Why are securities transactions taxed?

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What drives the taxation of securities transactions on the financial markets? During the twentieth century, most industrialised countries used a securities transaction tax [STT] as a fiscal tool applied to the financial sector. Its effects upon government revenues and financial market performance have been explored numerous times by public investigators and academic researchers but surprisingly few have analysed these taxes’ political origins. This study is an attempt to alleviate this deficiency through a focus on Swedish STTs, in place between 1909 and 1991, that is, almost during the entire twentieth century. The basic methodology is to match historical evidence, in the form of political arguments and economic outcomes, with

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various measures of tax efficiency as well as deduced economic incentives of actors. Using such extensive time period allows specific conclusions of structural character to be drawn, but it also imposes restrictions of historical accuracy affecting the methods.

The analysis employs a theoretical framework departing from the conflict between the two contrasting approaches to the economics of regulation: the public-interest and the private-interest theories. The first prevailed until the 1960s as the general economic approach to how governments should conduct their regulatory and fiscal policies. It mainly rested upon economically justified assumptions that, first, policymaking is a costless activity and, second, it is of great importance since private markets recurrently fail to internalise their own costs or undertake the redistribution among social groups necessary to each society. The other theory evolved during the 1960s and 1970s as a critique of the public-interest approach, focusing on how the government, constantly maximising its own political support, primarily pursue a policy that is a function of the pressure from well-organised, special interest groups, which in turn maximise their private benefits at the expense of other groups in society.

The paper proceeds in the following way. Theory, method and data are described in section I. The theory outlines the public-interest and private-interest models as applied to tax policy and, specifically, STTs. The paper’s methodology is to analyse qualitatively political arguments together with a quantitative use of economic outcome variables and, thereby, evaluate the goodness of fit with the theoretical models. While this methodological approach yields considerable benefits in its combination of a narrow qualitative approach and a measurable quantitative treatment, it also entails a number of problems, discussed in the same section. Section II presents the actual case study, starting with the events during the first securities stamp duty regime between 1909 and 1979. In section III, the various tax events during the second STT regime, in place between 1984 and 1991, are described and analysed. In Table 1, an overview of the entire STT history is presented. Section IV concludes.

- Table 1 here -

an American stock transfer tax in the 1790s but there is no thorough politico-economic analysis pursued.
The economic view of policy-makers as compassionately executing what they think is optimal for society without any other (private) objectives, is sometimes called the public-interest theory. This is not really an economic theory in the model term of the word but, rather, a generic term for a view of government stemming from the late nineteenth century. The public-interest theory is based upon the assumptions that private markets are fragile, and government regulation is costless. This then suggests that governments in a benevolent manner maximise social welfare by correcting for all inequitable market failures that they observe.⁴

In the context of single-based excise taxes, such as STT, there are three common economic and fiscal justifications for applying tax policy in the public interest.⁵ First, the Ramsey rule, or inverse demand elasticity rule, is an optimal taxation argument stating that single-based taxes should have low rates whenever the demand elasticity with respect to the tax is high, and vice versa.⁶ When pursued, the excess burden, that is, the welfare loss incurred when agents adjust their behaviour away from what they prefer the most, for a given level of revenue raised, is minimised. In the context of STT, the Ramsey rule implies that STT efficiency at a given tax rate is inversely related to the size of the demand elasticity and hence also to the excess burden. The ways that investors might respond to the tax are many. They can change the location of trade, move to substitute securities or alter their trading frequency. Regarding the revenues generated by STTs, it is important to differentiate between gross revenues - the money flowing into the treasury - and the economically more interesting net revenues. The latter incorporates the various costs associated with the tax - the excess burden, administration costs and revenue reductions in other taxes (for example capital gains and corporate taxes).


Second, when the government observes market failures, that is when private market participants’ actions imposes net costs on society and so create negative externalities, there is a role for taxation or regulatory measures to correct for this and make the private actor internalise these private costs. Such corrective taxes are sometimes also called ‘sin’ taxes. In the context of an STT, the by far most noted market failure through all times is that financial market speculation has been ‘destabilising’ for the rest of society. For example, James Tobin and others have argued that stock-market speculation is wasteful and destabilising for long-term real investment, hence diverting society’s resources away from productive uses.\(^7\) An inherent problem in this view, however, is how to distinguish between ‘sound’ and ‘harmful’ speculation, especially since secondary markets need a certain element of speculation to be thick and liquid.

Third, there is the benefit principle of taxation, which states that groups should be taxed at a rate equivalent to the marginal benefit of the public goods produced within their respective sector. In the STT framework, it should imply that the tax is used to finance the public goods appearing in, and producing value to, this sector, such as: public market supervision or public infrastructure investments in, for example, telecommunication. In practice, this means that politicians should earmark the proceeds generated by the STT to finance these specific activities. Historically, Swedish politicians during the early twentieth century often used earmarking and the benefit principle to defend their fiscal policies.\(^8\)

The *private-interest theory*, also called the economic theory of regulation, treats politicians as economic agents in the ordinary sense, that is, they maximise their own utility and private benefits. In this view, governments become self-interested entities that only care about winning the next election, and all they do is maximise the political support from groups in


\(^8\) For examples of this from the broader fiscal debate, see E. Rodriguez, *Offentlig inkomstexpansion. En analys av drivkrafterna bakom de offentliga inkomsternas utveckling i Sverige under 1900-talet* (Uppsala, 1980), p. 197.
society by redistributing rents between these rent-seeking special interests. Also in this theory, the government has an incentive to reduce inefficiencies associated with rent seeking and redistribution. However, unlike in the public-interest view, this is only driven by the fact that these reduce the overall rents that the government can redistribute and, thereby, maximise its private political payoff.

Interest groups, in turn, exert pressure upon government by offering votes or other benefits to gain beneficial treatment at the expense of others. In the STT context, groups that are (or expect to become) taxed will, ceteris paribus, decrease their support offered to the government, whereas those groups that are (or expect to become) subsidised respond in the opposite way. Accordingly, interest groups prefer other groups to be taxed because this increases the (expected) rents to be captured in the form of subsidies, and they dislike it when other groups receive benefits. The latter response is related to notions of relative deprivation or envy, which have been found to be consistent factors explaining the rise of social conflicts and political action towards redistribution.

Regarding ideological components in interest-group behaviour, there is evidence of ideological shirking among politicians not captured by special interests. In the present study, however, the ideology component will not be emphasised due to obvious and disputed problems over measuring and separating it from pure economic interests.

The special interest groups associated with the Swedish STT issue are: the suppliers (banks, brokers) and demanders (investors, firms) on financial markets, all with an obvious incentive to pressure for decreased STTs. Support for STT comes from all groups that either receive subsidies based on the tax, or compare their utility with financial market actors’ utilities. These are predominantly trade unions and other broad-based societal organisations. Public

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bureaucrats might also influence taxing if they can be described as having similar utility maximising incentives as other interest groups.

The method of the empirical analysis is structured according to the chronological order of significant tax events. At each step, I start by describing the political arguments put forward by all participants (the government, political parties and interest groups), and the collected economic outcomes recorded from statistical sources. Second, these observations are matched with the contrasting predictions set out by the two theoretical models of government policy. Finally, I evaluate the goodness of fit of both models, and establish which offers the most plausible explanation of the event.\textsuperscript{12} The study, hence, becomes an outright test of the suitability of the two theories, which can offer insight to other similar studies of government policymaking.

Of course, my method incurs a number of analytical problems, some serious, some less so. First, evaluating these two contrasting theories against each other is demanding as they are not always perfectly substitutable and, hence, may in some events apply either simultaneously or not at all. They are, moreover, highly stylised, and one may question whether the government is either completely benevolent or completely self-interested. There also exist alternative theories regarding the emergence, structure and effects of government taxation but these do not fit with this study.\textsuperscript{13}

Second, analysed arguments and justifications used by some actors might not always be fully congruent with their true intentions and motives. Policymaking after all is a complex agenda, including: logrolling, tacit agreements and other elements that are difficult for historians to trace. To isolate the STT issue from its political and fiscal context will hence be problematic.

Third, the extended period causes problems when one uses the same theoretical framework as numerous economic and political institutions change over time. By being aware of these

\textsuperscript{12} A similar approach of evaluating the public- and private-interest theories against each other has previously been utilised by, e.g., R. S. Kroszner and P. E. Strahan, ‘What Drives Deregulation? Economics and Politics of the Relaxation of Bank Branching Restrictions’, \textit{Quarterly Journal of Economics}, 114 (1999) in their studies of financial regulation in the US.

\textsuperscript{13} See for example the discussions in Rodriguez, \textit{Offentlig inkomstexpansion}. 
constant risks but also recognising the behaviour of politicians across historical eras, these problems can hopefully be minimised throughout the analysis.

All these methodological problems represent potential traps for the study, and all conclusions must be drawn with great caution. Nevertheless, I believe that interpreting arguments without using any specified theoretical frames might cause even worse problems. Only to read political statements and observe the thousands of economic events that would potentially influence the studied case will yield results of no value. By, instead, defining actors’ incentives and matching their arguments and actual behaviour, using evidence from measurable and theoretically relevant variables, one can actually relate predictions from theory to what has actually happened empirically. Moreover, using two complementary theories reduces the risk of achieving results driven by the choice of model framework rather than actual observations.

The data used are the following. Evidence on government policy and parliament discussion was collected from the official parliamentary print, including: government bills, proposals from members of parliament, committee discussions and the debate in parliament. This source also mostly reports the opinions in certain political issues of various public and private organisations that were consulted. Government archives, with their material underlying government policy, were also consulted.

Using official political print exclusively might cause selection biases, which is why I have also examined the archives of one of the involved special interests – the Swedish Security Dealers Association – public investigations and various media sources, primarily business magazines. Media reports not only contain journalists’ reflections but also politicians aiming to reach the voters directly. Special interests have also often used media to express their opinions and supply information aimed to pressure the government. Another way to perceive interest-group activity and opinions is by reading their submitted considerations to the government on specific issues, sometimes after being asked to do so and sometimes on their own initiative. Finally, most quantitative data used were collected from Statistics Sweden.

Some citation issues: I denote government bills as: Prop. (proposition) and Parliament members’ proposals; Mot. (motion) followed by year and number. The 2 chambers of Parliament (after 1970 there was only one chamber) are denoted: FK (first chamber) and AK (second chamber). The parliamentary tax committee is called: BU (Bevillningsutskottet) or: SkU (Skatteutskottet) and RD (Riksdag) is the parliament.
The Swedish stock market grew rapidly at the beginning of the twentieth century with the Stockholm Stock Exchange as the dominating focus. Traditionally, Swedish stock exchanges were regulated and governed by local municipalities rather than the government but, after a severe national financial crisis in 1907-8, politicians in parliament became interested in stock-market affairs. There were calls for immediate government intervention, mostly for taxing all securities transactions as had been the case in Germany for some time.

In March 1908, the government presented a securities stamp duty (fondstämpel) designed following the German STT - Kauf- und sonstige Anschaffungsgeschäfte. The suggested Swedish tax rate on stock transfers was 0.15 per cent of the value traded and half that rate on bond transfers (including government debt). Since the government’s prime argument for the tax the raising of revenue for the national budget, approval from the tax and budget responsible authority, the National Economy Office (Statskontoret), was necessary, and eventually given. A secondary reason for the tax was to curb the stock-market speculation observed during the crisis, but some concerns regarding the risk that ‘fully legitimate transactions’ could also be negatively affected were mentioned.¹⁵

After the proposal was submitted, there were few reactions from the financial market. One exception was an editorial in the financial magazine, Affärsvärlden, which criticised both the design and the size of the tax, five times higher than the German STT rate.¹⁶ Eventually, parliament granted the tax but lowered its rate to 0.1 per cent.

During the 1910s, socialist-leaning parties entered parliament and added the issues of national stock market regulation and increased taxation to the political agenda. In January 1913, one Social Democratic member proposed both a sharp increase of the STT rate to 0.5 per cent, and that tax exemptions for trades on stock exchanges should be removed, taken together implying a tenfold tax rise on stock-exchange trading.¹⁷ The primary reason for the rise was

¹⁵ Prop. 1908:152, p. 15.
¹⁷ Mot. AK 1913:133.
the ‘insane form’ that stock speculation was taking, but the fiscal needs of financing a new and extensive national pension reform were also put forward. The important parliamentary tax committee consulted two private organisations: the Stockholm Chamber of Commerce (Stockholms Handelskammare), representing private business, and the Stockholm Stock Exchange Board, composed of bankers and brokers. Both parties opposed any STT increases since they had already observed significant harm to sound stock trade caused by the tax. Because of their close ties to the market, this reply might have been expected, but this closeness to the market also gave them insight and information about how the market really functioned. The tax committee eventually agreed that the proposed tax rate was too high, but it still granted a rise to 0.15 per cent, based on the additional revenues it would generate.

- Figure 1 (Turnover) -

During World War I, the Swedish economy experienced an industrial boom, marked by rising production and many new equity issues. As shown in Figure 1, stock-market turnover (that is, volume traded divided by market value of listed shares) increased sharply from 3 per cent to 42 per cent between 1915 and 1918 as a consequence. In other parts of society, however, poverty and unemployment pressured politicians to increase both public expenditures and the level of political democracy, the latter resulting in a radical increase in suffrage during these years.

The Social Democrats benefited from a wider electorate and, working for increased redistribution by parliament, proposed an STT rise in January 1917. The Liberal Minister of Finance, Ivar Vennersten, asked a commission of bankers, brokers and public servants, who were currently investigating the basis for new national stock market legislation, for their opinion about a tax increase. Their reply was that ‘the current economic boom and the excessive stock market speculation’ justified a tax rise, but only a temporary, and definitely not a permanent, similar to what was recently accomplished in Denmark. Using this affirmative answer in addition to the fact that the public war economy needed greater funding,

18 Attachments 1 & 2, BU 1913:36.
19 Mot.’s FK 1917:76, AK 1917:150.
the government carried a temporary (one-year) tax increase to 0.3 per cent through parliament.

Between 1917 and 1920, a new coalition government with Social Democrats and Liberals seized power and, in an extraordinary wartime session during late October 1918, the Minister of Finance, Fredrik Thorsson, proposed a doubling of STT to 0.6 per cent.\textsuperscript{21} He argued that persistent high market activity supported STT’s extended fiscal use and that harmful speculation could be beneficially curbed by the tax. Parliament approved the rise without any noticeable resistance.

How well can the public-interest and private-interest theories explain the introduction and subsequent increases of the Swedish STT? Recall that the public-interest theory requires excise taxation to be an efficient revenue source, a correction of perceived market failures or benefit taxation. Regarding efficiency, information that politicians received did not indicate any considerable tax-driven drag on the stock market, with the exception of intensive market protests prior to the 1913 STT increase. Turnover on the Stockholm Stock Exchange had increased steadily since the introduction of the tax in 1909, when it was only 2 per cent (see Figure 1). As the tax committee stated in 1913, it had increased to 12 per cent in 1912 and during World War I it was, remarkably, 42 per cent. This growth implied that the 1917 Stock Market Investigation supported temporary tax rises, although they were themselves in part taxpayers. By contrast, recently conducted estimates of the demand elasticities with respect to STT are significantly negative, suggesting that investors nevertheless adjusted their behaviour when the tax was increased.\textsuperscript{22}

- Figure 2 (STT revenues) -

Regarding government references to a need for wartime fiscal expansion, these seem to have been relatively well founded. Annual real public expenditures increased by on average 36 per

\textsuperscript{21} Prop. 1918B:25.

cent each year during the period. Due to the active stock market, moreover, gross STT revenue reached a level that was to be the highest over the entire stamp-duty regime, as depicted by Figure 2. As to net revenues, however, there were significantly lower levels. There is evidence that the tax was capitalised in asset prices, which caused a decreased rate of return on new securities issues and, hence, increased capital costs for the entire industrial sector. Figure 3 shows new equity issues as a share of GDP between 1909 and 1991, and clearly suggests that the most active period was between 1910 and 1939. Besides confirming that this was of course related to Sweden’s industrialisation, it also indicates that market distortions caused by STT might also have created substantial economic and social costs to the long run economic development in Sweden. Administration and collection costs were relatively small, about two per cent of collected revenues. Summing up, even if gross revenues were relatively large during the war years, net revenues might have been considerably lower, leaving the final tax incidence with a question mark.

- Figure 3 (New issues) -

The corrective taxation argument was used in all the above STT events, and it was always aimed at harmful speculation. To assess this argument justness, one should try to find any elements that were really detrimental to social welfare and might have been observed by the government. A first candidate would be futures trading, practised up to 1909 and regarded as destabilising by many market actors, including the Stockholm Stock Exchange Board. But since it was not referred to by the politicians and, moreover, abolished before the tax was applied, it can be removed as a speculation candidate. Another is stock-exchange trading volume that, by contrast, seems to have been regarded as speculative by politicians whenever it increased relatively rapidly. One such increase was in 1907 before the tax was introduced. This was, however, because commercial banks from that year carried out their commissioned


24 Waldenström, 'Taxing emerging stock markets' shows that stock prices decreased significantly when the tax rises were announced by the government but were not yet in effect on the market.

25 There was in fact another stamp duty directly taxing new securities issues by 1% of their value.

trading on the exchange and was, therefore, merely a transfer of trade to the organised market, and this is hence not a justified speculation. Although the remarkable turnover increase during the 1910s (see Figure 1) could indicate that purely price-speculative elements were prevailing on the exchange, the government never tried to differentiate between what was sound and unsound trading, which is troubling since this distinction had actually been made in the government bill of 1908. Hence, trading volume as such cannot be regarded as an indicator of speculation justifying the corrective tax argument. A final speculation candidate could be the share of outstanding bank credits against stock collateral, indicating the degree of risk exposure of the banking sector and this was also something that was discussed by the contemporaries.\textsuperscript{27} However, as is evident in Figure 4, during the first two STT events this share was not significantly higher than it was in the preceding decade. Over the war years credit volumes against stocks increased to almost 45 per cent. This could support the corrective taxation view, but it could just as well reflect the fact that stock prices increased markedly during the war, or that debt finance dominated other sources of funding to the firms.\textsuperscript{28}

- Figure 4 (Stock collateral) -

One fundamental problem to the public-interest view is the obvious policy inconsistency when the government both wants to curb stock trading volume since it contains socially harmful speculation, but, concurrently, wants to raise as much tax revenue as possible, as from increasing trading volume. Since these two aims often motivate the same tax events, it seems that the government lacked the awareness of this policy paradox.

The third public-interest justification is the benefit principle, which requires that tax revenues be channelled back to the financial market in some way. Although this was not mentioned in 1909, the revenues from the 1913 increase were on the contrary earmarked for pensioners, which counters the benefit principle and, instead, indicates that politicians tried to pursue a policy to the taste of large voter groups, such as pensioners. During the war, the revenues were earmarked to the general war budget and do hence not render any support for this justification.

\textsuperscript{27} Trustkommittén, \textit{Fondhandeln och dess reglerande} (Stockholm, 1914), pp. 49 ff.

\textsuperscript{28} Algott, 'Bidrag', p. 92.
By contrast, the private-interest theory predicts evident interest-group activities associated with STT events and government policy. Regarding this period, however, there are few signs of either support or resistance from outside groups. The potentially supporting groups were workers, who became increasingly represented in parliament by the Social Democrats. A rough indicator of relative income between workers and financial market actors is presented in Table 2, where I compare the real annual wage increases for industrial workers with the real annual return on Swedish stocks, used as proxy for brokers’ income. Despite a clear gap ex post between workers’ and brokers’ incomes in 1915 and 1916, the labour movement did not acknowledge this in their political rhetoric and was instead primarily engaged in other labour-market issues.  

An even stronger group supporting the tax was the defence industry, which benefited greatly from high public expenditures, especially during wartime. According to historians, this industry was strongly supported by the powerful Federation of Swedish Industries (Industriförbundet). This could also explain the over-explicit earmarking of STT revenues for the war budget, that is, for military defence, as a government strategy to overcome bothersome taxpayer resistance.

Taxed groups did not object to these STT events, except for the protests preceding the increase in 1913. A plausible explanation would be that most interest groups were relatively unorganised. Brokers on the underdeveloped Swedish stock market did not have their own organisation until December 1908, when the Swedish Security Dealers Association (Svenska Fondhandlareföreningen) was founded. Although the Association was established as a response to STT’s introduction, it mainly focused during its first years on internal issues, such as: membership policy and brokerage fees.

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29 This is argued by L. Lewin, *Samhället och de organiserade intressena* (Stockholm, 1992), and further supported by a remarkable lack of any tax discussions in congress material of the Swedish Trade Union Confederation, LO, before the 1930s that I have examined.


Altogether, the theoretical explanations of these early STT events have suggested the following. Introduction in 1909 is badly explained by both theoretical frameworks since the public-interest justifications barely hold and no evident interest-group pressure can be traced. The STT increase in 1913 carries aspects that can be explained by both views, but the evident role of interest-group activity and indications regarding politicians involved suggests that the private-interest theory offers higher explanatory value. STT events during primarily World War I are poorly explained by private-interest theory, but they give some support to public-interest notions of policy-making. Politicians received signals from market actors that STT could be justified (temporarily), while a strong increase in trading activity until 1918 can also be observed, suggesting a relatively inelastic investor demand. There were also significant increases in public expenditures that had to be balanced by corresponding increases in revenues. Hence, similar to the observations of Peacock and Wiseman regarding United Kingdom economic history, expansions in public income and expenditure levels associated with wartime often corresponded to the public interest.  

After World War I, the Swedish economy entered a period of recession and structural crisis. Many wartime investments proved to be unviable and industrial production fell rapidly. When Sweden returned to the gold standard at the former exchange rate, prices started to fall, augmented by an international deflationary tendency. Massive unemployment and deflation pressured the economy, the average real stock market return in 1917-21 was –31 per cent and a severe banking crisis broke out in 1921.

Against this context, the 1920 government proposal to prolong the temporary 0.6 per cent STT caused sharp reactions. In submissions to the government bill, the Security Dealers Association and the Bank Inspection Board (the authority supervising the banks and the stock market) opposed a prolonged increase, based on its observed devastating effects upon sound trading and several indications of tax-driven investor flight to other markets. The National Economy Office, on the other hand, questioned these statements’ validity, and countered them by emphasising the importance of STT revenues for the national budget. This argument was

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Prop. 1920:215, pp. 7 f.
used later by the government when it successfully carried the prolongation through parliament.

During the period 1921-25, the Bank Inspection Board repeatedly pointed out the tax’s adverse effects but was always overruled by both government and the left-wing dominated parliament constantly referring to the state’s fiscal needs. In 1926, however, two liberal members of parliament suggested an STT cut to 0.15 per cent, based on its inherent inefficiencies evident in the considerable crowding out of investors to substitute securities. The Chamber of Commerce followed up with an unsolicited official letter in support, emphasising the importance of a well-functioning secondary stock market for Swedish industry. As a response, the Social Democratic government conducted a minor inquiry over how a tax cut would affect revenues. It concluded that revenues would decrease significantly since the turnover boost of a decreased tax rate would not dominate the direct revenue effect of a lower tax. Thus, the proposal was rejected by parliament.35

Later in 1926, a temporary government crisis occurred, replacing the sequence of socialist-dominated governments with a new Liberal minority coalition, which directly proposed an STT cut. This time, the Stockholm Stock Exchange Board and the Bank Inspection Board reported new evidence on STTs in other countries. They showed that Sweden, together with Finland and Norway, had the highest STTs in the Western world (see Table 3) and, moreover, that several countries (Austria, Denmark and Germany) had recently reduced their STT rates.36 Additional support for a tax cut came from Sweden's largest industrial corporation, Kreuger & Toll, which heavily criticised STT in its 1926 annual report. Nonetheless, Social Democratic dominance in parliament's second chamber sufficed to reject the bill by a tiny majority.37

- Table 3 (International STTs) -

35 BU 1926:35, attachment.
37 'Kreuger and Toll', Affärsvärlden (19 May 1927).
The tax cut finally came in 1928 after the right-wing parties gained in the year's elections and a new conservative government was installed. STT was reduced to 0.3 per cent, commencing 1 July 1929, despite the Labour party’s strong opposition.\footnote{Prop. 1929:85.}

During the 1930s, severe world economic events seriously affected Swedish financial markets. The STT issue became dormant for a very long time, mainly because stock-market activity decreased substantially making STT fiscally insignificant. A new era of Social Democratic governments began, implying a more active economic policy aimed to smooth out business cycles as well as income differences. During World War II and subsequent decades, investors did not alter their portfolios, few corporations issued new equity and capital and credit markets became highly regulated.

According to some scholars, the Social Democratic Party established something like a corporatist equilibrium, in which close connections with not only trade unions but also large industrial conglomerates were established.\footnote{Lewin, Samhället.} The blue-collar union, LO (Swedish Trade Union Confederation), was increasingly influential in government policy-making, especially during the post-war period. It was the major source of Social Democrats’ support (both ideologically and financially), and LO even obtained seats in the party leadership. The Social Democrats controlled government between 1932 and 1976, practically always with this intimate LO association, which indicates the significant impact LO had on Swedish politics.

STT was not an issue in politics until the late 1960s, when a new public investigation concluded that it should be completely removed. This was based upon statements from the Bank Inspection Board and several market interests, which had pointed out that STT, apart from its fiscal insignificance (see Figure 2), had become redundant following the introduction of the new transaction tax-like ‘flat rate’ capital-gains-tax regime in 1965.\footnote{SOU 1969:16 (Aktiefondsutredningen), pp. 186f.} The proposal for its removal was sent out to 59 public and private organisations for consideration, and all except LO, gave their support. LO countered by arguing that ‘abolishing the tax is neither necessary nor desirable’.\footnote{Ministry of Finance, konseljakt 10 Oct. 1974, No. 38.} When, some years later, the issue ended up in a government bill,
the Social Democratic Minister of Finance, Gunnar Sträng, followed the single opposing party, LO, by merely stating that ‘not enough strong reasons were presented in order to justify an abolishment of the securities stamp duty’.  

However, STT had now returned to the political agenda, and financial market participants continued to pressure for its abolition. Two Conservative members of parliament proposed this in 1976, supported by similar requests submitted by two large commercial banks directly to the tax committee. The committee, still dominated by Social Democrats, admitted that the tax had become an obsolete artefact without any practical importance but, nevertheless, wanted to await the conclusion of the Bank Inspection Board’s ongoing inquiry into STT. This came in 1979, and contained a suggestion for STT’s complete removal solely for ‘technical and administrative reasons’. The new incumbent right-wing government accordingly carried through its removal, which thereby finally ended the 70-year history of the securities stamp duty.

Justifying the public-interest theory, based on events from the 1920s to the late 1970s, must focus on the efficiency aspect according to the Ramsey rule simply because the politicians during this period only used the revenue-raising as argument for the tax. And, for a number of reasons, this justification does not square with the empirical evidence. First, the government received repeated indications from media, market actors and even public authorities about high investor mobility to other securities and markets. This picture was further backed up by the completely insignificant gross STT revenues, which dropped after World War I down to about 0.3 per cent during the 1920s and 1930s, and less than 0.05 per cent of total taxes thereafter (see Figure 2). Hence, the Ramsey rule, stating that the tax should be inversely proportional to the elasticity of demand, with respect to STT was apparently violated - for which the government received considerable information. Second, there were significant economic costs that made net revenues even lower. Both parliamentary debates during the 1920s and the public investigation of the 1960s pointed out that the effects

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44 SOU 1978:11 (Kapitalmarknadstutredningen).
on corporate finance were clearly negative, and that many business opportunities were thereby potentially overlooked.\textsuperscript{46} Such effects are not in the public interest.

Does the private-interest theory offer any explanatory power of these events? The labour movement became a more active player in the political arena during the 1920s, clearly promoted by the Social Democratic Party’s increasing parliamentary dominance and the membership boost during the economic depression after the war.\textsuperscript{47} The roughly estimated income gap between workers and financial market actors, reported in Table 2, increased during the 1920s, implying that labour interests had clear incentives to obstruct any tax cuts that would have increased this differential even further. The full emergence of democracy in Sweden during this period, moreover, moved the median voter towards the low-income part of the population. Traditional Social Democratic voters most likely supported increased taxation of capital earnings, and the Social Democratic Party should have recognised and internalised this in its policy.\textsuperscript{48}

In the STT struggles of the 1960s and 1970s, LO’s remarkable influence, with its efficient lobby organisation and evident capture of the Social Democratic Party in parliament, became decisive. One might argue that the small STT revenue was insufficient to make LO interested in its subsidies. However, when regarded as part of a larger system of subsidies in which trade unions sustained redistribution in the government policy, STT could well have been an important part.

The opposing interest groups also improved their rent-seeking effectiveness from the 1920s, as shown by their collection and presentation of facts about STT in Sweden and abroad. They obviously captured the right-wing opposition at an early stage during the 1920s, but could not reap the rewards until the parliamentary majority switched in 1928. The silence among taxed groups between 1930 and the early 1960s is hard to explain consistently, but their activity thereafter can be clearly linked to the new capital gains taxation and ‘double’ transaction taxation it created. Through official letters and submissions, financial market interest groups


\textsuperscript{47} Lewin, \textit{Samhället}.

brought the STT issue back onto the political agenda during the late 1960s and 1970s. The
timing of the abolition, moreover, underlines the solid corporatist structure. Swedish
politicians were hard to capture by groups outside their traditional sphere, and it was not until
a right-wing government entered office that final removal was executed. These sticky
relations could also be interpreted in terms that there were ideological barriers in place,
obstructing successful rent seeking by the traditionally ‘wrong’ interest groups.

Altogether, experiences from the 1920s until the STT’s removal in 1979 yield strong support
for the explanatory power of private-interest theory and completely reject the public-interest
theory. Constitutional changes, such as universal suffrage at the beginning of the period,
made politicians increasingly inclined to vote-maximising strategies. The 50-year long
retention of the indisputably inefficient and fiscally insignificant STT was due to the
dominance of one party, the Social Democrats, in parliament, which securely rested upon
support from well-organised trade unions and their close ties with the largest Swedish banks
and corporations. Tax resistance did not become significant until the tax load was
substantially increased during the mid-1960s. This spurred financial market interests to
induce their captured right-wing politicians to remove STT, when they eventually formed a
government. The arguments defending the tax during this era must hence be seen as largely
political platitudes hiding the true underlying determinant, namely securing political support
from vested interest groups.

III

With the 1980s, the Swedish economy left the recession period of the 1970s, partly as a result
of significant devaluations. In particular, the new Social Democratic government’s large
currency devaluation of 1982 boosted export-industry production that, in turn, also augmented
corporate profits and stock prices. Meanwhile, workers saw their real wages decrease and the
labour movement complained that the gap between financial market profits and the real sector
growth was increasing. For example, LO called repeatedly for redistribution from stock
market actors to families with children and criticised the ‘sick’ and wasteful transaction
economy that had evolved.  

1983).
In late August 1983, the Minister of Finance, Kjell-Olof Feldt, said to the media that the stock market was ‘over-liquid’ and that an imminent return of the old securities stamp duty was likely.\textsuperscript{50} One month later, a section of the Metalworkers Union (the largest union within LO) wrote to the government, calling for an increased capital gains tax and a reintroduction of STT. Their prime motivation, besides purely redistributive arguments, was politically strategic with general elections at hand. They considered it necessary for the incumbent Social Democratic government to send a signal to the working population by taking political action against the excessive financial markets in time before the election campaign.\textsuperscript{51} Three weeks later, on October 24, the government presented a new STT and extended capital gains taxation.\textsuperscript{52} The suggested STT rate was one per cent of the value traded, that is, more than three times higher than the previous securities stamp duty. The government supported the new tax by arguing that the substantial stock market growth to a large extent rested on the 1982 devaluation and the favourable economic development that had ensued which, in turn, had boosted corporate profits. Accordingly, society could rightfully internalise some of the private profits made on the stock market.

Reactions in parliament were loud and critical. In the tax committee, all right-wing parties pointed out that the government had not adequately investigated beforehand the tax incidence. In particular, the Bankers’ Association, the Security Dealers Association and the Federation of Swedish Industries visited the committee suggesting major tax revisions, but without results. The tax was granted by parliament without any substantial adjustments.\textsuperscript{53}

Before the next elections in September 1985, the government tried to alleviate the intensive critique of STT by promising no more STT increases during the coming electoral period.\textsuperscript{54} Meanwhile, Sweden removed some of the highly restrictive regulations of capital and credit


\textsuperscript{52} Prop. 1983/84:48.

\textsuperscript{53} SkU 1983/84:11,20 and GCA, Ministry of Finance, Decision of 2 May 1985, I:10).

\textsuperscript{54} This promise was made by the Prime Minister, Olof Palme (‘aktieskatt’, TT Nyhetsbanken (31 Jul. 1985)).
markets, which caused investment and market activity to grow rapidly and strongly. Stockholm Stock Exchange turnover as well as stock prices reacted positively to this changed environment and increased rapidly, as shown by Figure 1. This caused an almost immediate reaction from the trade unions and, on 14 January 1986, one LO leader went out in the media demanding STT’s immediate doubling. At the same time, two Social Democrats in parliament proposed increased state intervention in the financial markets. On a question regarding the probability of the government responding positively to their proposal, one stated that ‘the success of our proposal is completely dependent on which pressure the unions will put upon the government’.55

Only a few weeks later, government policy turned around completely with the presentation of a bill extending the STT base to derivatives instruments and increasing STT on stocks to two per cent from 1 July 1986 – then the highest STT rate in the world (see Table 3).56 The prime argument was the need for new state revenues to finance extensions of family policy. When talking to the media, however, the government predominantly employed the ‘sin’ tax argument, complaining about (unspecified) speculative elements that needed to be curbed.57 The government did not invite outside organisations to comment on the bill, and only referred to an older report from the National Tax Board (Riksskatteverket) that a tax base extension was fiscally motivated. The tax committee granted the increase, based upon redistributive and fiscal reasons despite new direct approaches from and even protest meetings among market actors.58

Looking for public-interest theory justifications, in 1984 corrective taxation was the prime motive and raising revenues clearly secondary, while in 1986 revenue raising was the only justification used in parliament. Regarding efficiency, empirical estimates conducted some years later suggest that tax efficiency was low, and that the elasticity of demand was significantly negative in the interval (–1.3, –0.9).59 The collected gross STT revenues

56 Prop. 1985/86:140.
59 Lindgren and Westlund, ‘Transaction costs’. 

21
comprised about 1.5 per cent of total taxes, similar to then levels in other Western countries. Regarding net revenues, however, estimates by a public financial tax investigation suggested that approximately 60 per cent of gross revenues vanished due to reductions in deductible capital gains taxes.\textsuperscript{60} Moreover, stock prices decreased significantly when the tax increases where announced, further cutting other tax revenues. For example, the LO demand of 1986 caused a radical stock price decrease of 3.5 per cent in one day, to be compared with a 0.3 per cent increase on the New York Stock Exchange the day before.\textsuperscript{61} Similarly, the unofficial government STT announcement to the media on 28 February caused the Swedish stock price index to change –5.3 per cent, while the NYSE index on the contrary increased 1.1 per cent. Finally, Umlauf has shown that STT did not affect the variance of securities prices but primarily caused cuts in their level, seriously questioning any stabilising effects of STT.\textsuperscript{62} In neither of these STT events was the benefit principle of taxation met, especially not by the earmarking in 1986 of the new revenues to ‘the families’.

- Table 4 (income gap 76-92) -

As to the private-interest theory, there is ample evidence of successful rent seeking by LO from the government for increased financial market taxation right before the actual STT events. Again using the rough estimator on earnings differences between industrial workers and financial market actors presented in Table 4, there is a large gap during 1981-83. Responding to this, LO used its large-scale influence with government to induce some action against large stock-market profits. Equally strong evidence for rent-seeking behaviour was the government’s drastic turnaround in early 1986 following directly upon LO demands. Financial support and the votes from about 2m. highly probable Social Democratic electors represented by LO explain this great impact on government policy and also why the resisting initiatives taken by market participants did not make any difference.

\textsuperscript{60} Summers and Summers, ‘When financial markets’; and estimates of 1991 in SOU 1990:46, pp. 269 f.


\textsuperscript{62} Umlauf, 'Transaction taxes'.
Altogether, the reintroduction of STT in 1984 was not determined by a welfare-optimising government acting in the public interest. The government did not deploy any acceptable arguments justifying a public-interest view of the new STT, even if they may have prevailed in the background. By contrast, the remarkable match, both in time and content, of LO demands and both the reintroduction and doubling of the STT yields strong support for the private-interest theory. The trade unions were disturbed by the large profits within the corporate and financial sectors, and also knew that the Social Democratic government largely depended upon their support. Hence, despite recurrent resistance from taxed groups, the government clearly maximised its votes in the coming election by adjusting its policy to LO demands.

In 1987, the municipality of Stockholm and the labour movement’s insurance company Folksam made multi-million losses in fixed-exchange derivatives trading. LO chairman, Stig Malm, reacted strongly and, at the annual LO conference in October that year, demanded that STT’s tax base should be extended to bond and money market instruments to ‘reduce the overly large and socially worthless activities on the money market’. Within only two weeks, the Ministry of Finance presented a short report that contained a broadening of the STT base to include a wide range of fixed-income securities: bonds (including government debt), interest-rate futures and options. Tax rates were to depend on remaining maturity but a maximum rate was 0.15 per cent, or 15 base points of the underlying cash amount. In the report, international experiences of money-market taxes had been collected from a number of countries, but prime model was Swiss STT. Another tax extension contained in the report was brokerage firms’ own trade, the so-called market-maker trade, which had previously been mainly considered as something that gave liquidity to the market.

The report was sent out for consideration to 37 public and private organisations, of which all but two (LO and the board of the First Government National Pension Insurance Fund) were critical. Among the most important opponents were the Swedish Riksbank and the National

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Debt Office, which warned that the new tax would have undesired effects on interbank trading and secondary trade in government debt. Nevertheless, the government presented the new bond and money market STT in March 1988 (to be effective from 1 January 1989), with only some minor adjustments. In the bill, the basic argument was compensating pensioners for their gradually increased costs of living, but dampening the ‘exaggerated fluctuations on the financial markets that caused instability in the real sectors’ and to create ‘uniformity in the tax structure’ were also mentioned.\(^6^6\)

Because of the first report’s drastic critique, the tax committee arranged a large meeting about the new tax with considered interest groups and the Minister of Finance. Although this did not result in anything qualitatively new, the government’s political rhetoric and the tactics of tax earmarking became clarified. For example, clearly responding to the promises made in the bill, the leader of the largest pensioner association, PRO, stated: ‘I can confidently say that a veritable storm will break out among the pensioners in this country if the parliament would decide not to accept this new law’.\(^6^7\) When the matter came to parliament, it was approved without any obstacles. The new tax got the name ‘the puppy tax’ (valpskatten), which came from the LO leader’s nickname for people working on the financial markets: ‘financial puppies’.

The public-interest theory finds some support in the fact that broader tax bases are mostly preferable from a tax efficiency point of view, especially when substitute securities are the ones to be taxed. Moreover, the inquiries made by the Ministry of Finance before launching the new tax were also desirable from a public-interest view. Ironically, though, the explicit reference to STT in Switzerland was counter-balanced by almost the exact same behaviour from the Swiss government, which in 1988 defended its heavily criticised money-market STT by referring to other countries also using money-market STTs.\(^6^8\) The efficiency of the new tax, measured ex post, was moreover devastating. Over the period from early 1987 (before the tax) to six months after its introduction, mid-1989, turnover on the Stockholm bond and money market fell by approximately 98 per cent, and trades in interest-rate futures and

\(^{66}\) Prop. 1987/88:156, pp. 10 f.

\(^{67}\) SkU 1987/88:37, Attachment, p. 56.

options on the derivatives markets vanished completely! One factor enabling such a development was that the mobility of Swedish investors was drastically facilitated in 1989, when currency regulations prohibiting direct trade between Swedish and foreign investors were removed. The Swedish markets partially escaped to foreign markets with lower or no taxes.

Regarding the corrective tax argument that was also employed heavily, the government was somewhat more precise in its description of market failure. It was real sector instability caused by the excessively fluctuating financial markets. There is, however, little evidence that the markets became more stable following the new tax’s imposition. On the contrary, bond market volatility increased as a result of the new tax. The benefit principle did again apply since the additional revenues were earmarked to the Swedish pensioners.

The private-interest theory would predict interest-group activities before and after the STT change. The temporal match between the LO initiative in September 1987 and the subsequent government report strongly suggests, and confirms, the previous results that trade unions’ rent-seeking activities had a crucial impact on the Social Democratic government’s policy. As mentioned, the trade unions, especially LO, offered highly probable votes in the coming general election in autumn 1988. The earmarking of revenues to pensioners suggests another important constituency that was subsidised in exchange for votes. Finally, Minister of Finance Feldt wrote in his autobiography about the determinants of the new STT. He felt that the coming Party Congress in 1988 ‘needed an active achievement, showing that the government would not let the financial market ravage freely and earn money merely by transacting money’, which indicates another important pressure group that was crucial for the government to treat well, namely its own party members. In other words, once again, it was the run for votes in the coming election and benefits from specific interest groups that appear to have been crucial for the ‘puppy tax’.

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69 Lybeck, ‘On Political Risk’.

70 Ibid, pp. 169f.

Summing up, STT’s extension to bonds and money-market instruments lends some support to the explanatory value of both theories although with emphasis on the private-interest theory. Most evident is the temporal correlation between proposals and opinions from LO and responses and decisions by government, confirming the previously suggested notions of a captured government, heavily dependent on support from special interest groups. However, government STT policy also became more developed over the years and the thorough preparatory work for the tax, including international comparisons and broad tax bases, indicates that the public-interest theory’s efficiency requirements were actually met. But when judged against the actual outcome, this picture of efficiency changes completely.

During the years 1990-91, high inflation, labour shortages and almost negative real interest rates drove the Swedish economy into a superheated state with the government loosing control over economic policy. This resulted in a period of political turbulence and also a government crisis. The complex tax system, with numerous loopholes and specific subsidy rules, was blamed for many of these problems. Moreover, the financial markets continued to suffer under fiscal pressure. Stock exchange turnover decreased by about 15 per cent and the majority of trades in the shares of the largest companies occurred on foreign stock exchanges. A Socialist-Liberal collaboration started working on tax reform in which the overall tax load and the system of special exemption rules were to be reduced.

It was during the logrolling rounds of the tax reform that support for STT from LO was suddenly withdrawn. LO had a representative on the Stockholm Stock Exchange Board, and he stated in late October 1989 that the proposed increases in capital taxation within the tax reform justified an STT reduction. In January 1990, the government followed up with a 180-degree turnaround, carrying through an immediate abolition of the bond and money-market STT from 15 April and a cut of STT on stocks to one per cent from 1 January 1991. Its arguments focused upon the importance of well-functioning financial markets and that Sweden could not diverge in tax policy relative to other European countries.

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72 Umlauf, ‘Transaction taxes’.
Similar developments occurred at the same time in other European countries such as Germany, Norway and Switzerland, where the financial markets had pressured successfully for the removal of their respective national STTs. The Swedish election campaign in 1991 contained a focus on STT, set by the right-wing opposition which claimed that STT-removal was ‘of highest priority’. When the right-wing coalition eventually won the elections in September 1991, one of the first things undertaken was the abolition of the entire STT regime from 1 December 1991. This was motivated by its negative effects on market liquidity and on equity financing; that it obstructed more dispersed shareholding in society; and that the tax contained many well-documented inefficiencies (offshore trading and low net revenues). Although Social Democrats and Leftists opposed its abolition, the new parliamentary majority carried through the bill without problems.

The public-interest theory yields substantial support for the abolition of the various STTs in 1990 and 1991. The demand for fixed-income securities and related instruments had proved to be highly elastic and, hence, the money-market STT was clearly inefficient. The stock-market slump, during which shares in the largest companies were mainly traded abroad and ‘small’ shares hardly traded at all, also indicated that the stock STT was highly questionable. One could also justify the corrective tax argument by stating that the ‘sins’, that is, the ‘excessive’ brokerage profits and the high turnover, had been reduced, or corrected, as a consequence of the tax. These observed reductions in market activity, however, were already apparent during 1987 and 1988.

The private-interest theory, on the other hand, explains the tax cuts and abolitions by LO’s sudden withdrawal of its support for STT and government proposals in the same direction following short thereafter. The bargaining rounds during the tax reform gave LO the possibility to increase the overall tax load on the capital market and, hence, increase its own subsidies. Bad market performance in 1990 and 1991, evident in Table 4, also implied reduced profits for financial market actors and, accordingly, decreased envy among workers.

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75 See Levich and Walter, ‘Tax-Driven Regulatory Drag’.

76 Stated by the leader of the Conservative Party, Carl Bildt, in Dagens Industri, (28 Nov. 1990).

77 Prop. 1991/92:34.

78 See SOU 1990:46, p. 265 and Figure 1.
The pressure from trade unions, comprising votes and benefits in combination with obvious vote-maximising revenue earmarking to large voter segments, was a more important driving force.

To sum up, the second Swedish STT regime was abolished by a right-wing government, which argued that it had well-recognised negative effects on the stock market and was inefficient as an excise tax. These circumstances actually gives support to both the public-interest and private-interest theories but, when checking these particular events against the previous course of events during the 1980s, it becomes clear that the switching support for STT was the crucial factor driving the government policy. In a somewhat broader perspective, changes in technological and financial institutions created a possibility for investors to move from the costly Swedish market place to other European financial centres with smaller net regulatory burdens. Hence, these institutional changes undermined the traditional positions of the tax defenders making the support too expensive.

IV

This paper’s purpose has been to explore the political economy of STT, specifically focusing on the two Swedish STT regimes practised during practically the entire twentieth century. By combining theoretical predictions, the political arguments used and a number of recorded economic facts, I find that interest-group pressure stands out as the prime source of influence upon government STT policy, as opposed to public-interest theory. STT was an inefficient and fiscally insignificant revenue source, clear to everyone, driving investors either to stop trading in shares or to leave for foreign markets and substitute securities. Also influential was the development of technological and financial institutions that over time undermined the STT regime by giving investors new possibilities to switch to other financial markets where taxes were lower.

A parallel finding of the paper is that the influence of interest groups on government policy grew considerably during the century, an observation which fits well with the general pattern for Sweden. Trade unions were a highly influential special interest in the STT issue, mainly because they had captured the Social Democratic Party that controlled governments from the mid-1930s. Their influence peaked during the 1980s, when the tax-supportive trade unions

See, for example, see Lewin ‘Samhället’.
several times practically forced the government to retreat completely and change opinion on the STT matter. The public-interest theory only offered plausible explanations for STT policy during extreme increases in public expenditures and the thereupon, following true need for additional tax revenues in World War I. In about all other cases, economic justifications for this theory based upon taxing efficiency, correction for market failures and the benefit principle were contradicted by real world evidence.
Table 1: Securities transaction taxes in Sweden, 1909-1991: main events.

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
<th>Tax rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1909</td>
<td>Securities stamp duty introduced.</td>
<td>0.1</td>
</tr>
<tr>
<td>1913</td>
<td>Tax rise and tax base extended to additional set of stock-like securities.</td>
<td>0.15</td>
</tr>
<tr>
<td>1917</td>
<td>Tax rise.</td>
<td>0.3</td>
</tr>
<tr>
<td>1918</td>
<td>Tax rise.</td>
<td>0.6</td>
</tr>
<tr>
<td>1929</td>
<td>Tax cut.</td>
<td>0.3</td>
</tr>
<tr>
<td>1979</td>
<td>Securities stamp duty removed.</td>
<td>—</td>
</tr>
<tr>
<td>1984</td>
<td>New STT introduced.</td>
<td>1</td>
</tr>
<tr>
<td>1986</td>
<td>Tax rise.</td>
<td>2</td>
</tr>
<tr>
<td>1989</td>
<td>Tax base extended to bond and money market instruments.</td>
<td>2</td>
</tr>
<tr>
<td>1991</td>
<td>(January) Tax cut and money market tax removed.</td>
<td>1</td>
</tr>
<tr>
<td>1991</td>
<td>(December) STT abolition.</td>
<td>—</td>
</tr>
</tbody>
</table>

Table 2: Estimated income differences between stock market actors and industry workers, 1914-1929 (per cent).

<table>
<thead>
<tr>
<th>Year</th>
<th>Real stock return (R)</th>
<th>Real wage increase (W)</th>
<th>R–W</th>
</tr>
</thead>
<tbody>
<tr>
<td>1914</td>
<td>–9.9</td>
<td>1.2</td>
<td>–11.1</td>
</tr>
<tr>
<td>1915</td>
<td>3.4</td>
<td>–10.4</td>
<td>13.8</td>
</tr>
<tr>
<td>1916</td>
<td>23.7</td>
<td>–4.2</td>
<td>27.9</td>
</tr>
<tr>
<td>1917</td>
<td>–22.2</td>
<td>–9.5</td>
<td>–12.7</td>
</tr>
<tr>
<td>1918</td>
<td>–64.2</td>
<td>–10.3</td>
<td>–53.9</td>
</tr>
<tr>
<td>1919</td>
<td>–35.6</td>
<td>4.2</td>
<td>–39.8</td>
</tr>
<tr>
<td>1920</td>
<td>–21.6</td>
<td>13.6</td>
<td>–35.2</td>
</tr>
<tr>
<td>1921</td>
<td>–12.2</td>
<td>15.0</td>
<td>–27.2</td>
</tr>
<tr>
<td>1922</td>
<td>3.6</td>
<td>9.0</td>
<td>–5.6</td>
</tr>
<tr>
<td>1923</td>
<td>4.9</td>
<td>–0.9</td>
<td>5.8</td>
</tr>
<tr>
<td>1924</td>
<td>10.7</td>
<td>–0.6</td>
<td>11.3</td>
</tr>
<tr>
<td>1925</td>
<td>3.0</td>
<td>–2.5</td>
<td>5.5</td>
</tr>
<tr>
<td>1926</td>
<td>12.8</td>
<td>0.7</td>
<td>12.1</td>
</tr>
<tr>
<td>1927</td>
<td>19.0</td>
<td>0.7</td>
<td>18.3</td>
</tr>
<tr>
<td>1928</td>
<td>20.5</td>
<td>–0.8</td>
<td>21.3</td>
</tr>
<tr>
<td>1929</td>
<td>–5.6</td>
<td>0.3</td>
<td>–5.9</td>
</tr>
</tbody>
</table>

Source: R is the real stock return taken from Waldenström ‘Taxing emerging stock markets’ and W is the real wage increase of workers in industry and communication calculated from Statistics Sweden, Statistical yearbook, various years.
Table 3: Securities transaction taxes in some countries during the twentieth century (per cent)

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>0.1</td>
<td>0.6</td>
<td>0.3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Denmark</td>
<td>0.04</td>
<td>0.3</td>
<td>1</td>
<td>0.5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Norway</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>France</td>
<td>0.02</td>
<td>0.02</td>
<td>0.6</td>
<td>0.45</td>
<td>0.3</td>
<td>&gt;0</td>
</tr>
<tr>
<td>Germany</td>
<td>0.06</td>
<td>0.3</td>
<td>0.25</td>
<td>0.5</td>
<td>0.25</td>
<td>0</td>
</tr>
<tr>
<td>UK</td>
<td>0.05</td>
<td>0.02</td>
<td>2</td>
<td>0.5</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>US</td>
<td>0.04</td>
<td>0.04</td>
<td>0</td>
<td>0.0066</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>


Table 4: Estimated income differences between stock market actors and industry workers, 1977-1991 (per cent).

<table>
<thead>
<tr>
<th>Year</th>
<th>Real stock return (R)</th>
<th>Real wage increase (W)</th>
<th>R–W</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>–27.7</td>
<td>3.7</td>
<td>–31.4</td>
</tr>
<tr>
<td>1978</td>
<td>6.2</td>
<td>2.8</td>
<td>3.4</td>
</tr>
<tr>
<td>1979</td>
<td>–7.7</td>
<td>–0.8</td>
<td>–6.9</td>
</tr>
<tr>
<td>1980</td>
<td>8.9</td>
<td>3.2</td>
<td>5.7</td>
</tr>
<tr>
<td>1981</td>
<td>44.8</td>
<td>3.8</td>
<td>41.0</td>
</tr>
<tr>
<td>1982</td>
<td>26.4</td>
<td>1.6</td>
<td>24.8</td>
</tr>
<tr>
<td>1983</td>
<td>56.8</td>
<td>2.0</td>
<td>54.8</td>
</tr>
<tr>
<td>1984</td>
<td>–19.2</td>
<td>–1.1</td>
<td>–18.1</td>
</tr>
<tr>
<td>1985</td>
<td>18.1</td>
<td>–0.3</td>
<td>18.4</td>
</tr>
<tr>
<td>1986</td>
<td>46.8</td>
<td>–2.4</td>
<td>49.2</td>
</tr>
<tr>
<td>1987</td>
<td>–12.0</td>
<td>–2.6</td>
<td>–9.4</td>
</tr>
<tr>
<td>1988</td>
<td>46.1</td>
<td>–2.0</td>
<td>48.1</td>
</tr>
<tr>
<td>1989</td>
<td>18.0</td>
<td>–3.4</td>
<td>21.5</td>
</tr>
<tr>
<td>1990</td>
<td>–41.4</td>
<td>0.2</td>
<td>–41.6</td>
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<tr>
<td>1991</td>
<td>–4.0</td>
<td>5.4</td>
<td>–9.6</td>
</tr>
</tbody>
</table>

Source: Real stock returns R are calculated from the Affärsvärldens Generalindex and W is real wage increases of workers in mining- and construction industry, taken from Swedish Official Statistics.
Figure 1: Turnover on the Stockholm Stock Exchange, 1907-1991.

Note: Turnover is defined as the value of traded shares divided by market capitalization.
Source: Official statistics and own calculations, available upon request.

Figure 2: STT revenues as share of total public taxes, 1909-1991.

Figure 3: New equity issues in Sweden as share of GDP, 1909-1991.

Source: Statistics Sweden, Statistical yearbook.

Figure 4: Bank credits against stock collateral as share of total bank credits in commercial banks, 1888-1924.