

In 1978, the valuation relief for unlisted businesses became more generous. Unlisted firms were valued at 30 percent of book net equity value (assets less liabilities). This valuation rule was in force until the wealth tax for unlisted corporate equity was repealed in 1991.

3. Tax Schedules

To understand how the wealth tax normally worked in practice, one must consider the structure of marginal and average wealth tax rates, tax brackets, the scope for deductions, the valuation rules for assets, and the rules for reductions of the wealth tax.

In 1910 the combined income and wealth tax was introduced, and was in effect from 1911 through 1919. From it, the income wealth tax and a separate wealth tax arose.

3.1 The Combined Income and Wealth Tax, 1911–1919

The marginal tax rates in the combined income and wealth tax in the 1911–1919 period varied between 1.7 and 6 percent (Table 6.1).[10] Part of a taxpayer's net wealth was added on top of global (labor plus capital) income. The share of wealth

Table 6.1 The combined state income and wealth tax, 1911–1919

State taxable income	Tax	Average tax rate, %	Marginal tax rate, %
0	0	0	0
800	3.2	0.4	3.2
900	5.4	0.6	2.2
1,100	8.8	0.8	1.7
1,400	14	1.0	2.13
1,700	20.4	1.2	2.53
2,000	28	1.4	2.40
2,500	40	1.6	2.80
3,000	54	1.8	3.0
3,600	72	2.0	3.0
4,500	99	2.2	2.4
6,000	132	2.2	3.0
8,000	195	2.4	3.50
12,000	335	2.8	4.0
20,000	655	3.3	4.5
30,000	1,105	3.7	5.0
50,000	2,105	4.2	5.5
80,000	3,755	4.7	6.0
104,500	5,225	5.0	5.0

Note: All amounts in the tables refer to SEK. Between 1911 and 1919, one-sixtieth of the taxpayer's wealth was added to state taxable income. For income above SEK 104,500, the marginal income tax rate is lower due to an average tax cap. The appropriation and defense taxes are not included in the figures. For income below SEK 6,000, only average tax rates are reported in SFS 1910:115. The marginal tax rates are calculated by the authors. As the average tax rates increase with income, the marginal tax rates are higher than the average tax rates up to the tax cap. At income levels where the average tax rates increased, marginal tax rates were very high (spikes), but between these bracket boundaries, the marginal tax rate was equal to the average tax rate. Since most people are likely to pay the average tax rate on income increases and just a few people at the bracket boundaries pay a much higher marginal tax rate, we prefer to use an average marginal tax rate on a significant income increase. This methodology evens out part of the large variation in the point marginal tax rates at different income levels. If one ignores the high marginal income tax spikes at bracket boundaries, the average marginal tax rates are underestimated. As a consequence, the average wealth tax rate would also be underestimated. For an alternative calculation, see Du Rietz, Johansson, and Stenkula (2015a).

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

that was added to the income tax base varied over time. It was one-sixtieth from 1911 to 1938 and 1 percent from 1939 to 1947, but in one year it was temporarily as high as 10 percent due to the 1913 defense tax. For wealthy high-income earners the wealth tax at times was so large that the income-taxed imputed income from wealth covered several tax brackets. The amounts in each bracket were then

determined at different marginal tax rates. This was particularly true following the 1913 defense tax. There was also a cap that limited the average income tax to, at the most, 5 percent.

The income wealth tax was levied from 1911 to 1948, but the marginal tax rates were increased several times (especially in 1920 and 1939), which increased the tax burden. Because of World War I, several additional temporary taxes were introduced to finance military expenditures. These taxes were constructed in a way similar to the regular income and wealth tax, that is, part of net wealth was included in the income tax base and thus increased the effective income tax. The temporary war taxes affected only individuals with high income or large wealth, but the tax schedules were highly progressive with the result that those affected were often hard hit (SOU 1969:54, 77–79; Söderberg 1996, 11). These temporary surtaxes, particularly the business cycle tax (*krigskonjunkturskatten*; literally "the war boom tax"), were also in part motivated by the recognition that many firms made extraordinarily large profits during the war.[11]

The first of these surtaxes was the temporary 1913 progressive defense tax, which was due in 1914, but calculated on the basis of 1913 income (Table 6.2). It was an extraordinary tax, hence the ordinary 1911 income and wealth tax also applied. The defense tax was levied on individuals with an income of at least SEK 5,000 (≈ five average annual wages for a full-time production worker, henceforth APW) or with taxable wealth exceeding SEK 30,000.[12] The tax due could be paid in installments over a three-year period (1915–1917) (Genberg 1942, 6). It was particularly onerous for wealthy persons as 10 percent of personal wealth was added to taxable income (compared to one-sixtieth in the ordinary income and wealth taxation) (SOU 1969:54, 77–79; Söderberg 1996, 11). The average tax rate was 1.5 percent for an income of SEK 5,000 and the marginal tax rate was 2.5 percent (Table 6.2). The top tax rate went as high as 13.5 percent and applied to income exceeding SEK 225,000 (≈ 212 APWs in 1913).

Olsson (2006, 342) offers the case of the Minister of Foreign Affairs Knut A. Wallenberg's (KAW) income to illustrate how heavy a burden the 1913 defense tax could be on individuals having very high income and wealth. In 1913, KAW received a salary and bonus (before he became Minister of Foreign Affairs and his salary dropped) totaling SEK 215,000 from Stockholms Enskilda Bank. In addition, he received dividends of roughly SEK 500,000. KAW's total income—excluding income-taxed wealth—thus amounted to SEK 715,000. Ten percent of KAW's wealth was added to income (global income, that is, the sum of labor and capital income). Since his taxable wealth amounted to SEK 15 million, his taxable income increased by SEK 1.5 million. The highest state marginal income tax rate of the 1913 defense tax (13.5%) was normally levied on taxable income exceeding SEK 225,000. Given that KAW's taxable income before the wealth tax stood at SEK 715,000, the SEK 1.5 million was thus taxed at the highest marginal rate of the defense tax. However, there was a tax cap in the 1913 defense tax, which limited the tax to, at the most, 12 percent of the taxable income. The bottom line was that the income wealth tax of the defense tax levied on KAW was SEK 180,000 (0.12 · 1.5 million), which amounted to 1.2 percent of his wealth. Few individuals (and no

Table 6.2 The 1913 defense tax and the extra income and wealth taxes of 1918–1919

1913			1918			1919		
Taxable income	**Marginal tax rate, %**	**Tax**	**Taxable income**	**Marginal tax rate, %**	**Tax**	**Taxable income**	**Marginal tax rate, %**	**Tax**
0	0	0	0	0	0	0	0	0
5,000	2.5	0	6,000	1.5	0	10,000	2.5	0
8,000	3	75	8,000	2	30	12,000	3	50
12,000	3.5	195	10,000	2.5	70	15,000	3.5	140
14,000	4	265	12,000	3	120	20,000	4	315
17,000	4.5	385	15,000	3.5	210	30,000	4.5	715
20,000	5	520	20,000	4	385	50,000	5	1,615
25,000	6	770	30,000	4.5	785	80,000	6	3,115
30,000	7	1,070	50,000	5	1,685	100,000	7	4,315
40,000	8	1,770	80,000	6	3,185	125,000	8	6,065
50,000	9	2,570	150,000	7	7,385	150,000	9	8,065
70,000	10	4,370				200,000	10	12,565
100,000	11	7,370				300,000	11	22,565
150,000	12.5	12,870				400,000	12	33,565
225,000	13.5	22,245				500,000	13	45,565
537,000	12	64,365				600,000	14	58,565
						700,000	15	72,565
						800,000	16	87.565
						900,000	17	103,565
						988,700	12	118,644

Note: Ten percent of taxable wealth was added to the base for the income tax.

Source: SFS 1918:512, SFS 1918:513, SFS 1917:513, and Genberg (1942, 21–22); own calculations.

firms) were affected by the 1913 defense tax, but among those affected, many paid substantial amounts.

Furthermore, and in a similar vein, an extra income and wealth tax was levied in 1918 and 1919 (Table 6.2), as well as a supplementary tax (Table 6.3) on incomes above SEK 100,000 in 1918.[13] These surtaxes were similar to the 1913 defense tax in being designed to apply exclusively to very large incomes and fortunes (Söderberg 1996, 11). The 1918 supplementary tax had several upper bracket thresholds (between SEK 100,000 and 925,000). KAW avoided the 1918 and 1919 surtaxes and subsequent wealth taxes by having already donated in 1917 the bulk of his fortune to a tax-exempt foundation, the Knut and Alice Wallenberg Foundation.

Table 6.3 The defense surtax, 1918

Taxable income	Tax	Marginal tax rate, %
0	0	0
100,000	0	1.0
125,000	250	2.0
200,000	1,750	3.0
300,000	4,750	4.0
400,000	8,750	5.0
500,000	13,750	6.0
600,000	19,750	7.0
700,000	26,750	8.0
800,000	34,750	9.0
900,000	43,750	10.0
925,000	53,000	5.0

Note: Taxable income refers to state taxable income and includes one-sixtieth of taxpayer's wealth. In the highest tax bracket, the marginal income tax rate is lower due to the average tax cap.

Source: SFS 1918:512; Du Rietz, Johansson, and Stenkula (2015a).

3.2 The Combined State Income and Wealth Tax, 1920–1938

The 1919 combined state income and wealth tax was implemented in 1920 (Table 6.4). It replaced the 1910 ordinary tax along with earlier temporary defense taxes, and was in effect through 1938 (see Du Rietz, Johansson, and Stenkula 2015a). The state income tax schedules were revised and made flexible. The structure of the new state tax system—tax brackets, base amounts, and marginal tax rates—was fixed, but the effective total tax rates were now flexible. Politicians would henceforth annually determine the so-called withdrawal percentage of the tax (*uttagningsprocent*), thus allowing for easy upward and downward adjustments in the state income and wealth tax rates in accordance with perceived "needs."

Another innovation within this new income tax was the introduction of state and local income tax allowances. Furthermore, local taxes paid were now deductible from the state income tax base in the subsequent year. The system was progressive, with base marginal income tax rates running from 3 to 15 percent. To calculate the total tax rates, the base tax rates were multiplied by the withdrawal percentage for the year in question (see Table 6.4). As before, there was a tax cap, which restricted total tax payments to a maximum of 12 percent of taxable income. The lowest tax bracket was very wide (the threshold for the upper limit was more than three times the average wage of a production worker in 1920) and thus included the majority of taxpayers.[14] As a result, even though the new income tax schedule comprised 13 tax brackets with rising marginal income tax rates, the tax schedule was proportional for low- and middle-income earners.

Table 6.4 The combined income and wealth tax, 1920–1938

Taxable income	Base amount	Marginal tax rate, %	Withdrawal percentage of tax	
0	0	3	1920	155
10,000	300	4	1921–1924	175
20,000	700	5	1925	170
40,000	1,700	6	1926–1927	160
60,000	2,900	7	1928	150
100,000	5,700	8	1929–1932	145
150,000	9,700	9	1933	165
200,000	14,200	10	1934–1937	170
300,000	24,200	11	1938	180
400,000	35,200	12		
600,000	59,200	13		
800,000	85,200	14		
1,000,000	113,200	15		
1,226,670	147,200	12		

Note: Between 1920 and 1938, one-sixtieth of the taxpayer's wealth was also added to the state taxable income. Between 1939 and 1947, 1 percent of the taxpayer's wealth was added to the state taxable income. The progressive local tax 1920–1938 is not included in the numbers above. A state equalization tax and an extra state income tax were levied in the periods 1928–1938 and 1932–1938, respectively. These taxes are not included in the numbers above. In the highest tax bracket from 1920 to 1938, the marginal income tax rate is lower due to an average tax cap. To calculate the exact amount of tax paid or the state marginal income tax rate for a specific year from 1920 to 1938, one multiplies the base amount or the marginal tax rate by the withdrawal percentage for the specific year.

Source: Genberg (1942, 22–24) and Söderberg (1996, 75–76).

Several new additional temporary state income taxes were introduced alongside the 1920 ordinary state income and wealth tax. Wealth taxation was thus raised by the 1920 local progressive income tax (*1920 års kommunala progressivskatt*, Table 6.5), which had the same base as the ordinary income and wealth tax (SOU 1969:54, 78). The marginal tax rates varied from 0.5 to 8 percent (Table 6.5). The 1920 local progressive income tax was replaced by the 1928 local progressive income tax (Table 6.6). The structure of the local tax system was changed, so that one-fourth of the 1920 local tax was transformed into a separate state income tax called the state equalization tax (*statliga utjämningsskatten*; Table 6.7). Revenues from this new state tax were used to compensate municipalities having weak tax bases or high expenditures. The tax was slightly progressive, but the tax rates were modest (the top marginal tax rate was 1.5%) until 1934, when it was doubled to 3 percent (Table 6.8).

The depression in the early 1930s led to shrinking tax bases and the need to finance increased public expenditures, which was partly compensated for in 1932 by another temporary tax—the state extra income and wealth tax (Table 6.9). This

Table 6.5 The local progressive income tax (*den kommunala progressivskatten*), 1920–1927

State taxable income	Tax	Marginal tax rate, %	Withdrawal percentage of tax	
3,000	0	0.5	1920–1921	92.5
6,000	15	1.0	1922–1926	93.75
10,000	55	2.0	1927	96.25
25,000	355	3.0		
40,000	805	4.0		
60,000	1,605	5.0		
100,000	3,605	6.0		
150,000	6,605	7.0		
200,000	10,105	8.0		
294,750	17,685	6.0		

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

Table 6.6 The local progressive income tax (*den kommunala progressivskatten*), 1928–1938

State taxable income	Tax	Marginal tax rate, %
3,000	0	0.5
9,000	30	1.0
15,000	90	2.0
35,000	490	3.0
60,000	1,240	4.0
100,000	2,840	5.0

Source: Genberg (1942, 23).

Table 6.7 The state equalization tax (*statliga utjämningsskatten*), 1928–1933

State taxable income	Tax	Marginal tax rate, %	Withdrawal percentage of tax	
3,000	0	0.167	1928	85
9,000	10	0.333	1929	85
15,000	30	0.667	1930	80
35,000	163	1.0	1931	100
60,000	413	1.333	1932	100
100,000	947	1.67		
432,000	6,481	1.5		

Source: Genberg (1942, 23).

Table 6.8 The state equalization tax (*statliga utjämningsskatten*), 1934–1938

State taxable income	Tax	Marginal tax rate, %
3,000	0	0.33
9,000	20	0.67
15,000	60	1.33
35,000	327	2.0
60,000	827	2.67
100,000	1,893	3.33
432,000	12,960	3.0

Source: Genberg (1942, 23).

Table 6.9 State extra income and wealth tax, 1932–1935

State taxable income	Tax	Marginal tax rate, %
6,000	0	0.5
8,000	10	1.0
12,000	50	1.5
20,000	170	2.0
30,000	370	2.5
40,000	620	3.0
60,000	1,220	3.5
100,000	2,620	4.0

Source: Söderberg (1996, 106).

extra income tax was slightly progressive but only affected taxpayers having taxable income exceeding SEK 6,000 (about 3.5 APWs). The top marginal tax rate was 4 percent. Sweden did not escape the prolonged global retrenchment, and the extra income tax rates were doubled in 1936 (Table 6.10).

3.3 The Separate Wealth Tax of 1934 and 1938

A separate wealth tax was introduced in 1934, alongside the income wealth tax. It applied until 2007. This wealth tax levied specific marginal wealth tax rates in different brackets *directly* on net wealth (not taxing added wealth by marginal income tax rates), normally resulting in higher wealth taxes. Initially, the exemption was high—SEK 50,000—which was more than the net worth of many small and medium-sized firms (see Section 4 below). The tax rates varied between 0.1 and 0.5 percent. The introduction of the separate wealth tax in 1934 also entailed, as described in Section 2.2, a reduction rule prohibiting levying wealth taxes on

Table 6.10 State extra income and wealth tax, 1936–1938

State taxable income	Tax	Marginal tax rate, %
6,000	0	1.0
8,000	20	2.0
10,000	60	3.0
12,000	120	4.0
20,000	440	5.0
30,000	940	6.0
50,000	2,140	7.0
100,000	5,640	8.0

Source: SFS 1935:300.

asset values exceeding 25 times taxable income (including income taxed wealth). To prevent the tax caps from becoming overly generous, a minimum tax floor was implemented, stipulating that the wealth tax must never be reduced below the tax due on half of taxable wealth. This minimum tax floor was temporarily lowered to 40 percent in 1938 and 1939. No floor was applied from 1940 to 1947.

Effective from 1939, tax rates were slightly increased (to a maximum of 0.6%). The exempted amount was more than halved to SEK 20,000 in the separate wealth tax, which from then on became an integral part of the ordinary tax system by virtue of the 1938 particular tax on wealth (applicable in the 1939–1947 period; see Table 6.16).

Despite the 1939 reduction of the tax exemption, it was still sufficiently high to exempt many owners of small firms from the separate wealth tax (see further Section 4.1 on family firms). The 1939–1947 defense tax increased the wealth tax rate for larger firms despite the reduction of the part of wealth added to income from one-sixtieth to one percent, and the fact that the progressive local tax, the state equalization tax, and the extra state income and wealth tax were all repealed (Du Rietz, Johansson, and Stenkula 2015a). However, only taxpayers having taxable income exceeding SEK 6,000 (between two and three APWs during this period) paid the temporary income and wealth taxes in the 1920–1938 period. The tax rates in the ordinary income and wealth tax that affected almost all taxpayers were increased in 1939 by the 1938 income and wealth tax (SFS 1938:369) to compensate for the repeal of the temporary taxes. The temporary wealth taxes were thereby broadened and made permanent. Revenues from the state income tax were now partly seen as a relatively stable way to finance social expenditures.

3.4 The Combined State Income and Wealth Tax, 1939–1947

The 1938 income and wealth tax (Table 6.11) applied from 1939 to 1947 and consisted of a flexible tax rate (the "bottom tax"/*bottenskatt*), which was determined annually by Parliament, and a fixed tax rate (the surtax/*tilläggsskatt*). That is, this

Table 6.11 The 1938 income and wealth tax, 1939–1947

Bottom tax Taxable income	Tax at bracket boundary	Marginal tax in bracket, %	Withdrawal percentage of tax	
0	0	4.5	Income year	
3,000	135	5.5	1939	120
6,000	300	6.5	1940–1947	150
Surtax Taxable income	**Surtax at boundary**	**Marginal tax in bracket, %**		
8,000	0	2		
10,000	40	4		
15,000	240	8		
25,000	1,040	12		
40,000	2,840	16		
60,000	6,040	20		
100,000	14,040	24		
200,000	38,040	28		

Note: To calculate the exact state marginal income tax rate for a specific year from 1939 to 1947, one must multiply the bottom tax with the withdrawal percentage for the specific year and then add the surtax.

Source: SFS 1938:369 and Genberg (1942, 23–24).

income and wealth tax was partly constructed in the same way as the one it replaced. The bottom tax was only slightly progressive, while the surtax was highly progressive, but only levied on income exceeding roughly three APWs. All these changes resulted in increased progressivity of the income tax. The part of wealth that was added and taxed as state income was reduced from one-sixtieth of a taxpayer's wealth, in effect from 1911 through 1938, to 1 percent from 1939 to 1947.

Although the state equalization tax and the extra income tax were abolished to simplify the tax system, a new defense tax (*värnskatt*) was introduced in 1939 (Table 6.12). This was a highly progressive combined income, and wealth tax payable by most taxpayers. It was raised in 1940 (Table 6.13) and in 1942 (Table 6.14), and in effect through 1947. The reasoning behind this tax was analogous to that behind the World War I defense tax, motivated by the need to strengthen Swedish military capacity. However, it is also clear that the government had an increasing interest in raising taxes for social and redistributional purposes (Rodriguez 1981, 32–33). Due to rising military tensions throughout the world at that time, there was broad consensus about the need to ramp up capacity and thus little debate or criticism of the 1938 tax reform. In practice, the new income and wealth tax (1939–1947), the defense tax (1939–1947), and high inflation and wage increases all combined to cause a sharp increase of marginal income tax rates for most taxpayers (Du Rietz, Johansson, and Stenkula 2015a). The wealth tax rate also increased significantly in the 1939–1947 period (see Figures 6.3–6.5 and 6.11–6.13).[15]

Table 6.12 The 1939 defense tax

Bottom tax			
Taxable income	**Tax at bracket boundary**	**Marginal tax in bracket, %**	**Withdrawal percentage of tax**
0	0	2.25	120
3,000	67.5	2.75	
6,000	150	3.25	
Surtax Taxable income	**Surtax at boundary**	**Marginal tax in bracket, %**	
8,000	0	1	
10,000	20	2	
15,000	120	4	
25,000	520	6	
40,000	1420	8	
60,000	3,020	10	
100,000	7,020	12	
200,000	19,020	14	

Source: Genberg (1942, 24); own calculations.

Table 6.13 The 1940 defense tax

State taxable income	**Tax**	**Marginal tax rate, %**
3,000	150	5.5
6,000	315	6.5
9,000	510	8.0
12,000	750	10.0
15,000	1,050	12.0
25,000	2,250	14.0
35,000	3,650	16.0
50,000	6,050	18.0
100,000	15,050	20.5
200,000	35,550	23.0

Source: Genberg (1942, 24).

Table 6.14 The defense tax, 1941–1947

State taxable income	Tax	Marginal tax rate, %
3,000	180	7.0
6,000	390	8.0
9,000	630	10.0
12,000	930	12.5
15,000	1,300	15.0
25,000	2,805	18.0
35,000	4,605	21.0
50,000	7,755	24.0
100,000	19,755	27.5
200,000	47,255	31.0

Source: Genberg (1942, 25).

Table 6.15 The 1934 separate tax on wealth, 1934–1938

Taxable wealth	Tax	Marginal tax rate, %
50,000	0	0.1
150,000	100	0.2
300,000	400	0.3
500,000	1,000	0.4
1,000,000	3,000	0.5

Source: Genberg (1942, 23).

Table 6.16 The 1938 separate tax on wealth, 1939–1947

Taxable wealth	Tax	Marginal tax rate, %
20,000	0	0.1
40,000	20	0.2
80,000	100	0.3
150,000	310	0.4
300,000	910	0.5
1,000,000	4,410	0.6

Source: Genberg (1942, 24) and SOU 1969:54, 80.

3.5 The Separate Wealth Tax, 1947–2006

The combined income and wealth tax was motivated by the notion that current income from wealth could be taxed more heavily than labor income (current capital income was taxed jointly with labor income) and therefore additional income could be imputed and taxed. It was also judged that the combined system adhered more closely to the ability to pay principle.

By the *1947 Royal Ordinance* (Table 6.17), wealth taxation was defined in a separate law, independent of the income tax law. The former system was abandoned for two reasons: (i) to attain greater simplicity, and (ii) an increasing awareness of its disincentive effects when marginal tax rates were becoming much higher (SOU 1969:54, 78–80). In 1910, the highest marginal tax rate was a mere 12 percent, while it exceeded 70 percent by the mid-1940s (Du Rietz, Johansson, and Stenkula 2015a).

As noted in Section 2.1, taxable wealth was defined as the value of assets minus debt. Real estate was set equal to the tax-assessed value (*taxeringsvärdet*); personal property (*lösöre*) should correspond to market value; periodic payments were valued according to capitalized values determined by the tax authority; and listed stocks and bonds at quoted values. For stocks in closely held firms without dividends, the value of equity was set to the difference between assets and liabilities at book value. For other Swedish stocks, values were often based on the capitalized value of dividends, the so-called earnings value (SOU 1969:54, 54). The 1947 wealth tax schedule, applicable from 1948, increased tax rates sharply (Table 6.17), compared to the 1938 separate tax on wealth (Table 6.16), with tax rates ranging from 0.6 to 1.8 percent. With the introduction of the new state income tax in 1948, the old combined income and wealth tax as well as the income wealth tax were discontinued (SOU 1969:54, 54ff).

In the 1950s and 1960s, unreduced direct wealth tax rates continuously increased through bracket creep. This occurred in spite of the fact that the top marginal tax rate remained unchanged at 1.8 percent until 1970 (Table 6.21) when it was temporarily raised to 2.5 percent (Tables 6.22 and 6.23). In 1981–1982, the average wealth tax rates decreased (Table 6.24), when bracket boundaries were raised to adjust for inflation. A final, temporary, wealth tax hike was implemented in 1983 (Table 6.25).

Table 6.17 The 1947 wealth tax, 1948–1952

Taxable wealth	Tax	Marginal tax rate, %
30,000	0	0.6
100,000	420	1.0
150,000	920	1.2
200,000	1,520	1.5
300,000	3,020	1.8

Source: SOU 1951:51, 225.

Table 6.18 The 1953 wealth tax, 1953–1956

Taxable wealth	Tax	Marginal tax rate, %
50,000	0	0.5
100,000	250	0.8
150,000	650	1.0
200,000	1,150	1.3
400,000	3,750	1.6
1,000,000	13,350	1.8

Source: SOU 1957:48, 174, and 176.

Table 6.19 Wealth tax, 1957–1964

Taxable wealth	Tax	Marginal tax rate, %
80,000	0	0.5
100,000	100	0.8
150,000	500	1.0
200,000	1,000	1.3
400,000	3,600	1.6
1,000,000	13,200	1.8

Source: SOU 1957:48, 174.

Table 6.20 Wealth tax, 1965–1969

Taxable wealth	Tax	Marginal tax rate, %
100,000	0	0.8
150,000	400	1.0
200,000	900	1.3
400,000	3,500	1.6
1,000,000	13,100	1.8

Source: SOU 1969:54, 43 and Bratt and Fernström (1971, 239).

In 1984, the top marginal tax rate was reduced from 4 to 3 percent (Tables 6.26 and 6.27), and further, to 2.5 percent in 1991 (Table 6.28) and 1.5 percent in 1992 (Tables 6.29–6.33).

The taxation of wealth before 1948 was a complex—to put it mildly—combination of wealth and income taxation, making it impossible to fully define its aggregate importance. However, that is possible in the 1948–2006 period, when a

Table 6.21 Wealth tax, 1970

Taxable wealth	Tax	Marginal tax rate, %
150,000	0	1.0
250,000	900	1.3
400,000	3,500	1.6
1,000,000	13,100	1.8

Source: Bratt and Fernström (1971, 239).

Table 6.22 Wealth tax, 1971–1973

Taxable wealth	Tax	Marginal tax rate, %
150,000	0	1.0
250,000	1,000	1.5
400,000	3,250	2.0
1,000,000	15,250	2.5

Source: SOU 1971:46, 19 and Bratt and Fernström (1975, 246).

Table 6.23 Wealth tax, 1974–1980

Taxable wealth	Tax	Marginal tax rate, %
200,000	0	1.0
275,000	750	1.5
400,000	2,625	2.0
1,000,000	14,625	2.5

Source: Bratt, Fernström, and Tolstoy (1982, 286).

Table 6.24 Wealth tax, 1981–1982

Taxable wealth	Tax	Marginal tax rate, %
400,000	0	1.0
600,000	2,000	1.5
800,000	5,000	2.0
1,800,000	25,000	2.5

Source: Bratt, Fernström, and Tolstoy (1982, 286).

Table 6.25 Wealth tax, 1983

Taxable wealth	Tax	Marginal tax rate, %
300,000	0	1.0
400,000	1,000	2.5
600,000	6,000	3.0
800,000	12,000	3.5
1,800,000	47,000	4.0

Source: Bratt, Fernström, and Tolstoy (1984, 362).

Table 6.26 Wealth tax, 1984–1989

Taxable wealth	Tax	Marginal tax rate, %
400,000	0	1.5
600,000	3,000	2.0
800,000	7,000	2.5
1,800,000	32,000	3.0

Source: Bratt, Fernström, and Tolstoy (1984, 362) and Nordling (1989, 93).

Table 6.27 Wealth tax, 1990

Taxable wealth	Tax	Marginal tax rate, %
800,000	0	1.5
1,800,000	12,000	2.5
3,600,000	62,000	3.0

Source: Skattebetalarnas förening (1990).

Table 6.28 Wealth tax, 1991

Taxable wealth	Tax	Marginal tax rate, %
800,000	0	1.5
1,600,000	12,000	2.5

Source: Skatteverket (2005, 113).

Table 6.29 Wealth tax, 1992–1995

Taxable wealth	Tax	Marginal tax rate, %
800,000	0	1.5

Source: Skatteverket (2005, 113).

Table 6.30 Wealth tax, 1996–2000

Taxable wealth	Tax	Marginal tax rate, %
900,000	0	1.5

Source: Skatteverket (2005, 113).

Table 6.31 Wealth tax, 2001

Taxable wealth singles	Taxable wealth couples	Marginal tax rate, %
1,000,000	1,500,000	1.5

Source: Skatteverket (2005, 113).

Table 6.32 Wealth tax, 2002–2004

Taxable wealth singles	Taxable wealth couples	Marginal tax rate, %
1,000,000	2,000,000	1.5

Source: Skatteverket (2005, 113).

Table 6.33 Wealth tax, 2005–2006

Taxable wealth singles	Taxable wealth couples	Marginal tax rate, %
1,500,000	3,000,000	1.5

Source: Skatteverket (2005, 113).

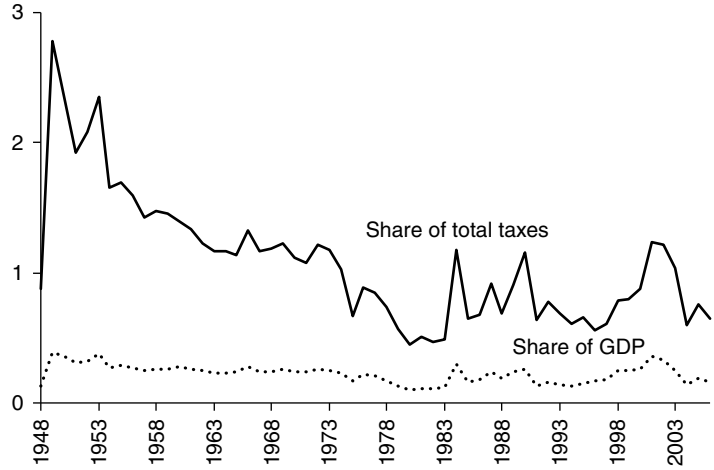

Figure 6.1 Wealth tax revenue as a share of total central government tax revenue and as a share of GDP, 1948–2006 (%).

Source: Data on GDP is from Edvinsson, Jacobson, and Waldenström (2014) and data on wealth tax revenue and total central government tax revenue is from Rodriguez (1980) and Statistics Sweden (1949–2008).

pure wealth tax was in effect. Figure 6.1 shows wealth tax revenue as a share of total central government tax revenue and of GDP during that period. It is clear that, with the exception of the temporary surge in wealth tax revenue around 1950, wealth taxation was of minor importance as a source of revenue for the central government. Revenue from wealth taxation typically varied from 0.5 to 1 percent of total state tax revenue from the early 1970s until 2006. As a share of GDP, it averaged just 0.2 percent, never exceeding 0.4 percent.

4. The Evolution of Wealth Tax Rates for Swedish Family Firms and Individuals

4.1 Family Firms

In order to depict how the Swedish wealth tax rates evolved, we will present estimated average wealth tax rates for synthetically constructed family firms and individuals over the entire lifecycle of the law: from its inception in 1911 to its abolition in 2007. Throughout the analysis, each of three standardized firms has only one owner whose total wealth is invested in his/her firm; we calculate annual average wealth tax rates as a percentage of net business equity during the entire period. The tax rates are applied to three differently sized family firms: one large, one medium-sized, and one small firm.

The large firm has a net worth assumed equal to 1,000 average annual wages for a full-time production worker (1,000 APWs), and therefore has a starting wealth in 1911 of SEK 986,000, which increases to SEK 261 million in 2006. The marginal tax rate of the large firm owner is assumed to be equal to the top marginal tax rate in the case of tax on dividends but lower (three APWs) in the case of income tax on the income-taxed wealth (see Figure 6.2).[16] The number of firms of this size in the late 1960s has been estimated to be fewer than 100.[17] The medium-sized firm is assumed to have a nominal equity equal to 100 APWs, and thus has an initial wealth of SEK 98,600 in 1911, which increases to SEK 26.1 million in 2006. The marginal tax rate of the owner of the medium-sized firm is assumed to be the same as for an employee earning 1.67 times the wage of an average worker.[18] The small firm is assumed to have nominal net business equity of ten APWs or SEK 9,900 in 1911, and 2.61 million in 2006.[19] The marginal tax rate is assumed to be equal to the marginal tax rate for the owner of the medium-sized firm (1.67 APW).

Figure 6.3 depicts the long-run evolution of the unreduced direct wealth tax rate incurred by the owner of a large family firm with equity of SEK 261 million in 2006 (almost 30 million euros at the time). The assessed tax rate has varied greatly over time, increasing in the postwar era and peaking in the early 1970s, and then falling to zero from 1991 onward. Until 1934, the wealth tax hovered between 0.1 and 0.2 percent. The one exception was the year 1913 when the defense tax sharply, albeit temporarily, increased the wealth tax to 0.82 percent.[20]

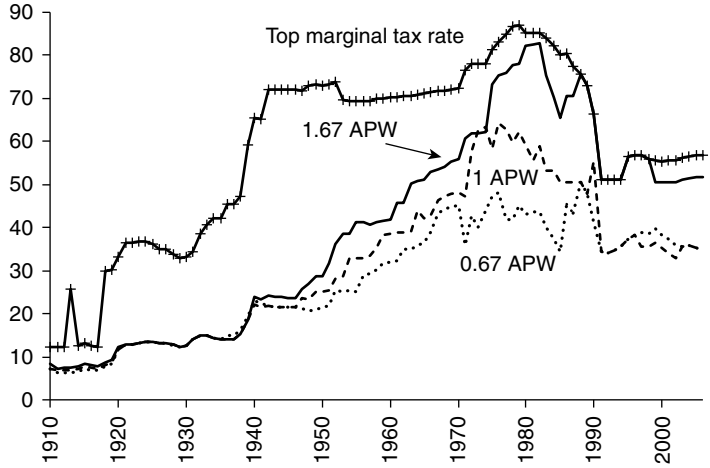

Figure 6.2 Marginal tax rates at different levels of income, 1910–2006 (%).
Source: Du Rietz, Johansson, and Stenkula (2015a).

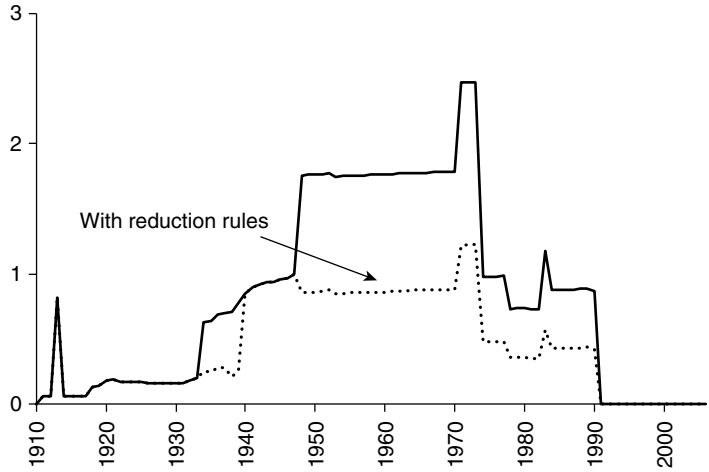

Figure 6.3 Wealth tax rate for an owner of a large firm, 1911–2006 (% of firm equity).
Note: The net worth of the large firm is 1,000 APWs (corresponding to SEK 261 million in 2006).
Source: Calculations made by the authors.

A permanent rise in unreduced wealth taxation occurred in 1934 with the introduction of the separate wealth tax, in effect tripling the entrepreneur's wealth tax rate to 0.63 percent. The 1938 income and wealth tax, effective from 1939 (Table 6.11), and the defense taxes in 1939–1947 (Tables 6.12–6.14), resulted in a

gradual increase of the direct wealth tax rate by more than 50 percent (from 0.63 to 1%) for the large firm. The next tax hike occurred in 1948, when the new 1947 wealth tax (Table 6.17) increased the direct tax rate from 1 to 1.8 percent. Large firm owners, however, by using the rule that reduced taxable wealth to, at the most, 25 times the taxable income but at least 50 percent of taxable wealth in 1934–1937 and 40 percent of taxable wealth in 1938–1939, avoided wealth tax increases until 1940, when the reduction rule no longer applied. The repeal of the reduction rule more than tripled the effective tax rates.

The wealth tax schedule proposed by the Capital Taxation Committee in 1969, and subsequently enacted and effective from 1971, led to a further substantial increase of the average direct tax rate from 1.8 to almost 2.5 percent. The top marginal tax rate was increased from 1.8 percent in the period 1948–1970 to 2.5 percent in 1971–1973 (Table 6.22). The unreduced wealth tax rate then increased sharply to 2.47 percent, while the reduced wealth tax stabilized at 1.2 percent of firm equity.

In 1974, tax authorities allowed a greater undervaluation of firms' stock-in-trade and inventories, leading to the unreduced wealth tax rate being more than halved from 2.5 to 1 percent.[21] The wealth tax on corporate equity dropped further in 1978 to 0.7 percent when only 30 percent of the net worth (*substansvärdet*) of firms was subject to wealth taxation, but then with increased tax rates in 1983 rose temporarily to 1.2 percent. It decreased to 0.9 percent in 1984, when the top marginal tax rate was reduced from 4 to 3 percent. The reduced wealth tax rate also dropped in 1974, from 1.2 to 0.5 percent, and then to 0.4 percent in 1978. It remained roughly at that level until the wealth tax for corporate equity was abolished in 1991.

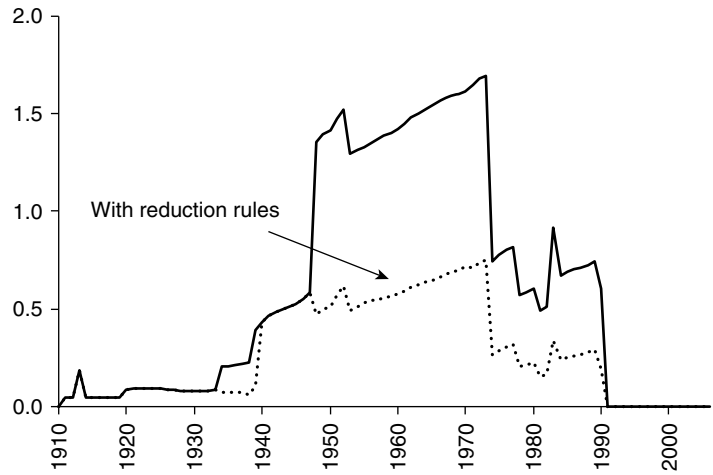

Figure 6.4 Wealth tax rate for an owner of a medium-sized firm, 1911–2006 (% of firm equity).

Note: The net worth of the medium-sized firm is 100 APWs (corresponding to SEK 26.1 million in 2006).

Source: Calculations made by the authors.

Turning to the medium-sized firm (with an equity of SEK 26.1 million, or almost three million euros in 2006), Figure 6.4 shows the average tax rate paid by the owner of such a firm. The long-run trend resembles that of the large family firm, but at a lower level. Before the introduction of the separate wealth tax in 1934, the medium-sized firm owner paid below 0.1 percent in wealth tax with the exception of 1913 when the defense tax increased the wealth tax rate to 0.19 percent. In 1934, the average full direct tax rate increased to 0.21 percent, and then to 0.39 percent in 1939. It gradually increased until 1948 when it more than doubled again, to 1.35 percent. The tax rate continued upward to 1.52 percent in 1952, and peaked two decades later in 1973 at 1.7 percent, despite the 1971–1973 small-firm relief. It fell considerably in the 1974–1977 period to barely 0.8 percent as a result of the lower valuation of inventories and stock-in-trade. In 1978, it decreased to 0.6 percent as a result of the 30 percent valuation rule, and then fell to zero in 1991 when the wealth tax for unlisted firm equity was abolished (Regeringens proposition 1991/92:60, 1). Thanks to the reduction rule, the wealth tax rate did—analogous to the large firm—hardly increase in 1934, only somewhat in 1939, but then climbed steeply from 1940 through 1947 when no reduction rule applied.

In 1948, the reduction rule, which limited taxable wealth to 30 times the taxable income but at least half of taxable wealth, began to apply. This resulted in an effective direct wealth tax rate of 0.47 percent, a significant drop compared to the unreduced tax rate of 1.35 percent. During the 1950s and 1960s, both the unreduced and the reduced direct wealth tax rate increased slowly, but the reduced tax rate level remained at less than half the level of the full tax rate.

Figure 6.5 shows the average direct wealth tax rate paid by the owner of the small firm (with an equity of SEK 2.61 million or about 0.3 million euros in 2006). The average direct tax rate began at 0.02 percent in 1911, increased to just below 0.1 percent between 1919 and 1939, to 0.2 percent from 1940 to 1947 and to around 0.3 percent in 1948. The wealth tax rise in 1948—when the high and progressive separate wealth tax schedule was introduced—was abated by the fact that the income wealth tax was discontinued at the same time that the separate wealth tax was increased. However, the 1948–1953 tax schedules continued to increase the wealth tax rate until it peaked in 1951 and 1952 at 0.4 percent, because the size of the exemption (SEK 30,000) was unchanged through 1952 despite very high rates of inflation in 1951–1952.

Between 1954 and 1973, the average wealth tax rose from 0.23 to 0.73 percent as an increasingly larger fraction of firm equity exceeded the exemption level. In addition, the net business equity of our small firm owners did not exceed SEK 500,000, which excluded the owner from the 1971 to 1973 small firm asset relief.[22] From 1974, the lower valuation rules for corporate equity diminished the wealth tax drastically to zero for small-firm owners, apart from a low positive rate in 1976, 1977, 1980, and 1989. As already noted, we have assumed that the reduction rules were not applicable for the small-firm owner, because the level of wealth was too low in relation to income.

When calculating the wealth tax rate, one important aspect is how the entrepreneur manages to finance the wealth tax payment. Selling off assets or stock to pay the direct tax minimizes additional taxes incurred. In practice, that strategy may

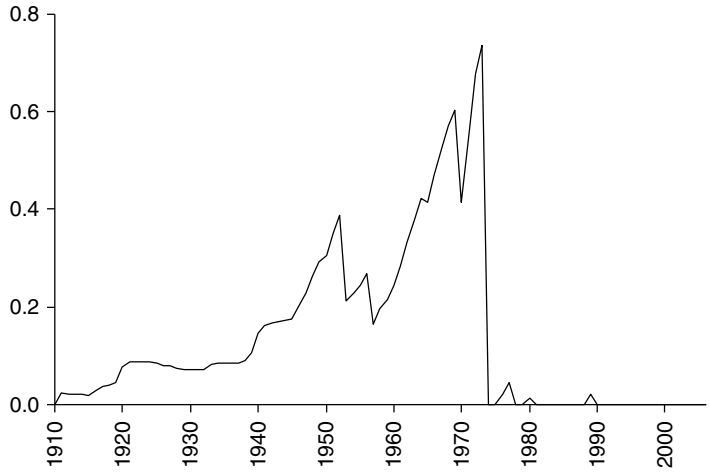

Figure 6.5 Wealth tax rate for an owner of a small firm, 1911–2006 (% of firm equity).
Note: The net worth of the small firm is 10 APWs (corresponding to SEK 2.61 million in 2006). Reduction rules assumed not to be applicable.
Source: Calculations made by the authors.

not always have been feasible or even desirable. One readily available and commonly used option for entrepreneurs to finance wealth tax payments was by means of additional dividends. This was more expensive than selling off stock, since dividends were taxed jointly with labor income until 1991. Thus, owners had to pay labor income tax on these dividends before the remainder could be used to meet wealth tax obligations. Family firm owners could extract an extra salary payment from the company to pay the tax. The problem here was that this would give rise to additional taxation at an even higher rate, since in addition to the ordinary labor income tax the firm would also have to pay social security fees (including payroll taxes).

On the other hand, it should be noted that before any dividend payments could be made from a firm, corporate tax had to be paid on the profits. From 1951 until 1990 the statutory corporate tax rate was never below 46 percent, and in the 1970s and 1980s, it was, on average, roughly 55 percent (Davis and Henrekson 1997). Thus, in order to generate sufficient after tax dividends to pay the wealth tax in the early 1970s, the large firm required a rate of return on equity of up to 18 percent before tax.

Finally, owners could simply take loans to finance tax payments, at least in theory. Debt financing was a favorable mode of payment because it did not give rise to the extra income taxes associated with dividends. However, this strategy was normally not an option until the mid-1980s, because of the strict quantitative regulation of credit markets.[23]

In short, in addition to the wealth tax, owners potentially faced high indirect wealth-related taxes. During the 1970s and 1980s, when the marginal dividend tax was at 70 percent or above, and as much as 85 percent in the 1977–1981 period, these indirect taxes were almost prohibitive.

Our calculations account for such extra dividend indirect taxes for our three standard firms. As the extra dividend 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*. This sometimes entirely eliminated the real rate of return and could—with everything else being equal—jeopardize the survival of the firm. A better option could therefore be to sell the firm. In Figure 6.6, we have recalculated the effective average tax rate, assuming that the entrepreneur finances the wealth tax on the net worth of the large firm by an extra dividend payout. This significantly increased the tax associated with wealth (although formally it was an additional dividend tax). From the late 1940s until 1990, the effective unreduced wealth tax financed through dividends was—for the large firm—invariably above 3 percent, and for most of these years, it hovered between 4 and 6 percent. From the early 1970s until the mid-1980s, it was, with a few exceptions, extremely high. It peaked in 1973 at 11 percent of owners' equity, five times the direct wealth tax.

For owners who got away with paying the minimum tax stipulated by the floor in the reduction rule, the total wealth tax rate (including tax on extra dividends) hovered around 3 percent from 1940 to 1970 and peaked above 5 percent in the years 1971–1973 (see Figure 6.7).

For the owner of the medium-sized firm with a salary 1.67 times the average production worker (1.67 APW), the effective average wealth tax—including the extra dividend tax—reached 2 percent in 1949. This increased to 3 percent in 1963 and peaked at over 4 percent in 1971–1973 if no reduction rule applied (Figure 6.8), and at almost 2 percent when the reduction rule applied (Figure 6.9). The effective

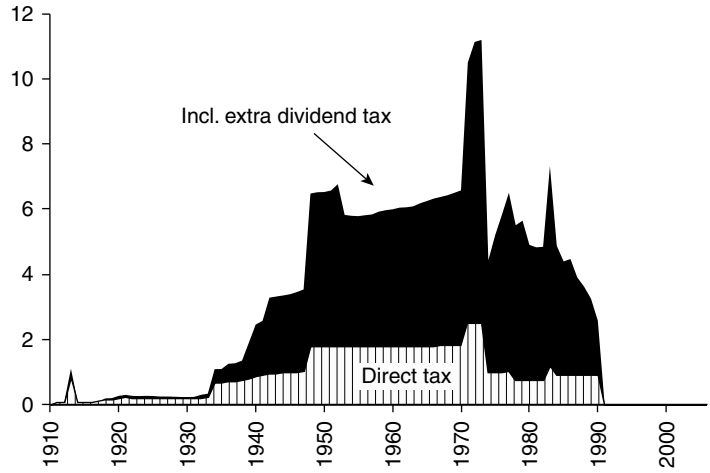

Figure 6.6 Direct and total wealth tax for an owner of a large firm, 1911–2006 (% of firm equity) when no reduction rules apply.

Note: The net worth of the large firm is 1,000 APWs (corresponding to SEK 261 million in 2006). The extra dividend tax was calculated assuming that the firm owner is paying the highest marginal income tax rate.

Source: Calculations made by the authors.

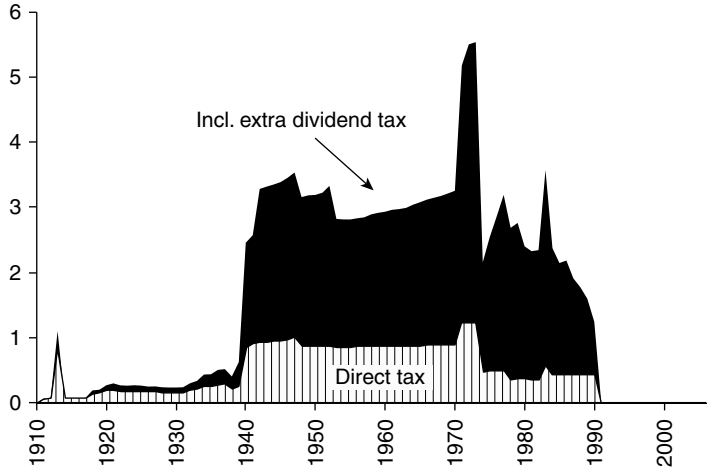

Figure 6.7 Direct and total wealth tax for an owner of a large firm, 1911–2006 (% of firm equity) when reduction rules apply.

Note: The net worth of the large firm was SEK 261 million in 2006 (1,000 APWs). The extra dividend tax was calculated assuming that the firm owner is paying the highest marginal income tax rate.

Source: Calculations made by the authors.

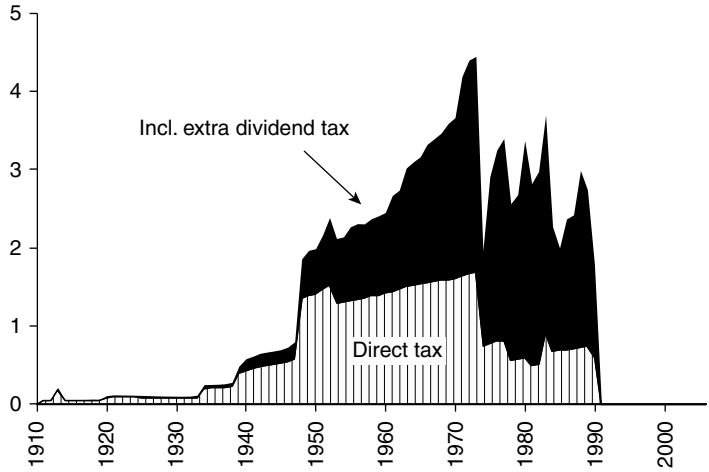

Figure 6.8 Direct and total wealth tax for an owner of a medium-sized firm, 1911–2006 (% of firm equity) when no reduction rules apply.

Note: The net worth of the medium-sized firm is 100 APWs (corresponding to SEK 26.1 million in 2006). The extra dividend tax was calculated assuming a marginal income tax corresponding to 1.67 APW.

Source: Calculations made by the authors.

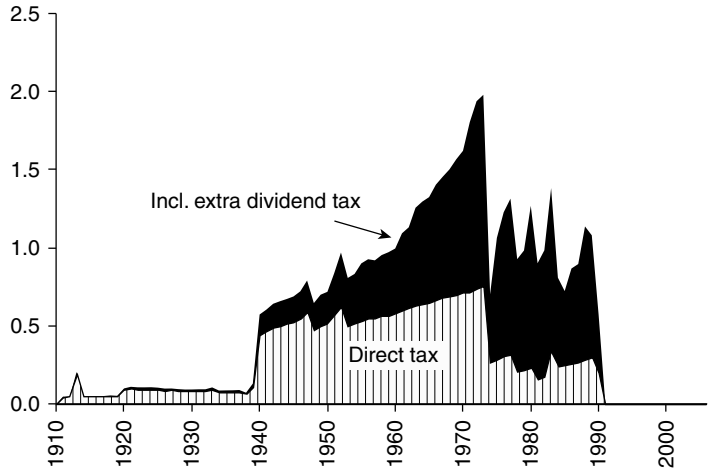

Figure 6.9 Direct and total wealth tax for an owner of a medium-sized firm, 1911–2006 (% of firm equity) when reduction rules apply.

Note: The net worth of the medium-sized firm is 100 APWs (corresponding to SEK 26.1 million in 2006). The extra dividend tax was calculated assuming a marginal income tax corresponding to 1.67 APW.

Source: Calculations made by the authors.

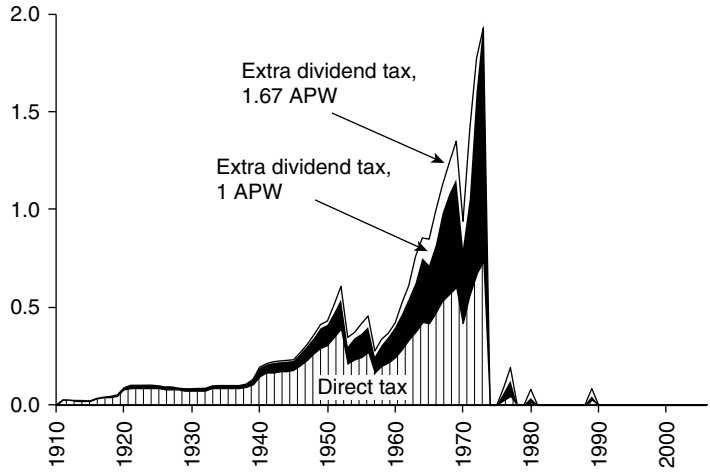

Figure 6.10 Direct and total wealth tax for an owner of a small firm, 1911–2006 (% of firm equity).

Note: The net worth of the small firm is 10 APWs (corresponding to SEK 2.61 million in 2006). Reduction rules assumed not to be applicable.

Source: Calculations made by the authors.

average wealth tax for the small firm owner reached 1 percent in 1966 and peaked at 1.9 percent in 1973 (Figure 6.10).

Due to the fact that entrepreneurs were forced to withdraw funds from their firms to pay wealth tax (unless they were willing to sell part of the firm to pay the tax), running large family firms became extremely unfavorable from the 1960s through the 1980s.

Finally, when we look at the wealth tax rates of all three firm types together, both clear similarities and differences become apparent. First of all, they all follow largely the same time trend in taxation, starting off from a relatively low level in the years before World War II. After the war, tax rates increased sharply until 1973. In 1974, these high levels dropped due to the comprehensive valuation reductions described previously.

In terms of tax levels, the experiences of the three differently sized family firms diverge significantly. Comparing the large and the medium-sized firm, the effective total tax rate of the large firm owner (including extra dividend tax) was roughly twice the effective rate for the owner of the medium-sized firm. This was true for both the unreduced and the minimum wealth tax rate. In contrast, for the small-firm owner the direct wealth tax rate for most years was relatively low. The main exception is the decade 1963–1973, when it consistently exceeded 0.4 percent. In 1974, the small firm tax rate fell to zero.

4.2 Private Individuals

Figures 6.11, 6.12, and 6.13 present the wealth tax rates paid by the three individuals whose level of wealth corresponds to the corporate wealth of the owners of the large, medium-sized, and small family firm, respectively, as discussed in the previous subsection. Unlike for family firms, we only calculate the direct wealth tax for individuals, since wealthy individuals typically can sell some assets—or borrow—in order to pay the wealth tax. However, in practice individuals often must pay capital gains tax when selling assets, an important factor that needs to be acknowledged as it implies that we tend to underestimate the total effective tax.

In 1978, listed stock was valued at 75 percent of the quoted value, motivated by the latent capital gains tax. This was raised to 80 percent in 1997. Real estate was taxed based on the assessed value, intended to be 75 percent of the market value. On these grounds, it is assumed that the average valuation of noncorporate assets was 100 percent before 1978, and 75 percent from 1978 onward.

Figure 6.11 shows that wealthy individuals—with fortunes equivalent to the owners of family firms—faced the same direct wealth tax rates as the firm owners in all years through 1973. If the maximum reduction rules applied, the wealth tax rate fell to approximately 0.2–0.3 percent in the period 1934–1939. In 1940, it then rose sharply to 0.9 percent when no reduction rule applied and further, to 1.2 percent from 1971 until 1977, finally peaking at 1.47 percent in 1983. The tax rate fell to 0.6 percent in 1991–1992 and stayed at that level through 2006. With the introduction of the valuation relief for unlisted net business equity in 1974, effective wealth taxation of the two types of wealth holders began to diverge. The beneficial treatment

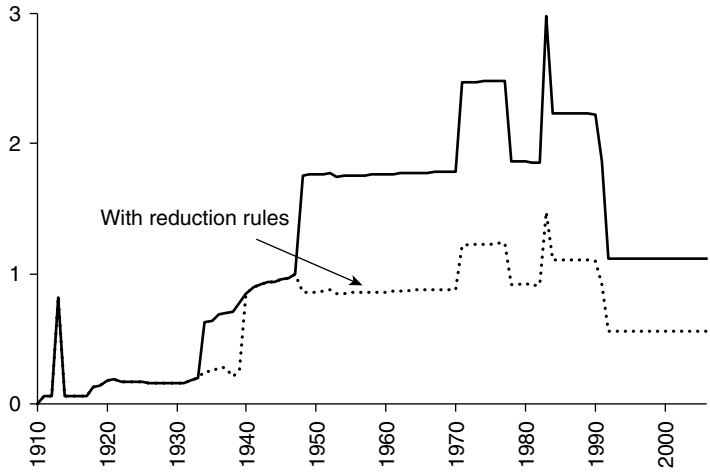

Figure 6.11 Wealth tax rate for an individual having wealth equal to the large-firm owner, 1911–2006 (%).

Note: The person's wealth is 1,000 APWs (SEK 261 million in 2006).

Source: Calculations made by the authors.

of unlisted firm equity was reinforced through the tax rules introduced in 1978. Such beneficial treatment was not extended to noncorporate wealth. As a result, wealthy individuals paid between two and almost three times more than the medium-sized or large firm owners did. The difference was even greater for small wealth holders.

The results change if we account for the effect of financing payment of the wealth tax by extracting an extra dividend from the company. We assume here that wealthy individuals manage to avoid extra dividends or capital gains tax.[24] The additional dividend tax paid by firm owners when funding the wealth tax payments from extra dividends implies that they paid a significantly higher total wealth tax. The first small noticeable divergence in average total wealth tax—for owners of large firms compared to similar individuals—appeared in 1913 and 1918. This was due to the fact that the extra dividend tax that had to be paid by firm owners was subject to relatively high marginal income tax rates. This divergence grew gradually and peaked at 8.7 percentage points in 1973, and then dropped sharply to 2 percentage points in 1974 when relief in the valuation of net business equity was granted.

Figure 6.12 shows that an individual having noncorporate wealth of the same magnitude as the owner of the medium-sized firm faced the same direct wealth tax rate as did the firm owner in all the years until 1970. From 1971 and onward, moderately wealthy individuals paid a higher wealth tax, while from 1974 they paid three times more direct wealth tax than firm owners of equal wealth. However, if one takes into account extra dividends from the firm being used to pay the owners' direct wealth tax, the total wealth tax was significantly higher for the entrepreneurs even after 1974.

Figure 6.13 shows that an individual having wealth of the same level as the owner of the small firm faced the same direct wealth tax rate as did the firm

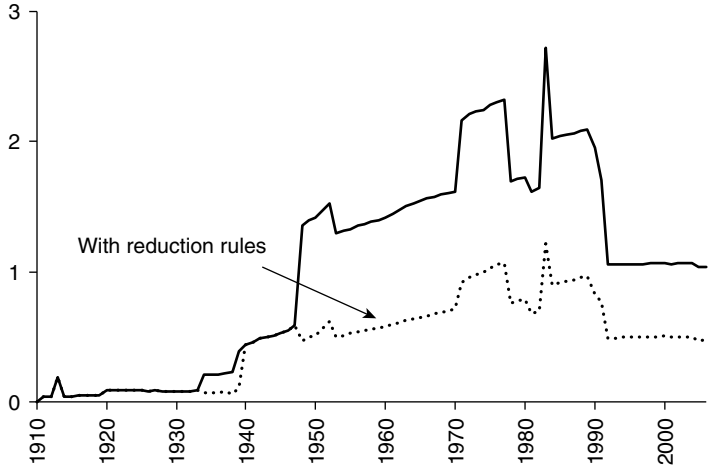

Figure 6.12 Wealth tax rate for an individual having wealth equal to the medium-sized firm owner, 1911–2006 (%).

Note: The person's wealth is 100 APWs (SEK 26.1 million in 2006).

Source: Calculations made by the authors.

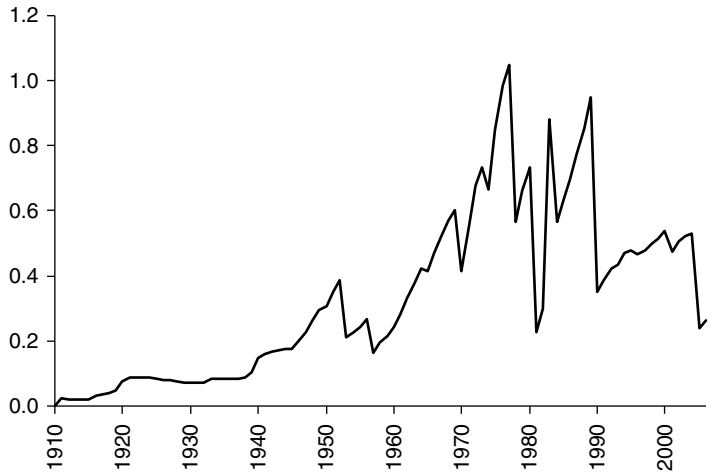

Figure 6.13 Effective wealth tax rate for an individual having wealth equal to the small-firm owner, 1911–2006 (%).

Note: The person's wealth is 10 APWs (SEK 2.61 million in 2006).

Source: Calculations made by the authors.

owner in all years through 1973. From 1974, the direct wealth tax for the small firm owner fell to zero (but for a few years), while our corresponding individual continued to pay a wealth tax of nearly 1 percent until 1978 when the tax rate was reduced to 0.6 percent. In 1979–1980, the tax rate increased to

0.7 percent. Temporarily, in 1981–1982, the tax rate almost fell to 0.2 percent due to increased bracket boundaries. During the period 1990–2004, the tax rate varied between 0.4 and 0.5 percent, falling to between 0.2 and 0.3 percent in 2005–2006.

5. Summary and Conclusions

We have provided an exploratory analysis of the system for taxation of wealth in Sweden. The analysis begins in 1911, when the income wealth tax was introduced, and ends in 2006, which is the last year that wealth was taxed. The wealth tax was not particularly important as a source of revenue for the central government, at least not from 1948 and onward. Beginning in the 1930s, taxes on wealth were largely motivated by redistributional concerns.

The direct tax rate for owners of large firms began at a low level of 0.06 percent on equity in 1911–1912. The average direct wealth tax was increased temporarily by the highly progressive defense tax in 1913, in some cases by as much as a factor of 14. A further sharp rise in the tax rate occurred in 1934 with the introduction of the separate wealth tax, which in many cases tripled the effective wealth tax rate for owners of large firms. The 1939–1947 wealth tax, combined income and wealth tax, and defense tax resulted in a gradual increase of the direct wealth tax rate for owners of larger firms from 0.8 to 1 percent. The 1947 wealth tax gave rise to the next substantial wealth tax hike. Effective tax rates were almost doubled from 1948. The highest marginal tax rate was 1.8 percent. The wealth tax schedule introduced in 1971 increased the top marginal tax rate to 2.5 percent.

In 1974, the wealth tax was more than halved for firm owners when tax authorities introduced a greater undervaluation of firms' stock-in-trade and inventories. The wealth tax on corporate equity dropped further in 1978 when only 30 percent of the net worth of firms was subject to wealth taxation. In 1983, it increased temporarily as a consequence of a temporary increase in tax rates in that year. It decreased in 1984, when the top marginal tax rate was reduced from 4 to 3 percent. The wealth tax on unlisted firm equity was repealed in 1991.

When considering wealth tax effects, the total effects are arguably more important than the direct wealth tax effects. The wealth tax had to be paid annually. Firm owners often had to finance wealth tax payments through additional dividend payouts that were taxed at high marginal income tax rates. The total effective wealth tax was in such cases much higher than the direct wealth tax. It peaked at extremely high levels in the 1970s and 1980s.

With the introduction of the valuation reliefs for unlisted net business equity in the 1970s, effective wealth taxation began to diverge between wealth holders of unlisted corporate wealth and holders of noncorporate wealth of the same size. As a result, wealthy individuals paid between two and almost three times more than the medium-sized or large firm owners did. The difference was even greater for small wealth holders.

Notes

1. SFS (*svensk författningssamling*) is the Swedish code of statutes and official publication of laws enacted by the Swedish Parliament (*Riksdag*).
2. The earliest Swedish estate tax was the "poverty percentage," a fee of 1/8 of 1 percent levied on the gross estate value. This tax was imposed between 1698 and the 1830s by local governments to fund local social spending. Probates were also taxed by a stamp duty (*Charta Sigillata*), but this was paid per sheet, and thus the fee was unrelated to the value of the estate. See Rydin (1882), Eberstein (1915), and Ohlsson (2011) for further details.
3. SOU (*Statens offentliga utredningar*) is the Swedish official series of reports of committees appointed by the Swedish Government.
4. See Du Rietz, Henrekson, and Waldenström (2015) for a further discussion.
5. The marginal wealth tax is important as well, because it influences the incentives for additional investments (King and Fullerton 1984, 7–8). The focus here, however, is on the average wealth tax, because it determines the wealth tax burden and influences the incentive to continue running family firms.
6. In fact, the wealth tax was abolished in 1994 by the then non-socialist government. The abolition was to come into effect January 1, 1995, but the repeal was annulled by the newly elected Social-Democratic government in the late autumn of 1994. For a discussion of why the wealth tax was abolished in 2007, see Henrekson and Du Rietz (2014, 30–32).
7. For example, if a taxpayer's wealth was SEK four million, but he had no current income; taxable wealth was reduced to SEK two million. If a taxpayer's current income was SEK 100,000, his taxable wealth was reduced to SEK 100,000 · 25 = SEK 2.5 million.
8. A similar tax cap also applied from 1941 until 1944 and then again in 1947, but this cap only limited the state income tax (SOU 1969:54, 82).
9. 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 a few exceptions, oscillated between six and nine kronor to the dollar.
10. All tables are presented in the main text.
11. From 1913 to 1916 Swedish exports of iron ore, metals, timber, paper, and pulp increased dramatically in volume and prices almost doubled. The chief reason was that the Central Powers (mainly Germany and Austria-Hungary) increased their demand from Sweden when—due to the trade boycott by the Entente—these countries could no longer trade with the UK, France, or Russia (Olsson 2006, 300).
12. The average annual wage for a full-time production worker was almost exactly SEK 1,000 in 1913.
13. This amount corresponded to 49 APWs (SEK 2,054 in 1918), or to SEK 19 million in 2013 prices.
14. In 1920, about 98 percent of all persons declaring a taxable income paid the lowest marginal state tax rate or no state income tax at all (Statistics Sweden 1923).
15. To repeat, prior to the introduction of the 1938 separate tax on wealth in 1939 (Table 6.16), wealth was taxed by the ordinary income and wealth tax (1920–1938), the local progressive tax (1920–1938), the 1928 equalization tax, the 1932 extra income and wealth tax and by the separate wealth tax (1934–1938) (SOU 1969:54, 79).
16. We assume that the extra dividend that the owner withdraws from his firm to pay the direct wealth tax is taxed at the top marginal tax rate. In the case of income tax on the income-taxed wealth, we have computed the total extra income tax by adding

(particularly in 1913) the income-taxed wealth on top of the salary using several marginal tax rates, which means that the average marginal tax is lower than the top marginal tax rate.

17. According to the report of the Capital Taxation Committee (*Kapitalskatteberedningen*, SOU 1969:54, 209) there were 377 private fortunes larger than SEK five million in 1968. A considerable share of these fortunes was probably in the form of corporate equity. The net equity of the owner of our large firm was SEK 23 million in 1968. This indicates that in 1968, there probably existed no more than 100 corporations as large as our large firm. Our medium-sized firm had equity of about SEK 2.3 million in 1968. According to the same source, in 1968 there were 4,800 fortunes exceeding SEK one million.
18. An annual income of 1.67 APW is used to attain consistency with other studies in the overall project (e.g., Du Rietz, Johansson, and Stenkula 2015a), and because this is one of three income levels used by the OECD when comparing effective marginal tax rates across countries, for example, OECD (2011). The other two levels used by the OECD are 0.67 and 1 APW.
19. The size of our synthetically constructed firms is chosen so as to be fully comparable with the analysis in the companion paper on Swedish inheritance and gift taxation (Du Rietz, Henrekson, and Waldenström 2015). In that study, it is assumed that there are two heirs, each inheriting 50 percent of the firm.
20. The owner of the large firm (is assumed to have) had a salary of SEK 3,185 (3 APWs) and firm equity of SEK 1,061,500 in 1913. The wealth subject to income taxation amounted to SEK 106,150 (10% of 1,061,500). The wealth tax on this amount was SEK 8,047 + SEK 636 in ordinary income and wealth tax, thus totaling = SEK 8,683. Hence, the total average tax for the two taxes combined was 8,683/1,061,500 = 0.82 percent. The assumed salary of three APWs is arguably on the low side for a large-firm owner. On the other hand, it is not unreasonably low considering that retained earnings were taxed much more lightly; there was no capital gains tax and the 1913 extra defense marginal tax schedule was highly progressive and applied alongside the ordinary 1911–1919 tax schedule.
21. The impact of this alleviation was not uniform across industries. Service sector firms with small stocks and limited inventories were relatively disfavored.
22. For wealth up to SEK 500,000, there was no valuation relief (SOU 1971:46, 127). See also Du Rietz, Johansson, and Stenkula (2015b) and Section 2.3.
23. Even if there had been no quantitative restrictions preventing such lending it would have been difficult to find a credit institution willing to grant loans to be used to pay taxes likely to arise every year for the foreseeable future, and entrepreneurs are unlikely to be willing to use personal borrowing to meet tax payments year after year, thereby gradually increasing their financial risk.
24. Until 1966, the long-term capital gains tax (holding period more than five years) was zero. From 1967 to 1975, about 25 percent of long-term capital gains can be estimated to have been taxable (Du Rietz, Johansson, and Stenkula 2015b). Formally, 10 percent of the proceeds of sales of long-term shares were included in personal income. From 1976 to 1990, 40 percent of long-term gains were taxable (holding period more than two years). Short-term capital gains were always fully taxable at the labor income tax schedule.

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Chapter 7

Taxation of Real Estate in Sweden (1862–2013)

Mikael Stenkula

1. Introduction

Taxation of land, property, and real estate has historically been an important income base for governments. Today, real estate taxation is often considered a stable and less distortionary tax source.[1] Although the extent of real estate taxation varies widely across countries, real estate is taxed nearly everywhere in the developed world. Real estate taxation is nevertheless more controversial than many other types of taxation.[2]

The purpose of this chapter is to briefly describe the evolution of real estate taxation in Sweden between 1862 and 2013.[3] The study is part of a comprehensive effort to characterize the Swedish tax system over this long period. This chapter focuses exclusively on taxation directly related to real estate.[4] Analyzing the nature and important role of real estate taxation is more difficult than analyzing those of many other types of taxation. Indeed, the real estate tax in Sweden was generally an integral part of the ordinary income tax system; thus, specific statistics on real estate taxation are not available. Further, the construction of real estate taxation at the local level also makes an analysis of real estate taxation in Sweden less straightforward.

This chapter is organized as follows. In the next section, some general principles behind real estate taxation are presented. The third section describes the evolution of real estate taxation between 1862 and 2013. Against this background, the fourth section evaluates the importance of real estate taxation in Sweden, and the fifth section discusses other boxes on real estate. Finally, the sixth section presents a brief summary and our main conclusions.

2. General Principles behind Real Estate Taxation

A government can tax real estate in many different ways. It can tax property with a distinct separate tax, where the taxpayer pays a part of the value of real estate directly via tax (*objektskatt*). It can also integrate real estate taxation with the ordinary income tax and tax the yield or return on real estate (*avkastningsskatt*). In this case, the tax can be based on the true income associated with real estate. Such a system, in which the true income associated with real estate is taxed (allowing for deduction of costs), is called a conventional system.[5] Many housing types, such as owner-occupied housing, do not normally generate any true taxable income; thus, a strictly conventional method may generate little or no tax revenue. Assessing deductible costs may also be difficult for tax authorities. Instead of using the true income, the imputed income of real estate, for example, based on the assessed value of property, can be used. This approach has been extensively used in Sweden.

Taxation of real estate is often criticized on a number of grounds. Such a tax is considered unfair or unjust because it does not necessarily fall upon taxpayers with high income or substantial (financial) wealth. Further, the tax is levied not on a direct taxable income flow but on a non-pecuniary return. Therefore, a taxpayer may not have the available cash to pay the tax. In addition, as the tax is often based on the assessed value of real estate and as this assessed value can increase sharply, the taxpayer's tax burden may suddenly increase without any corresponding increase in income or financial wealth. It may seem odd if the taxpayer must borrow money (with the increased value of the real estate as collateral) to pay the tax. One general principle within the literature on taxation is that taxes should be levied upon taxpayers in proportion to their ability to pay; real estate tax seems *prima facie* to violate this principle.

Numerous arguments nevertheless support some sort of real estate taxation. In Sweden, three arguments have dominated.[6] First, real estate taxation is argued to provide municipalities with a stable tax base. Many investments by local authorities, such as infrastructure investment, also benefit real estate owners and may increase the value of their property. Hence, real estate tax can be regarded as being levied in proportion to the benefits that taxpayers receive. Second, proponents of real estate taxation argue that the tax system should be neutral. The concept of neutrality can refer to different aspects, and the focus of tax neutrality has changed over time. One aspect of neutrality relates to the neutrality of tenants vis-à-vis people in owner-occupied houses. Another aspect relates to the neutrality between, for example, saving capital in a bank account and investing capital in one's own home. This line of argument suggests that the tax system should be neutral between types of building or tenure and between different types of investments. Hence, if real estate is not taxed at all, the tax system will not be neutral.

Finally, and related to the neutrality argument, real estate is said to generate a flow of "capital return" that should be taxed. In this case, the return on capital should refer to the value of housing (and increases in property value). However, this "return," in contrast to returns on most financial assets, is non-pecuniary. As noted

above, a conventional system cannot be used if this return on real estate is supposed to be taxed. One can propose various arguments about how to derive some form of taxable return from real estate, for example, by using some form of reasoning based on opportunity costs. Homeowners could let their house to a tenant if they are not living in the house themselves. A tax could be levied on the estimated imputed rent that the owners would receive.[7] Homeowners could also sell their house and invest the money elsewhere. A tax could be levied on the estimated yield of this alternative investment. This yield provides a reasonable estimate of the "capital return" on the real estate.

Governments can choose whether to tax natural persons and/or legal entities. As usual, the incidence of the tax is not necessarily borne by the subjects who actually pay it. For instance, a tax on an apartment building may be shifted to tenants through higher rent. A tax on commercial buildings and industries will affect firms' profits, which may ultimately affect consumer prices and consumer choice.

Real estate taxation is typically, in some way or another, based on the assessed value of property.[8] As of 2006 in Sweden, the assessed value of property is determined annually but for different types of property each year (e.g., apartment buildings, one- or two-dwelling buildings). The assessed value of the same type of property was previously updated every six years. Now, however, property value can be assessed more often, and in a simplified way that considers only changes in the market price (*förenklad fastighetstaxering*).[9] The assessed value of property should correspond to 75 percent of the market value of the property. The law on assessed real estate was first introduced in 1810, and initially, the assessed value was determined every three years; however, during the 1900s, the assessment period was changed to every five years. Occasionally, the time period between assessments has exceeded five years (SOU 1979:32). In 1985, the Swedish government decided that the assessed value of property should be determined every six years (SOU 2000:10).

3. The Overall Evolution of Real Estate Taxation in Sweden[10]

In the nineteenth century, Sweden had a state income tax system based on so-called appropriations (*bevillning*). This system can be traced back centuries. Originally, *bevillning* was a temporary surtax that was granted by Parliament when the government had special needs, for instance, during wartime. Over time, the surtax became a permanent part of the Swedish tax system. The system was rather heterogeneous, with roots in the economic and social order of the agricultural society. In 1862, the appropriation tax system was reformed. The system was simplified, and the income tax classification was reduced from eight to two categories: appropriation on real estate (*fastighetsbevillning*) and appropriation on labor or capital income (*inkomstbevillning*). The tax rate was set at 1 percent.[11] The overall objective of this reform was to tax the entire annual return on all real estate. Given the extreme difficulty of assessing the annual return on all real estate in the country, some form of general rule had to be used to determine an imputed income from real estate.

Initially, the rules stipulated that 3 percent of the assessed value of agricultural property and 5 percent of all other property should be treated as taxable income. Because the tax rate was 1 percent, these rules implied that taxpayers had to pay 0.03 percent or 0.05 percent of the assessed value of real estate in taxes. Agricultural property had a lower tax rate because it was also subject to another type of tax (basic tax, see below). When the basic tax was gradually abolished beginning in 1892, the imputed return on agricultural property was increased to 6 percent. A rate of 6 percent was used because the category of agricultural property was assumed to encompass inventory and equipment (*inventarier*) estimated at a value of 1 percent that also should be taxed.

During this time, so-called *grundskatter* ("basic tax"), which was mainly a fixed lump-sum state tax often paid in kind, also existed. This tax was based on land that was not tax exempt, and it was the oldest existing tax at the time—first introduced in the Middle Ages and forming the bulk of state tax revenue—where peasants with taxable estates were hit hardest. This tax was regressive; it was fixed and had to be paid even during poor harvest years. Over centuries, it evolved considerably. After 1869, it was possible to pay the tax solely with money. In 1885, the government began to reduce this tax, and it was reduced by 10 percent per year between 1893 and 1902.[12]

In addition to the *grundskatter* (basic tax), the *mantalspenning*, a poll tax that was a lump-sum tax paid by every person, was also in effect. This tax was introduced in 1625 during a period of intense warfare, and it was not abolished until 1938, by which time its importance was negligible.

At the local level, taxable income and the local income tax were based on the state appropriation system. Consequently, part of the assessed value of real estate was also included in taxpayers' income taxable at the local level.[13] The tax rate paid on taxable income differed among municipalities.[14]

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, which were necessary in the emerging and growing cities.[15] Although small, the tax rate varied over time and across municipalities. However, its importance declined, along with the number of municipalities that used it.

In 1903, the state tax system was reformed, and a new state income tax system was introduced, though the taxation of real estate did not change.[16] However, shortly thereafter, in 1911, the state tax system was once again reformed. With this reform, only the true income from real estate was taxed in the same way as other income (the conventional method).[17] At the local level, 5 (6 for agricultural property) percent of the assessed value of property was included in taxpayers' taxable income, as described above.

In 1920, local real estate taxation was reformed, and a new so-called guaranteed tax system (*garantiskattesystem*) was introduced. The new tax rules required income tax to be paid on an imputed income, set at 5 (6 for agricultural property) percent of the assessed value of the property (for both private and commercial property). These figures, called repartition rates (*repartitionstal*), were the same as before the reform. However, the true income from real estate was also taxable (as in a conventional

system), although the taxpayer could deduct the imputed income of 5 (6 for agricultural property) percent from this taxable income (the so-called percent deduction [*procentavdraget*]). Hence, in this new system, there was no true additional tax on real estate if the income was higher than 5 (6 for agricultural property) percent. The property tax was binding (or effective) for real estate with low or no true income only.[18] Accordingly, this tax system provided municipalities with more tax revenue only if taxpayers could not use the percent deduction (partly or completely). The so-called effective rate (i.e., the share of the real estate tax that actually resulted from the real estate tax and that would disappear if the tax were abolished) varied over time and across properties.[19]

It was argued that a (much simpler) conventional system without any "guaranteed" level could not be introduced because many municipalities would garner insufficient tax revenue to cover their expenses and because the difference among municipalities would be unacceptably large. The tax system implied that municipalities always received tax revenue up to the "guaranteed" level (equal to the local tax rate times 5/6 percent of the assessed value of real estate in the municipality). Overall, this system increased the stability of the local tax base and ensured that taxpayers with income associated with their real estate above the imputed income did not escape from paying taxes on this income.

This complicated system became permanent with the tax reform of 1928, when the appropriation tax was finally abolished. However, the repartition rate on forestland was reduced to 4 percent because forestry also paid an excise duty on forestry. Technically, the sources of taxable income were extended from three (real estate, labor, and capital) to six. Real estate was split into two new classes ("agricultural property" and "other property"), and labor, business, capital, and capital gains composed the other four classes. The division between the ordinary local tax and the real estate tax can be considered an extension of the earlier division between the appropriation on real estate (*fastighetsbevillning*) and the appropriation on labor or capital income (*inkomstbevillning*). In 1932, the repartition rate on "agricultural property" was reduced to 5 percent, that is, the same repartition rate applied for "other property."

Considerable debate during the 1950s centered on the construction of the real estate tax, including the radical option of abolishing it altogether.[20] In 1953, the construction of the local guaranteed tax system was altered; however, the principles of the system remained unchanged.[21] The repartition rate was also reduced to 4 percent (in 1954) and then further to 2.5 percent (in 1957). However, the increase in the assessed value of property during this period completely or partly offset such reductions. The repartition rate was once more reduced in 1965 and then again in 1981 to 2 and 1.5 percent, respectively (see Table 7.1). The system was abolished altogether for natural persons in 1987 for the dual reasons that the tax system encouraged tax avoidance and that such a system (to provide the municipalities with a reasonable and stable, guaranteed tax revenue based on the value of real estate) was no longer necessary.

For owner-occupied houses, the 1953 reform entailed other important changes that affected both state and local taxation.[22] Prior to this reform, the true income from real estate was part of the tax system. Many taxpayers, of course, did not have

Table 7.1 The local guaranteed tax system, 1920–1986 (%)

Year	Repartition rate
1920	5.0
1954	4.0
1957	2.5
1965	2.0
1981	1.5

Note: Until 1932, the repartition rate was 6 percent on agricultural property.
Source: SOU 1986:6; SOU 1993:57.

Table 7.2 Imputed rent on owner-occupied houses (*villaschablonen*), 1954–1966 (%)

Assessed value	1954	1957	1965
Independent of value	3.0	2.5	2.0

Source: SOU 1974:16.

Table 7.3 Imputed rent on owner-occupied houses (*villaschablonen*), 1967–1990

Assessed value (thousands)	1967 %	Assessed value (thousands)	1970 %		
–100	2.0	–150	2.0		
100–200	4.0	150–225	4.0		
200–	8.0	225–	8.0		
Assessed value (thousands)	**1975 %**	**Assessed value (thousands)**	**1978 %**	**Assessed value (thousands)**	**1981 %**
–200	2.0	–200	3.0	–450	2.0
200–250	4.0	200–250	4.0	450–600	4.0
250–300	8.0	250–300	8.0	600–750	6.0
300–	10.0	300–	10.0	750–	8.0

Note: All amounts in the tables refer to SEK. The tax rates refer to the tax rates applicable within the tax bracket. If the assessed value in 1970 is 200,000, the imputed rent was 2% · 150,000 + 4% · (200,000 – 150,000). Occasionally, there was a small deduction.
Source: SOU 1974:16; Bratt and Fernström (1978, 1979, 1981); Ds 1998:3.

an income flow associated with their owner-occupied house. At the local level, this tax on the true income from real estate was combined with a guaranteed tax system that ensured tax income for local authorities, even when little or no income was associated with a property. With the reform, formal rules for an imputed income were

introduced for these properties (*villaschablon*).[23] Only interest payments associated with the property, not other costs, were deductible from this imputed income.[24]

For owner-occupied houses, the rate of imputed income was initially set at 3 percent of the assessed value of property.[25] The rate of imputed income was reduced to 2.5 percent in 1957 and then to 2 percent in 1965 (see Table 7.2). After 1967, the rate of imputed income depended on the assessed value of property, and the system was thus inherently progressive. Initially, the imputed rate varied between 2 and 8 percent.[26] The imputed rates and brackets were subsequently changed several times, often in response to changes in the assessed value of property (see Table 7.3). This system was finally abolished as part of the 1990–1991 tax reform.[27]

During the 1980s, the taxation of real estate underwent substantial change. A separate state tax on real estate in addition to the existing real estate tax was introduced. The origin of this tax was a state fee on old apartment buildings, which was introduced in 1983.[28] The tax rate was supposed to be 2 percent of the assessed value when it was finally implemented; however, for the first two years, there were some initial reductions, and the tax rate was only 1 and then 1.5 percent. This

Table 7.4 The state real estate tax, 1985–1991

	1985		1986		1987	
	Tax base	**Tax rate**	**Tax base**	**Tax rate**	**Tax base**	**Tax rate**
Owner-occupied house						
Conventionally taxed	1/3	0.5	1/3	1.0	1/3	1.4
Imputed	1/3	0.7	1/3	1.4	1/3	2.0
Apartment building						
Conventionally taxed	100%	1.4	100%	1.4	100%	1.4
Imputed	100%	2.0	100%	2.0	100%	2.5
	1988		**1989**		**1990**	
	Tax base	**Tax rate**	**Tax base**	**Tax rate**	**Tax base**	**Tax rate**
Owner-occupied house						
Conventionally taxed	1/3	1.4	1/3	1.4	1/3	1.4
Imputed	1/3	2.0	1/3	2.0	1/3	2.0
Apartment building						
Conventionally taxed	55%	1.4	55%	1.4	65%	1.4
Imputed	55%	2.5	55%	2.5	65%	2.5

Note: The tax base refers to the share of the assessed value of real estate.

Source: Andersson, Bratt, and Svensson (1985); Bratt and Tolstoy (1986, 1988a, b); Bratt (1989); Öberg (2008).

fee was primarily introduced because of changes in the state subsidy system for new apartment buildings, which would (unjustly) benefit owners of old apartment buildings.

In 1985, this fee was transformed into a more general state tax on real estate, including owner-occupied houses.[29] Originally, the tax rate was supposed to be 1.4 percent for real estate that was taxed with an imputed income (owner-occupied houses, housing associations, and public housing companies) and 2 percent for real estate that was conventionally taxed (the tax was deductible for conventionally taxed real estate). The tax rate on owner-occupied houses was reduced during the first two years, and in 1988, the tax rate on apartment buildings was raised to 2.5 percent. The base for the tax rate was initially the assessed value of property for apartment buildings; however, for owner-occupied houses, it was only one-third of the assessed value. The rules were subsequently changed several times. Before the 1990–1991 tax reform, the tax rate was 1.4 percent for owner-occupied houses and 2.5 percent for apartment buildings, and the tax base was one-third of the assessed value for owner-occupied houses and 65 percent of the assessed value for apartment buildings (see Table 7.4).[30]

The 1990–1991 tax reform abolished the system with imputed income on owner-occupied houses. Taxpayers with owner-occupied houses then paid only the specific state tax on real estate.[31] The tax rate was initially supposed to be 1.5 percent on owner-occupied housing and 2.5 percent on apartment buildings.[32] There was, however, a temporary reduction to 1.2 percent for owner-occupied houses for the first two years. The tax base was the entire assessed value, independent of property type. After the reform, this tax changed several times, and in 1996, the tax was broadened to encompass other property categories (see Table 7.5).[33] There were also many exceptions and forms of temporary relief, notably for new buildings. Later, rules limiting the effective tax rate were introduced. Such rules included distinct caps on the tax on real estate in relation to a taxpayer's assessed income (for natural persons) and grants of a smooth and stepwise increase in the real estate tax in case of a sharp increase in the assessed value of a property.

The state real estate tax on owner-occupied houses and apartment buildings was abolished in 2008. Instead, a "local fee" was introduced with a cap, to be adjusted annually, and was indexed to the so-called income base amount (*inkomstbasbelopp*), which tracks the average nominal income (initially the cap was SEK 6,000/house or SEK 1,200/apartment, see Table 7.6).[34] Whether this local fee should even be referred to as a "fee" is questionable; however, the government used the term "fee" instead of "tax" to underline that it was a new system that was qualitatively different from the earlier, unpopular system. Whether the fee should be considered a "local" fee is also questionable, because the tax rate is ultimately determined by the state, independently of local governments. The state also reduced its subsidies to the local governments by the same amount as the "local fee" generated. In practice, these changes initially implied a tax decrease for taxpayers with highly valued real estate but no positive effect on tax revenue at the local level.

Table 7.7 provides a general overview of the most important changes in the Swedish tax system for real estate.

Table 7.5 The state real estate tax, 1990–2013 (%)

Year	Owner-occupied houses	Apartment buildings	Commercial premises	Industrial Property
1991	1.2	2.5	3.5[a]	0.0
1992	1.2	2.5	3.5[a]	0.0
1993	1.5	2.5	0.0	0.0
1994	1.5	1.5	0.0	0.0
1995	1.5	1.5	0.0	0.0
1996	1.7	1.7	1.0	0.5
1997	1.7	1.7	1.0	0.5
1998	1.5	1.5	1.0	0.5
1999	1.5	1.3	1.0	0.5
2000	1.5	1.2	1.0	0.5
2001	1.0	0.5	1.0	0.5
2002	1.0	0.5	1.0	0.5
2003	1.0	0.5	1.0	0.5
2004	1.0	0.5	1.0	0.5
2005	1.0	0.5	1.0	0.5
2006	1.0	0.5	1.0	0.5
2007	1.0	0.4	1.0	0.5
2008	0.0	0.0	1.0	0.5
2009	0.0	0.0	1.0	0.5
2010	0.0	0.0	1.0	0.5
2011	0.0	0.0	1.0	0.5
2012	0.0	0.0	1.0	0.5
2013	0.0	0.0	1.0	0.5

Note: [a] In 1991 and 1992, there was a temporary tax on commercial premises.

Since 1996, there has also been a tax on hydroelectric power stations and wind turbines, which is not shown in the table.

Source: Öberg (2008); Skatteverket (2013).

Table 7.6 Local real estate fee, 2008–2013 (SEK)

Year	Owner-occupied houses	Apartment buildings
2008	0.75%, max 6,000	0.4%, max 1,200/apartment
2009	0.75%, max 6,362	0.4%, max 1,272/apartment
2010	0.75%, max 6,387	0.4%, max 1,277/apartment
2011	0.75%, max 6,512	0.4%, max 1,302/apartment
2012	0.75%, max 6,825	0.4%, max 1,365/apartment
2013	0.75%, max 7,074	0.3%, max 1,210/apartment

Source: Skatteverket (2013).

Table 7.7 The most important tax reforms for real estate

Year	
1862	Appropriation tax with imputed income
1911	Conventional method, introduced at the state level
1920	Guaranteed tax system, introduced at the local level
1954	Introduction of the so-called *villaschablon*
1985	Introduction of a specific real estate tax at the state level
1990	Simplifications of the system as part of a comprehensive tax reform
2008	Part of the real estate tax transformed to a "local fee"

4. The Aggregate Importance of Real Estate Taxation

Inasmuch as the real estate tax was often an integral part of the ordinary income tax system (which was often progressive), public and official statistics have not always reported the amount of revenue emanating from real estate taxation. The issue is further complicated by the fact that within the local guaranteed tax system, the entire amount paid in real estate tax was not effective, that is, a portion of the revenue would have been generated anyway.[35] Unadjusted figures would therefore be inherently misleading. Often explicit information on tax revenue from the taxation of real estate cannot be obtained, and one must rely on rough estimations (SOU 1942:34, 311).

During the first period examined, before the local guaranteed tax system was introduced in 1920, explicit figures on the basic tax and the specific urban real estate tax can be found. As shown in Table 7.8, the basic tax was an important revenue source for the state during the 1860s and 1870s. The share of the basic tax of total state tax revenue was approximately 20 percent, and its share of GDP was, at the most, approximately 1 percent. However, the importance of the basic tax declined quickly during the few decades that followed, and the basic tax was a negligible source of state income by the early part of the twentieth century.

The importance of the urban real estate tax was minor (not shown in any table). In 1875, approximately half of the urban municipalities (47 of 96) used this tax. At the aggregate level, the tax revenue raised corresponded to approximately 3 percent of urban municipalities' total local revenue. The importance of the urban real estate tax diminished throughout the 1800s and early 1900s. By 1900, only 17 urban municipalities used this tax, and it corresponded to a miniscule 0.2 percent of the total local revenue of urban municipalities. The tax rate for the urban real estate tax varied greatly among the municipalities, and for some municipalities, its importance for local revenue was somewhat greater. In 1900, the tax rate varied between 0.45 percent of agricultural property value (in Karlstad) and 0.01 percent of property value (in Ronneby).[36] The tax rate in Stockholm fluctuated at approximately

Table 7.8 Basic tax

Year	Amount (thousands)	Share of state tax revenue, %	Share of GDP, %
1862	7,398	23.0	1.0
1870	7,487	19.0	0.8
1880	6,770	11.5	0.5
1890	5,237	7.0	0.4
1900	1,696	1.5	< 0.1
1910	21	0.0	< 0.1
1920	1,698	0.2	< 0.1

Note: The basic tax also includes taxes associated with the allotted military system. All amounts in the tables refer to SEK.

Source: Statistics Sweden (1914a, 1923a); own calculations.

Table 7.9 Estimated importance of real estate income tax, state level

Year	Share of state income taxes, %	Share of state revenue, %
1862	38	2.5
1870	37	2.0
1880	33	3.0
1890	31	2.0
1900	32	2.5
1910	29	2.5

Note: State revenue refers to all state taxes. Rounded figures.

Source: Statistics Sweden (1914a); own calculations.

0.1 percent, and its share of local revenue decreased from 5 percent in 1875 to almost zero at the outbreak of World War I.

Information on the extent and importance of the income tax during this time, which added part of the value of the property to the taxable income as a form of imputed income, is difficult to find. Data on total income tax revenue is widely available; however, the proportion related to real estate is not reported separately.

One way to illustrate the importance of real estate taxation is to analyze the assessed value of real estate or the taxable income (tax base) derived from the imputed income on real estate.[37] The estimated tax on the imputed income can then be related to other revenues/taxes at the state or local level. This procedure generates a proxy for the importance of the taxation of real estate. The results are presented in Tables 7.9 and 7.10.

At the state level, the results through 1910, when a conventional system was implemented, are presented in Table 7.9. At the state level, approximately one-third

Table 7.10 Estimated importance of real estate income tax, local level

Year	All municipalities		Urban municipalities		Rural municipalities	
	Share of local income tax revenue, %	Share of local revenue, %	Share of local income tax revenue, %	Share of local revenue, %	Share of local income tax revenue, %	Share of local revenue, %
1881	43	15.0	19	5.5	66[a]	28.0[a]
1890	42	15.5	22	7.0	64	28.0
1900	34	14.0	19	6.5	52	26.0
1910	28	13.0	19	7.5	44	24.0
1920	14		8		23	
1931	20		14		30	
1940	18		15		23	
1950	11		10		12	

Note: [a] Only including agricultural property. "Local revenue" refers to the sum of all local taxes, state subsidies, and fees. The tax systems at the rural level are not completely comparable before and after 1910. Rounded figures.

Source: Statistics Sweden (1920b); Statistics Sweden (1923a); SOU 1953:8; own calculations.

of income tax revenue came from imputed income on real estate. However, income tax was not an important source of revenue at the state level at this point in time, and its estimated value, including all state revenue (taxes), was minor (at the most, a mere 2–3 percent).

Table 7.10 presents the results at the local level until 1920, when the local guaranteed tax system was first introduced. At the local level, a meaningful distinction can be made between rural and urban municipalities (*landskommuner* and *stadskommuner*). Unfortunately, no data at the local level is available until approximately 1880. Data as a share of income taxes is also presented for the period from 1920 to 1950. However, as described above, this data may be misleading because of the construction of the system, as part of these taxes would have been paid even if the real estate tax had been abolished. In urban municipalities, approximately one-fifth of income tax revenue came from imputed real estate income, representing approximately 5–10 percent of total local revenue. In rural municipalities, up to two-thirds of income tax came from imputed real estate income, representing approximately one-fourth of total revenue. Collectively, approximately 30–40 percent of local income tax revenue came from real estate, representing approximately 10–15 percent of total local revenue until 1920. Hence, the available evidence suggests that the real estate tax was more important at the local than at the state level and more important in rural than in urban municipalities.[38]

During the first half of the twentieth century, the importance of local real estate taxation seemed to diminish, as the estimated share of income taxes decreased. For the 1946–1953 period, explicit statistics concerning local real estate taxes can also be found (see Table 7.11). The share of the real estate tax represented 10–15 percent

Table 7.11 Real estate tax at the local level (unadjusted figures)

Year	Amount (million)	Share of local income tax revenue, %	Share of GDP, %
1946	153.8	15	0.7
1947	162.0	11	0.6
1948	168.6	11	0.6
1949	175.4	10	0.6
1950	187.8	11	0.5
1951	190.5	11	0.5
1952	298.9	13	0.7
1953	361.5	13	0.8

Source: Statistics Sweden (1947c–1954c); own calculations.

of local income tax revenue and approximately 0.5–1.0 percent of GDP. However, note that from 1920 onward, the local guaranteed tax system was in place, and as these figures do not take into account the effective tax rate, they give only an upper bound of the importance of this real estate tax.

Fortunately, some archival reports have analyzed the importance of the local guaranteed tax system in more detail and have estimated the effective tax rate based on thorough analyses of a subsample of the municipalities (e.g., SOU 1942:34; SOU 1953:8; SOU 1960:4). These measures of the "effective" amount raised were made for the years 1952, 1957, and 1958 (see Table 7.12).[39] The amount for 1952 (SEK 155.2 million) can be compared with the unadjusted amount in Table 7.11 (SEK 298.9 million), implying an overall effective rate of approximately 50 percent.[40] The share of GDP was minor. Adding further insight into the importance of the real estate tax, the reports estimated how much the taxable income would have decreased if the local real estate tax were abolished. They also estimated how much the local tax rate needed to increase to compensate for this shortfall. These counterfactual estimates can also be found for the 1930s. As the table shows, taxable income would have decreased, for example, by 28 percent in 1933 if the local real estate tax had been abolished. To compensate for this shortfall, the local tax rate had to increase by 4.48 percentage points (that is, almost by one-half) if tax revenue were to remain constant (on average).[41]

The table shows marked differences among the years examined. Some of the differences can be explained by the influence of the business cycle. During recessions, the real estate tax is binding for a greater number of property owners, and its importance increases.[42] Although the tax rate may vary over the business cycle, there is a clearly decreasing trend in the importance of the real estate tax. By 1958, the required tax increase had decreased sharply to 0.31 percentage points.

Substantial differences also existed among municipalities because the amount and composition of real estate in the municipalities varied considerably. The required tax increase, if the real estate tax were abolished, varied from 0.15 to 1.30 in the subsample examined for the year 1952.[43] Estimations for the urban municipalities Norrtälje and Stockholm show that the effective real estate tax corresponded to a local income tax increase of 0.95 and 0.70 percentage points, respectively.[44]

As shown in Table 7.12, the local real estate tax appears to have been important in the 1930s, especially during recessions; however, its importance in the 1950s appears to be minor. For approximately 80 percent of rural municipalities, the real estate tax represented less than 20 percent of the income tax in 1952 even without adjustments for the effective rate. The revenue from the real estate tax was as high as 35–45 percent of income tax revenues in, at the most, six of more than 900 rural municipalities (no urban municipalities had a revenue share this high). In 1958, 871 rural municipalities and all urban municipalities had a share below 15 percent. In 1952, 16 municipalities had a tax income share that exceeded 30 percent. In 1958, this number had decreased to four.

Estimates of the effective real estate tax during the 1970s are also available (SOU 1973:4; SOU 1979:32). These estimates suggest that the importance of the real estate tax was still rather low, although its share of GDP appears to have slightly increased. The effective rate was estimated to be 20 percent for agricultural property, 75 percent for owner-occupied houses, 75 percent for apartment buildings and business buildings, and 20 percent for industrial property.[45]

The introduction of a distinct real estate tax—not integrated with the income tax—at the state level in the mid-1980s increased the availability of more precise information on the importance of the real estate tax.[46] Table 7.13 and Figure 7.1

Table 7.12 Real estate tax at the local level (adjusted figures) and the importance of the local real estate tax during the guaranteed tax system

Year	Estimated effective local real estate tax		The importance of the local real estate tax	
	Amount (million)	Share of GDP %	Decrease of taxable income, %	Corresponding local income tax increase (percentage points)
1933	–	–	28.1	4.48
1936	–	–	13.6	1.43
1950	–	–	4.1	0.28
1952	155.2	0.3	6.6	0.58
1957	166.1	0.3	4.4	–
1958	130.0	0.2	2.8	0.31
1972	813	0.4	3.5	–
1975	1,082–1,298	0.3–0.4	3.8	–

Note: During the 1930s and 1950s, the average local tax rates were approximately 10 and 12 percent, respectively. The figures on tax increases refer only to the local level and exclude the county level. At the county level, the (effective) real estate tax is estimated to correspond to a local income tax increase of approximately 0.29 percentage points in 1952 and 0.125 percentage points in 1958. Figures concerning taxable income (column 4) in 1972 and 1975 are not presented in the SOUs but are calculated separately based on the local taxable income.

Source: SOU 1942:34; SOU 1953:8; SOU 1960:4; SOU 1973:4; SOU 1979:32; SOU 1986:6; own calculations.

depict the evolution of the importance of the real estate tax. Initially, when the tax only referred to the fee on apartment buildings, its importance was modest, constituting a small share of GDP and state tax revenue (0.1 and 0.3 percent, respectively). Its importance gradually increased during the 1990s, when it reached and occasionally exceeded 1 percent of GDP. As a share of state tax revenue, real estate tax revenue peaked at approximately 5 percent. When part of the state tax was transformed into a "local fee," the amount raised and the tax share were more than halved.[47] However, when the local real estate fee is accounted for, the total amount raised as real estate tax/fee and its share of GDP remained almost at the same level.[48] In 2013, the public sector collected approximately SEK 30 billion in real estate tax, which represented approximately 0.8 percent of GDP. This figure can be compared with the state income tax, which generated approximately SEK 40 billion, or the wealth tax, which generated approximately SEK 5 billion annually before it was finally abolished in 2007 (Du Rietz and Henrekson 2015).

The above statistics give the gross revenue generated by the real estate tax. However, interest expenses on household mortgages are tax deductible. Consequently, accounting for these tax deductions provides a "net" figure for the taxation of real estate. Data on net figures is difficult to find. However, Table 7.14 presents some interesting estimations for the 1980s, called "tax subsidies on owner-occupied housing." These subsidies include the effect of tax deductions on household mortgage loans, reduced by the tax revenue from the imputed income on owner-occupied houses (*villaschablon*). As a share of GDP, these estimated subsidies correspond to approximately 1.2–1.6 percent of GDP; thus, they are quite large. These figures are higher than the total amount raised through the real estate tax during the late 1980s (depicted in Table 7.13 and including legal entities). Hence, when the effect from

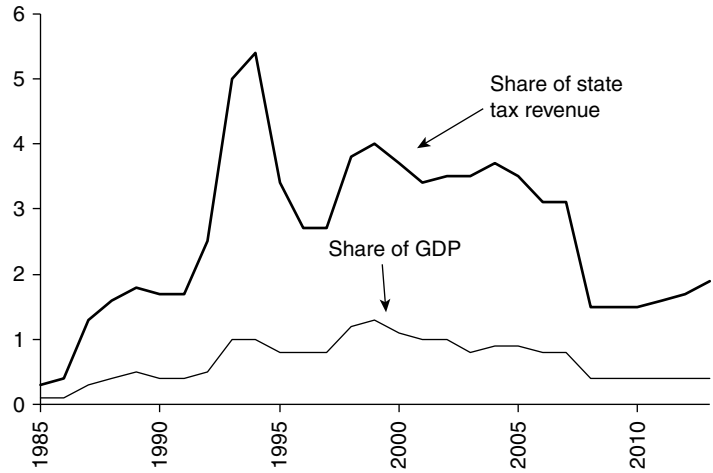

Figure 7.1 The state real estate tax, 1985–2013 (%).

Note: See Table 7.13.

Source: See Table 7.13.

Table 7.13 The state real estate tax and local real estate fee

Year	Real estate state tax			Local real estate fee		
	Amount (billion)	Share of state tax revenue, %	Share of GDP, %	Amount (billion)	Share of local tax revenue, %	Share of GDP, %
1985	0.68	0.3	0.1			
1986	0.95	0.4	0.1			
1987	3.6	1.3	0.3			
1988	4.6	1.6	0.4			
1989	5.8	1.8	0.5			
1990	6.0	1.7	0.4			
1991	6.0	1.7	0.4			
1992	8.5	2.5	0.5			
1993	16.1	5.0	1.0			
1994	16.9	5.4	1.0			
1995	14.4	3.4	0.8			
1996	14.9	2.7	0.8			
1997	15.3	2.7	0.8			
1998	24.0	3.8	1.2			
1999	27.1	4.0	1.3			
2000	24.8	3.7	1.1			
2001	23.3	3.4	1.0			
2002	23.3	3.5	1.0			
2003	21.2	3.5	0.8			
2004	23.5	3.7	0.9			
2005	24.0	3.5	0.9			
2006	25.0	3.1	0.8			
2007	25.9	3.1	0.8			
2008	11.5	1.5	0.4	12.4	3.7	0.4
2009	11.3	1.5	0.4	14.1	4.0	0.5
2010	11.9	1.5	0.4	14.5	4.3	0.4
2011	12.7	1.6	0.4	14.8	4.4	0.4
2012	12.8	1.7	0.4	15.9	4.3	0.4
2013	14.9	1.9	0.4	15.9	4.1	0.4

Note: 1985 and 1986 refer to the fee on apartment buildings. The state cut its subsidies to the local governments by the same amount as the "local fee" generated. After the introduction of the "local fee," real estate state tax was paid only on commercial premises and industrial property.

Source: Ekonomistyrningsverket (2014a); own calculations.

Table 7.14 Tax subsidies on owner-occupied housing

Year	Amount (billion)	% of GDP
1980	7.9	1.4
1981	9.9	1.6
1982	10.3	1.5
1983	10.9	1.4
1984	10.7	1.2
1985	13.0	1.4
1986	13.2	1.3
1987	13.8	1.3
1988	15.9	1.3

Note: The subsidies include tax reductions on household mortgage loans, reduced by the tax revenue from the imputed income on owner-occupied houses (*villaschablon*).

Source: Regeringens proposition 1987/88:100 and SOU 1989:33.

deductible interest expenses is included, the state did not generate any tax revenue from owner-occupied houses. Table 7.15 shows the estimated tax reductions due to deductibility of interest expenses on household mortgage loans after the 1990–1991 tax reform.[49] Normally, the estimated tax reductions range between SEK 15 and 20 billion. When these reductions are accounted for, the net amount, including all real estate taxes, was zero during the early 1990s. When the tax rates increased and when commercial premises and industries were also taxed, the net amount increased. During the 2000s, the net amount decreased but remained positive.[50]

5. Other Taxes on Real Estate

Other taxes have also been levied on real estate, although they are not explicitly defined as real estate taxes. First, a stamp duty (*stämpelskatt*) is payable when one buys real estate or acquires a mortgage. The tax has changed frequently, and temporary forms of relief have been implemented.[51]

The stamp duty has a long history that can be traced back to at least the late seventeenth century. Originally, to be legally binding, some transactions had to be written on specific documents provided by the state. Later, specific "stamps" had to be purchased and attached to legal documents to be valid. In addition to real estate-related transactions, these stamps have historically been required on several types of documents, for instance, shares, bonds, lottery tickets, passports, and drivers' licenses.[52] Part of the tax can be viewed as a fee that covers the expense of providing the economy with standardized certificates and permits.

Table 7.16 shows that the stamp duty began to grow in importance with respect to tax revenue toward the end of the nineteenth century when the basic tax was

Table 7.15 Estimated tax reductions due to interest expenses on household mortgage loans (billion)

Year	Interest expenses	Estimated interest expenses on mortgage loans	Estimated tax reductions
1991	85	64	19
1992	91	68	21
1993	84	63	19
1994	77	58	17
1995	74	56	17
1996	70	53	16
1997	60	45	14
1998	56	42	13
1999	53	40	12
2000	56	42	13
2001	61	46	14
2002	65	49	15
2003	66	49	15
2004	63	47	14
2005	62	46	14
2006	65	49	15
2007	83	62	19
2008	106	79	24
2009	80	60	18
2010	72	54	16
2011	102	77	23
2012	110	83	25

Note: Based on Statistics Sweden (2010d), interest expenses on mortgage loans are estimated to be 75 percent of total interest expenses. Tax reductions are estimated to be 30 percent of interest expenses on mortgage loans.

Source: Statistics Sweden (2010d); Ekonomistyrningsverket (2012, 2014b); own calculations.

abolished. In 1910, approximately 10 percent of state tax revenue came from this tax, amounting to approximately 0.5 percent of GDP. After World War II, its importance for tax revenue declined sharply, with the exception of the years around 1990, when its importance temporarily increased. By 2010, the importance of the stamp duty for state tax revenue was slightly less than that of the remaining state real estate tax.[53]

The so-called excise duty on forestry (*skogsaccis*) was a local tax that was implemented following a law enacted in 1909 and abolished in 1947. The amount raised by this tax varied among municipalities, depending on the prevalence of forestry

Table 7.16 Stamp duty

Year	Amount (million)	Share of state tax revenue, %	Share of GDP, %
1862	1.9	5.7	0.17
1870	1.4	3.6	0.13
1880	3.2	5.4	0.21
1890	3.5	4.8	0.21
1900	6.6	6.3	0.27
1910	15.6	10.0	0.44
1920	60.1	7.8	0.46
1930	56.8	9.5	0.59
1940	49.1	3.1	0.34
1950	52.7	1.0	0.16
1960	103	0.7	0.14
1970	253	0.6	0.13
1980	1,221	0.9	0.21
1990	7,406	2.1	0.50
2000	4,878	0.7	0.22
2010	8,968	1.1	0.27
2013	8,913	1.1	0.24

Source: Statistics Sweden (1914a–2002a); Ekonomistyrningsverket (2014a); own calculations.

in the municipality. On average, this excise duty contributed less than 1 percent of total local government revenue, having little importance. Its share of GDP was likewise minor (below 0.1 percent).

6. Conclusions

This chapter has analyzed the evolution of real estate taxation in Sweden from 1862 to 2013. Fully documenting and evaluating the importance of real estate taxation in Sweden is not feasible because of the limited availability of data in historical records and the sheer complexity of the tax system. Some general conclusions can nevertheless be drawn.

An imputed income based on property value was added to taxable income at the state and local levels until 1910 and 1920, respectively. Although tax on this income was not the most important component of tax revenue, it was more important at the local than at the state level and in rural than in urban municipalities. In 1900, approximately 25 percent of the total local revenue in rural municipalities came from this real estate tax. During the 1860s and 1870s, the so-called basic tax was

also an important source of tax revenue at the state level (corresponding to approximately 20–25 percent of total state tax revenue). The importance of the basic tax for state tax revenue subsequently diminished sharply in the late nineteenth century.

In 1920, the tax system was reformed, and a complex "guaranteed" tax system providing the municipalities with a stable tax base was introduced. The real estate tax was an important component of this new system, particularly during downturns and depressions. Estimations show that the real estate tax could still significantly influence the tax base; however, its importance for tax revenue declined substantially after World War II. While the tax system was reformed in the 1950s, the principles behind taxation remained largely unchanged. A formal imputed income on owner-occupied houses was also introduced.

In the mid-1980s, a separate state real estate tax was introduced. With the 1990–1991 tax reform, the construction of the real estate tax was simplified, and all other forms of real estate taxation were abolished. This tax contributed 2–4 percent of total state tax revenue and approximately 1 percent of GDP. In 2008, part of the tax was transformed into a local fee. When tax-deductible interest expenses are accounted for, net revenue from real estate taxation of owner-occupied houses was strongly negative in the 1980s. After the 1990–1991 tax reform, the net revenue increased initially but decreased during the 2000s.

Notes

1. The expressions "property tax" or "property taxation" are also used. Property tax also occasionally refers to wealth tax in general. In this chapter, we use the term "real estate taxation."
2. The basis for real estate taxation in Sweden has been discussed and examined in many official reports, including SOU 1942:34, 1953:8, 1960:4, 1973:4, 1974:16, 1976:11, 1979:32, 1986:4–6, 1992:8, 1992:11, 1993:57, 1994:57, 1999:59, 2000:10, 2000:34, 2012:52. SOU (*Statens offentliga utredningar*) is the Swedish official series of reports of committees appointed by the Swedish Government.
3. The period examined begins in 1862 because a major and pivotal (income) tax reform was implemented in that year.
4. A taxpayer may also have to pay wealth tax based on the assessed value of real estate and capital gains tax when a property is sold. Related taxes, such as the stamp duty or excise duty on forestry, are discussed in Section 4.1. For a comprehensive historical review of the complex evolution of Swedish wealth taxes, see Du Rietz and Henrekson (2015).
5. If a strictly conventional system is used and if, for example, a company that owns apartments is taxed according to its true income and costs in the same way as other companies, it is doubtful whether a specific and distinct real estate tax can be legitimately defined.
6. SOU 2000:34, 73f.
7. Alternatively, the rent that owners avoid paying because they own the house can be regarded as a benefit that should be taxed.
8. However, other possibilities exist. According to the so-called California model, real estate tax can be based on the purchase price of property (or the market value when the

property was purchased). Such a system will increase the predictability of the real estate tax but will also reduce residents' willingness to move.

9. In 1996, special rules stipulating that the assessed value of property should be updated yearly were also introduced. However, these rules did not have a substantial effect because a special decision prevented the assessed values of property from increasing during the end of the 1990s.
10. This description is based on Eberstein (1929, 1937), SOU 1953:8, SOU 1960:4, Gårestad (1987), SOU 2000:34, Löwnertz (2003), and Skatteverket (2013).
11. Occasionally, additional appropriation taxes were levied if the ordinary appropriation taxes yielded insufficient tax revenue. The tax rate could then be raised to 2 percent of income; see Du Rietz, Johansson, and Stenkula (2015). A small amount was also tax exempt.
12. This tax was not formally called *grundskatter* until it was decided that it would be abolished. Formally, this basic tax included several different types of taxes, including the *jordeboksräntan*, *mantalsräntan,* and *kronotiondet*. Historically, this tax was paid in kind, in the form of forced labor, for example, day work (*dagsverke*), or in cash. Part of the tax was not paid to the local or state government but rather was given directly to military authorities or soldiers. During the 1600s, the so-called *indelningsverket* (allotment system) was established as a way to arm and finance the Swedish Army with so-called allotted soldiers. This system required farmers to equip and remunerate infantry soldiers. They could also volunteer to equip and remunerate cavalry soldiers, including cavalry horses. These farmers (called *rusthållare*) did not have to pay (part of) the basic tax. The complex allotment system was finally abolished in 1904, shortly after the compulsory military service was introduced in 1901.
13. In rural municipalities (*landskommuner*), the income tax system was somewhat more complicated than in urban municipalities (*stadskommuner*) until 1910. Taxes, mostly paid in kind, were also used to maintain the roads.
14. See Du Rietz, Johansson, and Stenkula (2015) for a description of the evolution of the local tax rate.
15. Statistics Sweden (1920b).
16. However, the old appropriation system remained in place until 1928, but at a symbolic tax rate of 0.1 percent after 1911.
17. Most taxpayers did not have an income flow associated with their owner-occupied house. In practice, the tax authority could determine a hypothetical rental income and could base the tax on this estimation (see the discussion below).
18. If a taxpayer's income associated with his property is 10 percent (of the assessed value) and if the repartition rate is 6 percent, the taxpayer pays income tax on 6 percent (of the assessed value) in "real estate tax" and on 4 percent (10 – 6) in "ordinary" income tax. If the guaranteed tax system were abolished, the taxpayer would pay "ordinary" income tax on 10 percent directly. In effect, the taxes paid do not differ. The real estate tax in this example is considered to be noneffective for the taxpayer, that is, the tax is not binding. Hence, a high income implies that the real estate tax is not binding (noneffective), although the tax is formally paid.
19. Owner-occupied houses had a high effective rate, while commercial properties normally had a much lower effective rate. Similarly, the term "effective tax amount" was used to refer to the amount that directly resulted from the real estate tax and that would disappear if the real estate tax were abolished.
20. For example, it was argued that the system was unfair, complicated, and based on a nonpecuniary hypothetical yield that was difficult to tax.
21. The real estate income tax was integrated with the ordinary local income tax. The system was still based on an imputed income on the assessed value of property; however,

instead of a guaranteed tax (*garantiskatt*), the system was formally characterized by a guaranteed taxable income (*garantibelopp*).

22. Owner-occupied houses refer to one- or two-dwelling buildings.
23. The tax authority often estimated a hypothetical rental income before this tax reform. No formal rules stipulating how to perform this estimation existed. Over time, local authorities developed different standards, which varied among regions. Disputes about the estimated income and deductible costs associated with a property were common, and consequently, the rules were formalized and harmonized.
24. This principle was based on the idea that tenants and people in owner-occupied houses should be treated equally. The aim was also to reduce the disputes between taxpayers and the tax authorities.
25. Three percent corresponded to the interest rate on deposits in savings banks at the time. Because the tax base was 3 percent times the entire assessed value of the dwelling, reduced by the interest paid, this tax was clearly supposed to tax the implicit return on an owner's own investment in real estate.
26. However, the vast majority of homeowners could base their tax on the lowest imputed rate. In 1970, only 40,000 of 1,300,000 owner-occupied houses (3 percent) had an assessed value above 150,000, the threshold of the second bracket (SOU 1973:4). The corresponding figure for 1982 was 2 percent (SOU 1986:6).
27. The rules were also changed for housing associations (*bostadsrättsföreningar*), whose income was initially estimated to be 3 percent of the assessed value, as with owner-occupied houses. While no progressive tax system was introduced in 1967, from 1979 to 1987, part of the assessed value of the co-operative apartment was taxed as capital income by the owner. This system was abolished in 2007. Even public housing companies (*allmännyttiga bostadsföretag*) were taxed in this way until 1994.
28. Old apartment buildings roughly refer to apartment buildings built prior to 1975.
29. The tax was implemented for fiscal reasons; however, it was also justified as a way to render the tax system more equitable and neutral. Hence, in the mid-1980s, owner-occupied houses were taxed in three different ways with an imputed rent income (*villaschablon*), with a specific real estate tax (state level), and with a guaranteed tax (local level). In many cases, there was an additional wealth tax.
30. In 1990, the tax base was also increased at the local level in some municipalities.
31. With the tax reform, the sources of income were reduced to three (capital, labor, and business), and commercial real property (*näringsfastighet*) and private residential property (*privatbostadsfastigheter*) were differentiated.
32. One reason for these changes was to simplify the tax system. The principle behind the real estate tax regarding neutrality was then focused more on neutrality between different forms of investments (e.g., investing capital in owner-occupied housing versus saving capital in a bank) than on neutrality between different forms of housing (owner-occupied versus rental housing). The tax rate of 1.5 percent on owner-occupied houses was justified on the grounds that a reasonable nominal return on the capital invested was 7 percent. Capital income was taxed at 30 percent after the tax reform, implying a tax rate of 2.1 percent. Swedish politicians wanted the tax rate to be somewhat lower than this rate to stimulate investments and homeownership. Taxation on future capital gains once a property is sold was also accounted for. The capital gains tax was estimated to correspond to a real estate tax of 0.38 percent. Hence, the tax rate was set at 1.5 percent. See, for example, SOU 2000:34, 65f for further discussion. The total tax rate for owner-occupied houses before the reform, including the imputed rent (*villaschablon*), is estimated to have been 1.42 percent, according to SOU 1992:11. Thus, the taxation of owner-occupied houses was approximately the same after the reform as before the reform.

33. The reason for a decrease in the real estate tax has often been an increase in the assessed value of property. As in 2001, the decrease may simply be due to a stronger negative attitude toward real estate taxes among potential voters and taxpayers. The reason for the increase and broadening of the real estate tax in 1996 was almost purely fiscal. The change in tax policy was also argued to be a way to finance membership in the European Union.
34. 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 a few exceptions, oscillated between six and nine kronor to the dollar.
35. Cf. the discussion in Section 3 about the local guaranteed tax system.
36. The tax rate normally varied between very low levels, from a low of 0.004 percent, to, at the most, 1 percent.
37. For the local level, the imputed income is available but, the tax rate, which differs among municipalities, is not. At the state level, the assessed value of real estate is available and can be used to derive the imputed income.
38. As described above, a specific real estate tax may also exist in urban municipalities. However, even if this type of tax is accounted for, real estate taxation was generally more important in rural municipalities.
39. The effective amount refers to revenue that directly results from the real estate tax, that is, revenue that would disappear if the real estate tax were abolished.
40. In SOU 1953:8, the effective rate in 1952 is estimated to be 20–25 percent on agricultural property and 65–70 percent on other types of properties.
41. The average local tax rate was then approximately 10 percent.
42. Hence, the depression of the 1930s greatly increased the importance of the real estate tax in 1933, which was initially one of the cardinal reasons behind the construction of the real estate tax. The real estate tax should provide the local authorities with a stable tax source; when revenue from ordinary taxes decreased, the importance of the real estate tax increased.
43. The smallest increase was found in the district of Nysätra, a small agricultural district in the county of Västerbotten. The largest increase was found in the district of Bara in northern Skånes Sweden's southernmost County.
44. The average local tax rate was approximately 12 percent at the time. There were still municipalities where the real estate tax played an important role, even in the 1950s. A separate analysis of the district of Djurö in 1952, a small district in the Stockholm archipelago with mostly summer residences, shows that abolishing the local real estate tax would require an increase of the local income tax by up to 3.4 percentage points. By 1958, this number had decreased to 1.29 percentage points.
45. In SOU 1986:6, the effective tax amount raised was estimated, but only for natural persons. The estimated amount was SEK 1,354 million, which corresponded to less than 0.2 percent of GDP.
46. The imputed income in 1982 on owner-occupied houses (*villaschablon*) was approximately SEK 7 billion, according to SOU 1992:11. To calculate the tax revenue raised from this imputed income, one must have information on the marginal tax rates of the property owners. See also Table 7.14.
47. The state also reduced its subsidies to the local governments by the same amount as the "local fee" generated.
48. At the state level, to compensate for this change, the capital gains tax on private residences was also increased from 20 to 22 percent. The possibility of interest-free postponement capital gains tax was also eliminated.
49. During the 1980s, the scope for deductions was gradually reduced (in 1979, tax reductions could be above 85 percent), and in principle, the tax could be reduced by a maximum of

approximately 50 percent of the interest paid in 1985. After the 1990–1991 tax reform, the tax could be reduced by 30 percent of the interest paid up to SEK 100,000 and 21 percent above this level. All types of interest, not just interest on mortgage loans, were and still are (as of 2014) deductible. Information on interest deductions that relates only to mortgages cannot be found in the official statistics, but they can be estimated.

50. When only owner-occupied housing is considered, the estimated net tax was still negative at the beginning of the 1990s. It was also negative during the 2000s. To completely analyze the real estate sector, one should also include the effects of housing and interest allowances; however, such an analysis is beyond the scope of this chapter.
51. The tax was 1.5 percent of the purchase sum (legal entities paid 3 percent before 2011 and 4.25 percent after 2011) and 2 percent on a mortgage loan (Skatteverket 2013).
52. Even products have occasionally required stamps, such as the stamp duty on punsch (a sweet arrack-based liqueur). However, this tax is regarded as a separate tax.
53. See SOU 1983:8 for more information about the stamp duty.

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