Growth and equity in Finland[1]

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Abstract

This paper reviews Finnish economic history during the “long” 20th century with a special emphasis on policies for equity and growth. We argue that Finland developed from a poor, vulnerable and conflict-prone country to a modern economy in part through policies geared at both growth and equity, such as land reform and compulsory schooling. The state participated in economic activity both indirectly and directly in the post-war period, implementing many social policy reforms that facilitated the functioning of the labour market and led to greater equity. Centralised collective bargaining was just one of the many means through which central government intervened in the economy. Both the long-run growth record and the equality of different kinds of economic outcomes are fairly positive. This suggests that facilitating economic growth through such policies that further more equitable outcomes may at least in the case of Finland have met with some success.

JEL Codes: J50, N33, N34, O52

1 Introduction

This paper presents a brief socio-economic history of Finland from the 1860s to the present. In particular, we are interested in examining the extent to which economic growth and equitable socio-economic arrangements came to co-exist. We have therefore emphasised the role of conflicts and conflict resolution in socio-economic development. The paper combines the analysis of socio-economic institutions with an analysis of how different socio-economic risks have been managed to combine equity and growth.

In the past century, the Finnish economy experienced fairly rapid economic growth and, more lately, strong productivity growth. While the unemployment rate is currently uncomfortably high, largely as a consequence of the early 1990s economic shock, labour markets have long been characterised by a high degree of female labour force participation. The level of economic inequality is very low by international standards, despite steep increases in the 1990s. At face value, the Finnish economy has combined comparatively high levels of economic growth with a fairly equitable distribution of resources. This paper examines how this came to be. We focus on broad economic developments, such as economic growth and the evolution of economic institutions, on economic inequality and on social policy as socio-economic risk management.

The paper proceeds to briefly describe Finnish economic and social history in the “long” 20th century. Important events or aspects of this history include the last major European subsistence famine in 1866-68, and the civil war of 1918, a conflict rooted in part in class divisions and disparities in land ownership. After establishing that Finland suffered from difficult economic shocks and social conflicts in the early part of the “Long” 20th century we go on to discuss the insitutions for growth, conflict and social risk management.

2 A long 20th century of conflict

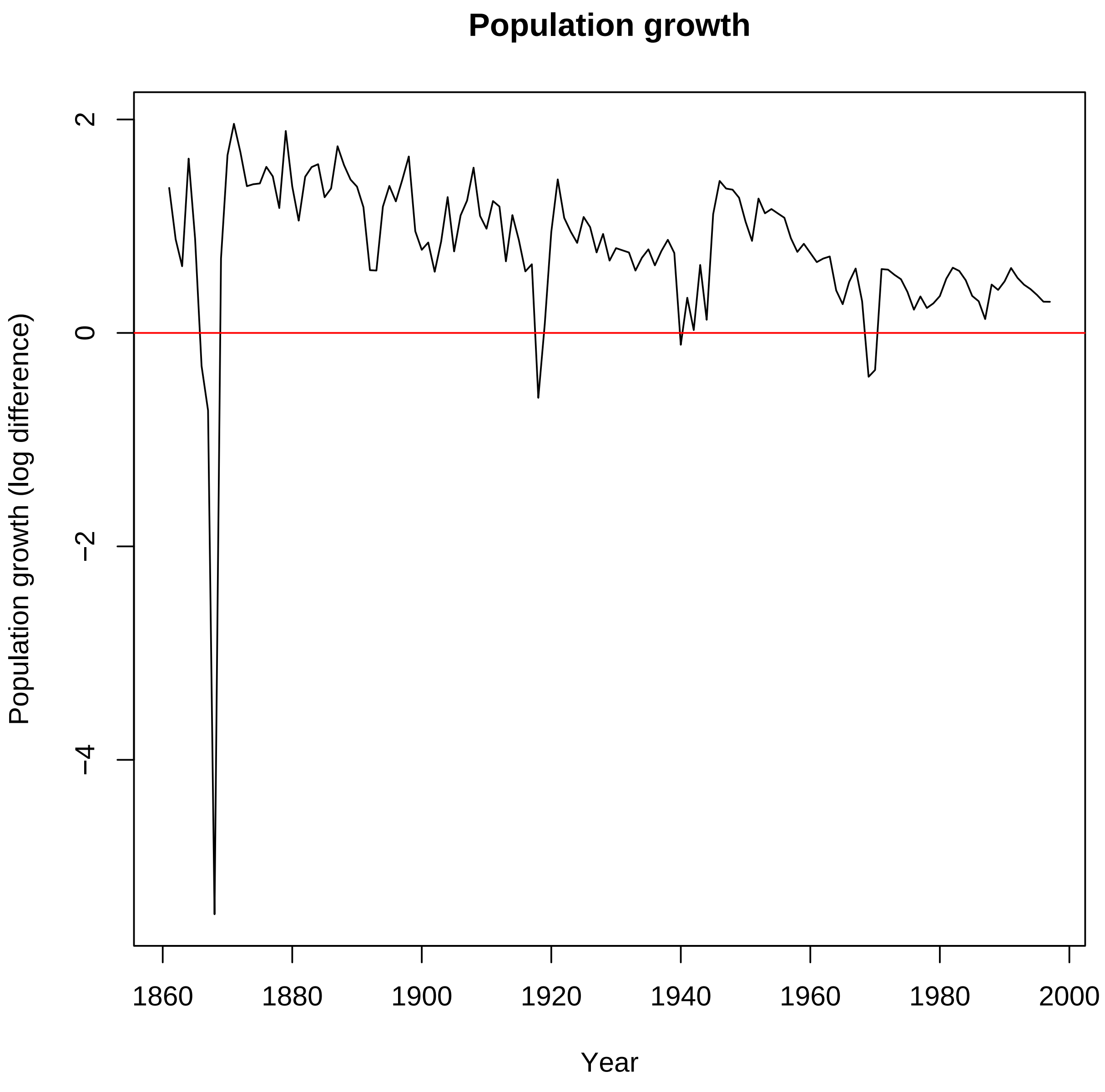
Finland appears in international media in either humorous minor news reports[1], in conjunction with ICT business news, or when it has become well-placed in one of many league tables that rank countries by “competitiveness”, “economic freedom” or “economic transparency”.[2] The purpose of this section is to discuss a few episodes of Finnish history that gave rise to very different kinds of news. Specifically, we discuss the long-run changes in population from 1860 to the present time as well as a few major crises that made sizeable dents in the population. We also discuss long-run economic development, as measured by Finland’s gross domestic product relative to other countries and its economic structure across time. The purpose of this section is to show to the reader, whom we assume to know next to nothing of Finnish economic development, that Finland is indeed a late arrival among the economically advanced nations and that Finland suffered quite recently from serious economic and social disturbances.

[1]See, for instance, the Financial Times on December 6 2004 (“Observer” on independence day celebrations), FT on January 8-9 2005 (Weekend section, on tango).

[2]See World Economic Forum (`http://www.weforum.org/`), Transparency International (`http://www.transparency.org/`).

The series on Finnish population change from 1860 to the present illustrates the depth of some major socio-economic shocks that were suffered during the "long" 20th century (see Figure 1). The first and largest decline in population growth is associated with the famine of 1867-68. The civil war in 1918 also shows up as a sizeable dip in the population growth pattern – much greater, in fact, than the second world war. The last major decline in population comes at the end of the 1960s when migration to Sweden was at its strongest.

Figure 1 Population change in Finland (Source: Statistics Finland)



Famine One of the latest European famines was experienced by Finland in the 1867-68, discussed by, e.g., Pitkänen (2002), Gráda (2001), and Turpeinen (1979). The institutions, structure and changes in the Finnish agricultural sector relative to those in other European countries are discussed by Peltonen (1988). The following brief account of the events is based on Pitkänen and Mielke (1993). The Finnish famine is worth discussing here for several reasons. First, the fact that one of the last major famines in Europe occurred in Finland – something that is likely not very widely known beyond those who specialise in famine historiography – shows how underdeveloped Finland was relative to other northern European countries until quite recently. Second, the factors behind famine-induced mortality turn out to be largely a function of the economic and social upheavals that the crop failures resulted in and of the very policy responses that were intended to tackle the problems.

The Finnish population had grown fairly continuously from 1810 to 1865 at an average rate of one percent per year. Starting in 1862, especially the northern and central parts of the country suffered from repeated poor harvests. Grain prices increased and economic conditions for many farmers worsened. There was a crop failure in 1865 and a close to total crop failure in most parts of the country in 1867. Mortality became elevated in 1866 already, but reached very high levels in the spring and early summer of 1868. The population of 1.8 million in 1865 declined by more than 100,000 persons during the three famine years. (Pitkänen and Mielke, 1993)

Most of the deaths during the famine were not from starvation but from infectious diseases, especially typhus, typhoid fever, dysentery and relapsing fever. The crop failures and the famine led to large-scale economic turmoil with mass joblessness. The unemployed searched for work and food in other areas. Many moved temporarily to towns in the south of Finland, which had not been as hardly hit. These temporary migrants were often housed in temporary poor houses and other relief centres and put to work for their food. These relief centres provided infectious diseases with excellent breeding ground and it was here that mortality rate reached their highest levels. Thus, the deaths were to a large extent a consequence of the economic and social upheaval that the famine caused and became quite concentrated in the very centres whose function was to provide for those who had been dislocated by the famine.

An important circumstance that contributed to the social upheaval during the 1860s was the fact that Finland, at that time an autonomous part of the Russian empire, had by the Czar been granted the right to issue its own currency, the silver Markka. The need to build up foreign currency reserves in anticipation of the issue of the Markka, Finnish economic policy (which was conducted independently of Russia) was during those years very restrictive (see Heikkinen et al., 2000, pp 151-163). This may have contributed both to lower purchasing power in the rural communities, making it more difficult to make up for the shortfall in grain by buying it from markets, and to an unwillingness on the part of central government to import, rather than export, grain. Indeed, when a decade later Finland was to move to the gold rather than the silver standard, many of those who had in the 1860s supported the tight fiscal stance had considerably more sympathy for its critics this time.

Civil war The second largest dent in the series of Finnish population growth occurs in 1918, during and after a bloody civil war. The civil war is discussed in detail by Upton (1980) and Alapuro (1988), Casanova (2000) compares the Finnish civil war with the better known civil wars that occurred later in Spain and in Greece. Arosalo (1998) examines the causes of the conflict in light of detailed regional data.

Finland was from the middle ages to 1809 part of Sweden. As a consequence of a war between Russia and Sweden in 1808-09, Finland became part of the Russian empire. Finland became at that point an autonomous Grand Duchy, with its Swedish constitution intact but with the Russian Czar as Finland's Grand Duke. Russian rule went through various stages, some more and some less benevolent. Finland had its own government, called a senate and parliament organised along the traditional estates. In 1906, Finland established a modern parliament with universal suffrage (including for women).

In 1916, the Social Democratic Party gained an absolute majority of the seats in parliament. The revolution in Russia in March of 1917 led to a collapse of imperial authority in Finland. The socialist-majority parliament passed a law which gave power to the parliament. The interim government in Russia revoked the power law, dissolved the parliament and ordered new elections to be held. The Social Democratic Party lost its parliamentary majority in the new elections.

The parliament declared Finland independent on December 6 1917 after the October revolution in Russia. The Social Democrats had organised a worker's or "red" guard as a counterweight to the "white" guards being organised by the bourgeois powers. In January 1918, the white guard was declared by the government to be the official troops of Finland and a few days later, January 25, the Social Democrats decided to seize power. The war started a few days later. The red guards fairly quickly took control of Helsinki and established a government. The white side setup up a government in Vaasa on the west coast of Finland. The country quickly became roughly equally divided into a white and a red part.

The war lasted for three months, ending in April after a German intervention. Both sides committed acts of terror – thereare concepts of "white terror" and "red terror". A project which was set up by the government in 1998 has produced various statistics on those who died between 1914 and 1922. Table 1 shows the breakdown of the dead by cause of death and which side they were on. Of the 4821 white troops that died, the vast majority, 3,279 persons, were killed in action. Of the 27,426 red troops that died, less than one in five, 5,324 persons, were killed in action. Almost one in four of the dead red troops were executed. Of the altogether around 82,000 red troops that were in prison camps, 11,785 persons died, most after the war had ended and mainly from starvation and related diseases. The population was around 3.1 million when the war started, so 20,000 deaths from executions, many of them extra-legal, and in prison camps indicates a substantial level of conflict.

There is much debate as to the causes of the civil war. It is probably most accurate to say that its causes include the general unrest that was in turn caused by the political turmoil in Russia, and by different patterns of class divisions across the country. It was, for instance, more common that small farmers were crofters in the south and east of the country than in it was in the west and north-west, which was reflected in the former joining the red and latter the whites. A contributing factor was also the sharp division of the parliament in nearly equally strong socialist and bourgeois blocks. While it has been speculated that a red victory would most likely have led to the annexation of Finland into the Soviet Union – which seems quite likely, given Lenin's nationality politics – there is little evidence that this was one of the reasons for the Social Democrat's grab for power.

Table 1 The number of war dead

Cause of death	Reds	Whites	Others	Total
Killed in action	5 324	3 279	484	9 087
Executed, shot, murdered	7 207	1 321	392	8 920
Died in prison camps	11 785	6	500	12 291
Died after being released	597	-	2	599
Missing	1 818	42	116	1 976
Other causes of death	695	173	536	1 404
Total	27 426	4 821	2 030	34 277

Source: War Victims of Finland 1914-1922 Project database,
`http://vesta.narc.fi/cgi-bin/db2www/sotasurmaetusivu/stat2`.

The aftermath of the civil war saw the most intensive period of extra-legal violence, with white expeditions moving into red areas to "punish" known and suspected reds during which period most of the red soldiers perished in the prison camps. The Social Democratic Party was briefly outlawed and the Communist Party, founded by radical communists outside of Finland in Russia in 1919, remained forbidden in Finland until after the second world war.

A Tentative national reconciliation In spite of the atrocious violence associated with the Civil War, the course of Finnish politics took a turn towards a more reconciliatory and moderate orientation in the early 1920s. As we describe below, this led to quite a few social reforms in the 1920s and 1930s.

What were the political determinants for such a centrist national reorientation? Immediately after the civil war, the victorious White side was split between the German-minded right-wing monarchists and the republican-oriented independent farmers. Germany's defeat in World War I and the emergence of a strong farmer's party[3] contributed to the republican side getting the upper hand. Although the farmers had little sympathy for the defeated Social Democracy, they were in general in favour of a republican constitution and distrustful of the idea of a German prince being throned as the supreme executive authority. Remembering that the Civil War was to a large extent a conflict according to land ownership lines, many in the Rural Union also sought to alleviate the danger for future conflicts by working towards legislation that would allow crofters to become independent farmers. The new and powerful Soviet Union was probably also seen by many as a potent threat that had to neutralised by more conciliatory domestic policies that would not entirely alienate the workers' movement.

This political reorientation was closely linked to national-state building, aimed at strengthening a common national identity under uncertain circumstances. One must keep in mind that Finland was commonly recognised as a sovereign state only in the early 1920s by some significant powers - and the Finns themselves implemented some expansionist policies, which resulted in a temporary occupation of some districts of Carelia, then judicially part of the Soviet Union. In such circumstances, some social reforms both strengthened national identity and improved the quality and quantity of

[3] Finnish *Maalaisliitto*, or "Rural Union".

manpower available for conscription and military services of different kinds.

Some of the ensuing reforms can also be seen as a continuation of previous policies planned and partially implemented before the civil war. The implementation of such reforms were consolidated by the rapid restoring of parliamentary democracy at the national and local level. At the national level, the political rights of most soldiers of the defeated side were restored after a short interregnum. Although the communist movement was forbidden both within the trade unions and a political party for a significant period of time, the social democratic party (SDP), which represented the non-rebellious legacy and an overwhelming majority of labour movement, was quickly integrated into the political system, thus providing significant power resources for the working class. At the local level, the democratisation process counter-balanced traditional power structures, and provided a solid political basis for public investments in health, education and some social services.

A series of reforms in the 1920 The 1920s saw important social developments. For instance, land reform, one of the reasons for the civil war, was enacted almost immediately. A law was passed in 1918 to allow "crofters" (a form of sharecroppers who rent a farm with at least 0.5 ha of arable land) the right to buy their land through a regulated process. The law led to a rapid decline in the number of crofters. By the year 1912 there were 55,112 crofts, compared to 125,172 farms. Between 1919 and 1928, 45,581 had been bought by the crofter, the vast majority of which were purchased in 1919 and 1920..[4] Since these rental farms tended to be very small, this led to an initial increase in the proportion of very small farms. Land reform was continued in 1922 with a law ("Lex Kallio") which allowed for a subsidised expansion of the small independent farms created by the crofter law reform. By 1929, the proportion of very small farms had declined and the whole mass of the farm size distribution had shifted to the right. Another demand made before the civil war by socialists was the introduction of progressive income and wealth taxation. This, too, was quickly passed and was by 1920 in place.

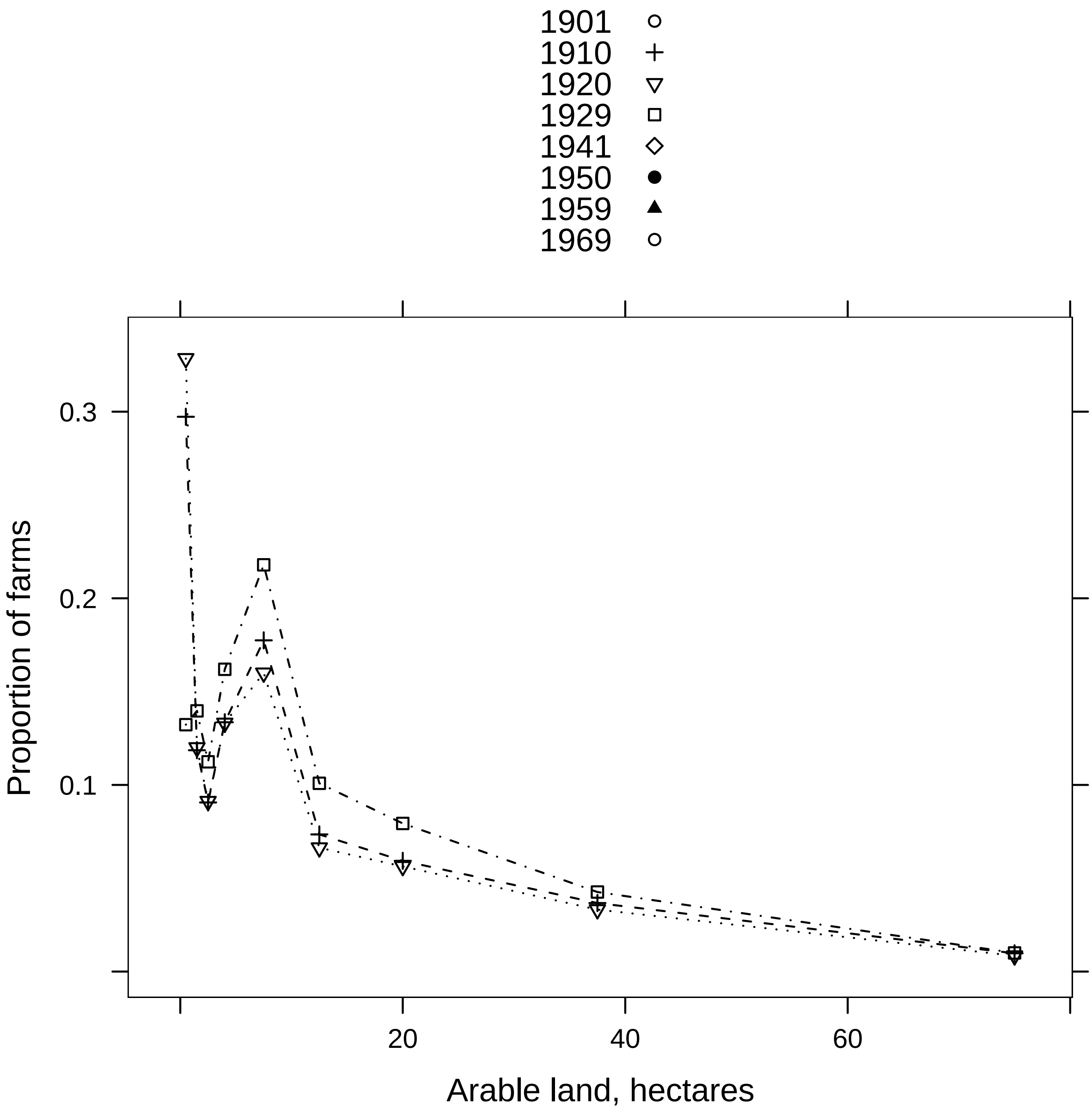
An unintended consequence of land reform was the following. Farms usually came attached with at least a little forest, serving as a source of building materials and energy for the farms. The widely dispersed ownership of forest land – much of which already belonged to the state as a consequence of 18th century actions – meant that the key raw materials for central industries – paper and pulp and mechanical forestry – was owned by by very many people. Industry thus was forced to negotiate with many partners about access to raw materials.

During the 1920s, women's rights were also expanded. For instance, parliament debated during several years whether to introduce the separate taxation of married couples' income. Although it was implemented only in 1936 (and abolished during the war to be re-introduced in 1976), public discussion of the issue bears witness to strong egalitarian principles.[5] Universal suffrage in parliamentary elections, including that for women, was introduced in 1906. During 1939-1945, Finland went through two wars, lost substantial areas, consisting of around 16 per cent of the land, to the

[4]See Vattula (1983, Table 1.2, p 16) and Statistics Finland (1932, Table 252).

[5]An excellent history of the discussion on separate taxation, both in parliamentary committees and the press, is given in Sukselainen (1946), although unfortunately only in Finnish.

Figure 2 The distribution of farm size (as measured by the size of arable land)



Note: The graphs are frequency polygons, showing the midpoint of the grouped distribution of farms across arable land size. Source: Vattula (1983).

Soviet Union and resettled several hundred thousand refugees, close to 10 per cent of the population, from the lost areas. The resettlement of the refugees on small farms around the country was a way to quickly absorb substantial internal migration. On the other hand, the resettlement probably exasperated the later problems of agriculture – the average farm size was small, which contributed to a rapid decline in agricultural employment and to the mass migration of several hundred thousand people to Sweden in the late 1960s and early 1970s.

Primary schooling provided by municipalities had been subsidised by central governments since 1866 but was legislated into a general "learning obligation" (Finnish oppivelvollisuus) in 1926 (more on this in Section 5 below).

We note, finally, that the last major negative population shock is due to migration to Sweden. While there was net outmigration to Sweden of between 5,000 and 10,000 annually from 1950 onwards, in 1969 and 1970 80,000 persons migrated to Sweden (with a net migration of around 60,000). While some of it was short term – in the following four years, the net flow of persons to and from Sweden was in fact negative – this population movement reached quite substantial proportions during those years.

Closing The purpose of this chapter was to describe the depth of the socio-economic crises that afflicted Finland during the "long" 20th century. Lest the reader suspect that the reason Finland has had a relatively strong growth record and fairly benign economic outcomes is that it has always been a low-shock, low-conflict society, we hope to have put such thoughts to rest. Instead, we will argue that the growth and equity outcomes have resulted from the conscious political will of several actors. Growth has been facilitated by active government involvement in the economy – both directly and through labour market interventions. This "growth accommodation" has been conducted in part through the managements of social risks, that is, the building of welfare-state institutions and, in part, through corporatist bargains between organised economic agents. We discuss the process and institutions for economic growth in Section 3 and labour market institutions in Section 4. The development of the institutions for social risk management are described in Section 5. In Section 6 we describe a few key equity outcomes and Section 7 concludes.

3 The economic growth regime

In the previous chapter, we outlined some historical socio-economic shocks and precarious conditions of Finnish aspirations towards political autonomy and economic prosperity. In this section, we analyse in greater detail the process of economic growth in the post-war period and explain how some of the structural threats and weaknesses may in fact have mobilised minds and thus contributed to an unorthodox but effective growth-enhancing policy regime.

Long-run trends in economic growth and economic structure Figure 3 shows the Finnish long-run growth performance measured in three different ways.[6] Year-on-year log change in the volume of GDP per capita along with a non-parametric smooth of the series, in Figure 3(a), shows how prone to fluctuations the Finnish economy was from 1860s, when the series starts, until the World War II. While the civil war and the second world war led to large declines in GDP, there were several periods of GDP decline from the start of the series. The crop failures in the early 1860s and the famine years of 1867-68 are associated with large declines in GDP. There were several recessions even after than, however, including the consecutive years of GDP decline around 1880, in the early 1890s, around 1900 and again during the first world war (but before the civil war). The economy grew quite rapidly during the 1920s until the 1930s depression arrived. Several declines occurred again during the second world war.

After the second world war, however, the year-on-year growth records exhibits far less frequent and more shallow slowdowns in growth. It was not until the early 1990s that GDP declined substantially again, suggesting the the "golden era" of capitalism in the post-war period in Finland was, indeed, quite golden.

Figures 3(b) and 3(c) show how Finland compares to a few other countries, namely the United States, Great Britain and Sweden during this period. Figure 3(b) shows the level of GDP per capita, measured in 1990 PPP dollars, in all four countries and Figure 3(c) shows the same series, but now that of real GDP per capita in Finland, Sweden and Great Britain relative to that in the United States.[7]

Figure 3(b) suggests that the Finnish economy suffered quite large shocks relative to those in other countries (where Sweden, geographically close, is in the 19th century the most natural comparison, as she has a similar climate). While Finland may have narrowed the gap to other countries in the inter-war period, it is only after the second world war that Finnish growth relative to these other countries really seems to take off. Finland reached the same level of GDP per capita as Great Britain in the 1980s and the same as Sweden in the 1990s, although the depth of the 1990s recession led to a relative decline in Finland's economic position.

Figure 4 shows the economic structure across sectors from 1860 to the present. Figure 4(a) shows the proportion of the total labour force that was employed in agriculture, the manufacturing industries and services. The share employed in agriculture started to decline in the last decade of the 19th century. This decline accelerated after the second world war and again in the early 1960s to slow down somewhat in the late 1970s. The manufacturing sector again increased slowly from the beginning of the series in 1860, increased at a slightly more rapid pace in the inter-war period and rose after the second world war to around 30 percent of the labour force. It has since its peak around 1980 declined and is currently lower than at any time since the 1950s. By contrast, services doubled their share of employment from around 30 percent of the labour force to about 60 percent currently.

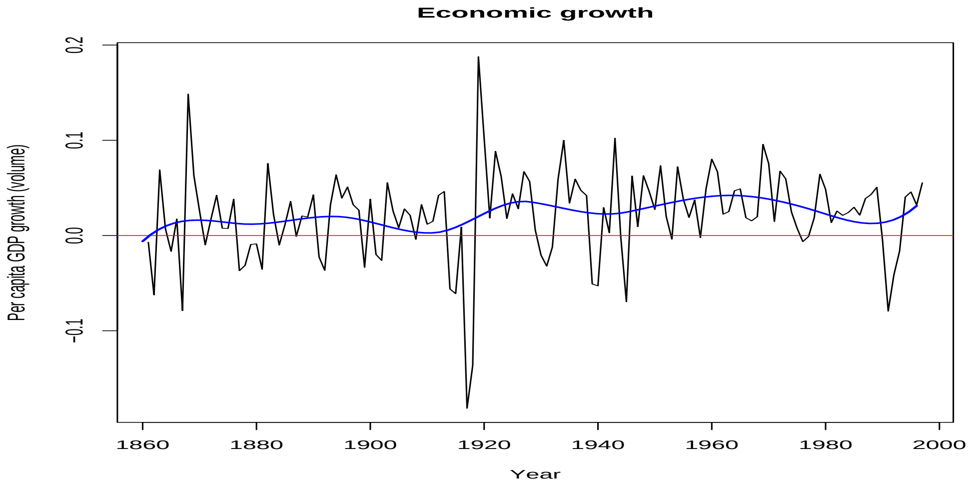
Figure 4(b) relates the employment share of each sector to the same sector's share of total output

[6]The data are drawn from the long-run series on the Finnish economy published by Statistics Finland, based on a long-term project based in part at the Bank of Finland. The most comprehensive report on these data is that by Hjerppe (1989).

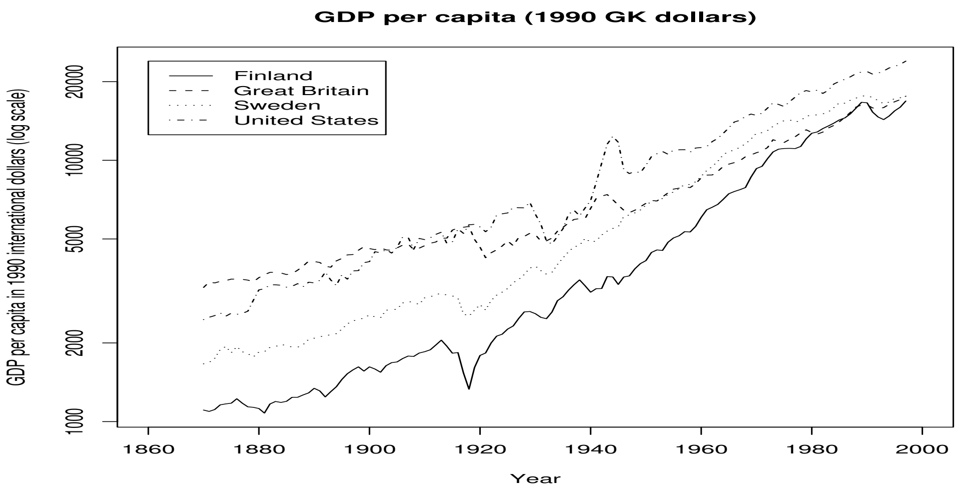
[7]The Swedish and Finnish cases are discussed in detail by Lindmark and Vikström (2003), who carefully analyse and decompose to its constituent parts the growth performance of these two economies.

Figure 3 GDP per capita in selected countries

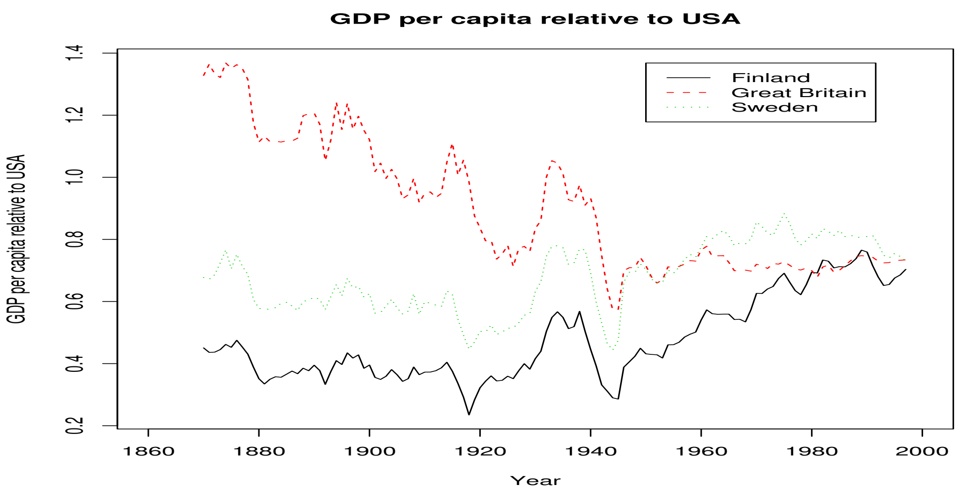
(a) Per capita GDP growth in Finland



(b) GDP per capita in 1990 international (GK) dollars



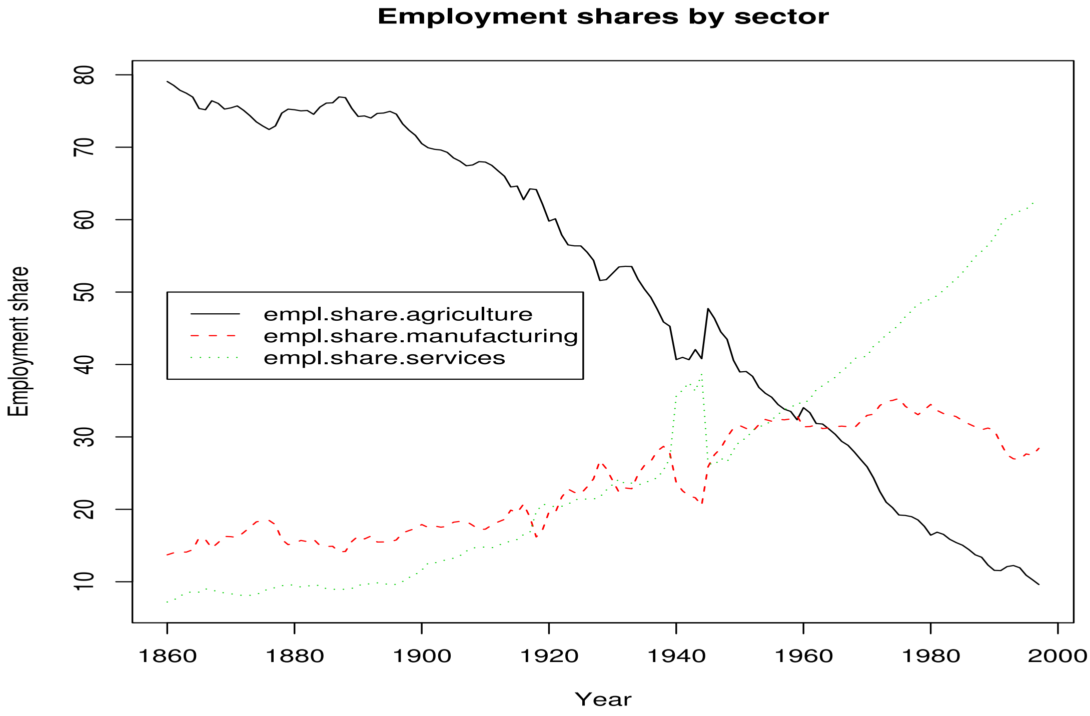
(c) GDP per capita relative to that in USA



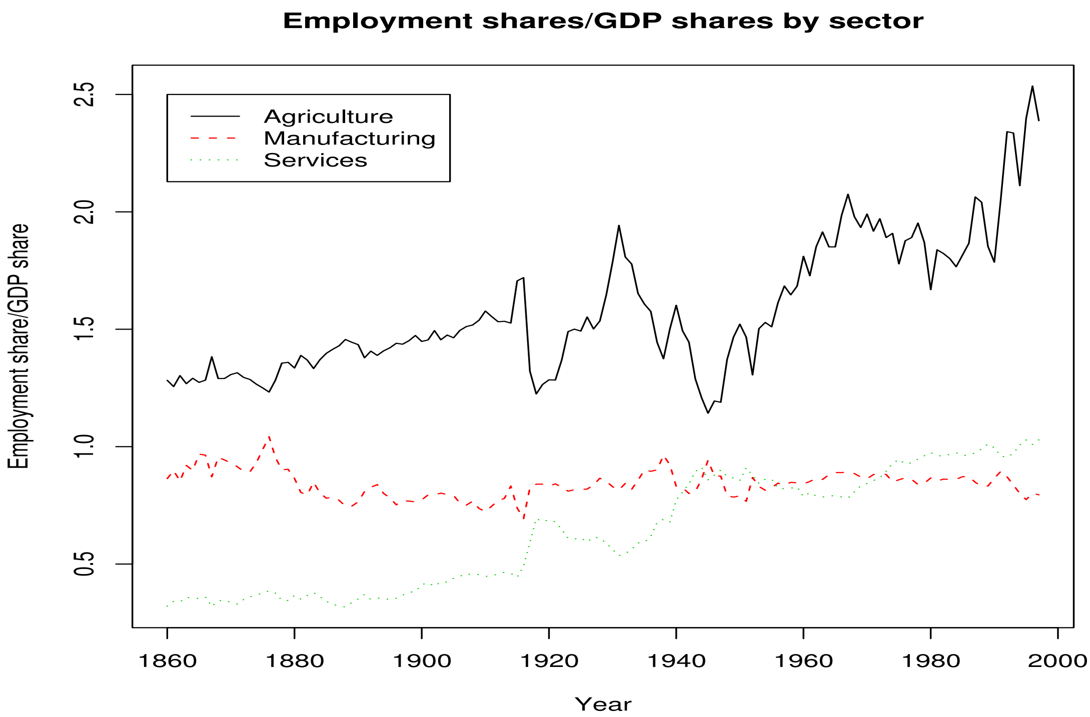
Source: Statistics Finland

Figure 4 Sectoral distribution of employment

(a) Employment shares by sector



(b) Employment shares relative to GDP by sector



(as measured by GDP). This expresses the relative effectiveness of the labour force in each sector. The graph suggests that the large decline in the agricultural labour force has been associated with a large decrease in its relative productivity. The relative productivity of manufacturing has varied quite little, while the service sector has increased its relative productivity even while its share of total employment increased.

The growth-accounting exercise reported by Hjerppe (1989, Table 7, p 70) suggests that between 1860 and 1890, agriculture made the largest contribution to growth, followed by manufacturing and (private) services. After that time, manufacturing and services have made on average about equally large contributions to growth. Over the whole period 1860-1985 these two sectors accounted for roughly one percentage point each to the average annual GDP growth rate of 3.0 percent. Public services grew at the same rate and contributed roughly 0.3 percentage points to the overall rate of GDP growth.

A pragmatic "Asian" interventionism Finland was a late industrialiser. In the 1930s, the economy was predominantly agrarian, and, as late as in the 1950s, more than half the population and 40 per cent of output were still in the primary sector. Per capita gross domestic product was only half of that of Sweden. Yet by the late 1970s, Finland had become a mature industrial economy.

In the light of modern economic policy jargon, the policy strategy that generated this favourable outcome was definitely interventionistic and did not rely on purely private incentives and market transactions. Yet the very notion of a strict separation between "state" agents and "private" agents, so central to modern economics, becomes anachronistic when applied to the Finnish policy experiences. In this respect, the country's growth strategy bears surprising similarities with those of the Asian tiger countries.[8] In Korea, Taiwan as well as in Finland, a pragmatic co-operation between organised private agents like bankers and business leaders, on the one hand, and government officials and civil servants, on the other, has played a key role in enhancing economic growth. As is typical for such corporatist regimes, many key decisions have been taken in a kind of twilight zone between private and public functions. Much of this policy set is hard to describe with well-established categories like "fiscal policy", "monetary policy" or "industrial policy". Will it be counted as "industrial policy", "monetary policy", "fiscal policy" or "incomes policy" if civil servants and industrialists agree that bank loans will be channelled to some particular new plant projects? Or when trade unions, business organisations and the government agree that the price of milk will be subsidised but workers will in return refrain from excessive wage claims and thereby boost the competitiveness of the open sector? These examples are amusing, but the economic logic of this policy regime can in many ways also be regarded as quite sophisticated: it was an attempt to exploit growth externalities and put the economy on a high growth path by direct intervention, but without infringing private property rights and without formally recurring to "economic planning" that would have been interpreted as a challenge to the capitalist order.

The main economic and institutional elements of this growth process have been the following:

[8]This resemblance has been more systematically described and analysed in (Vartiainen, 1999*a*)

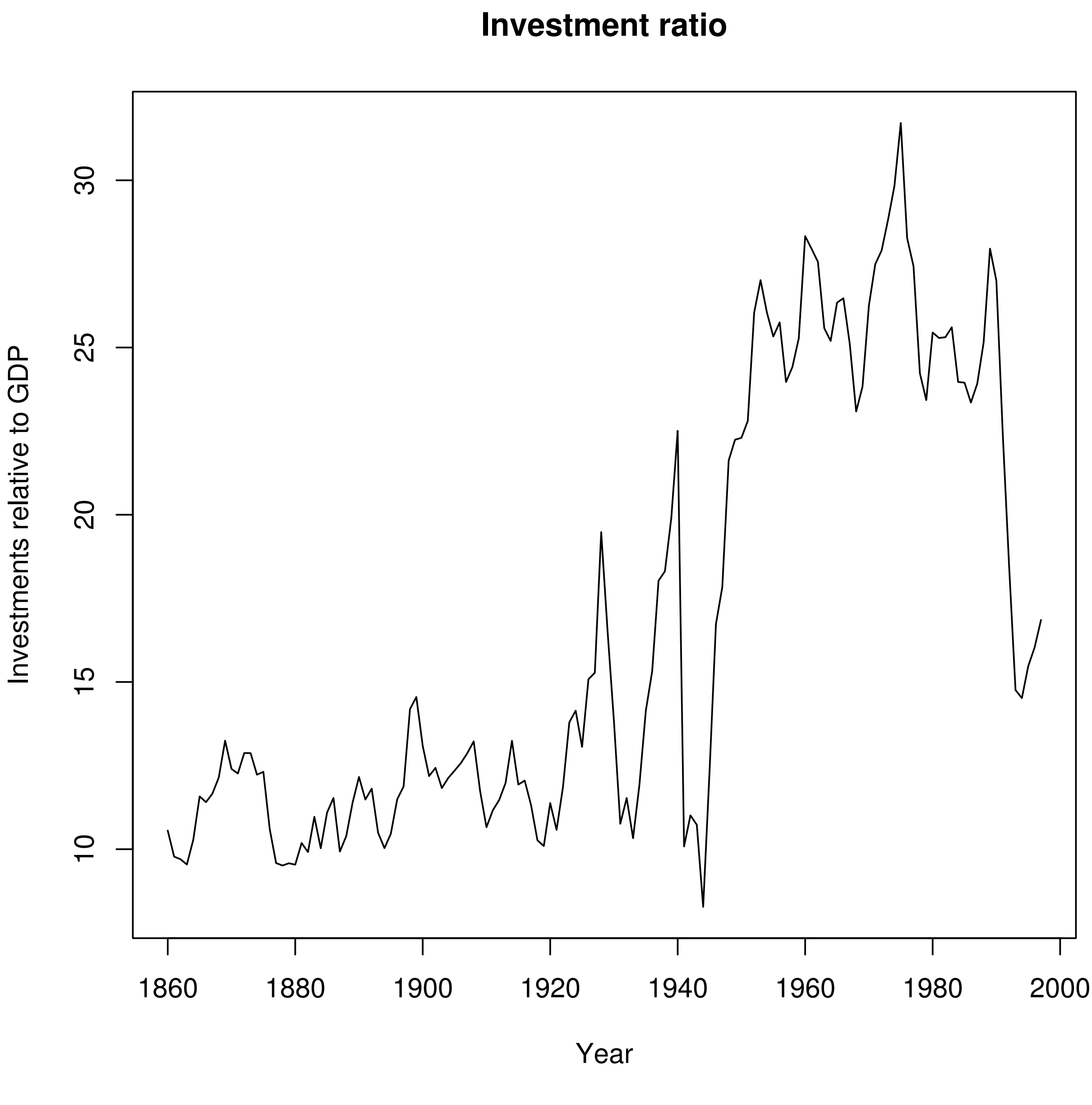
- A high rate of capital accumulation, in particular sustained by a high public saving rate. The public sector has been an important net saver in the economy.
- A high rate of investment in key areas of manufacturing, the paper and pulp and metalworking industries in particular.
- Low and rigid interest rates and administrative rationing of credit to some areas of business investment, at the expense of depositors and households. With administratively set interest rates, bouts of high inflation have resulted in transfers from creditor households to debtor businesses.
- A high average growth rate but a very volatile growth path: in the period that is often characterised as a "Golden Age" of Keynesianism, Finnish business cycles were particularly severe.

How did the institutional preconditions combine to generate such an outcome? We will next try to put some empirical flesh around our arguments.

The State as a net saver As in any other war-waging country, the second world war required a mobilisation and reorientation of the nation's resources. That implied a sharp rise in the tax rate and an acceptance of a far more active role for the State in the allocation of resources: price regulations, selection of investment targets together with industrialists, rationing of credit, social contracts with trade unions and business organisations, outright economic planning. The tax rate also went up sharply, as one might expect. Once the two wars were over, a strategic decision was made not to return to pre-war levels of taxation, but instead, to use the public surplus to finance a programme of public and private productive investment. In the very aftermath of the war, this was partly an outright necessity, since the war indemnity requested by the victorious Soviet Union required a rapid buildup of industrial capacity, in particular in the metal and engineering sectors. The continuation of a state-sponsored program of capital investments became even a conscious policy choice. As shown by Katri Kosonen, this was to some extent typical for all the Nordic countries (Kosonen, 1992). In Finland, the State adopted an even more direct and interventionist role in industrial policy than what was the case, for example, in Sweden.

The general political atmosphere of the late 1940s was conducive to such an outcome: it must be borne in mind that committees for "nationalisation" or "socialisation" were set up in many countries – such as Norway, the U.K. and France – in the aftermath of the war, and many policymakers in the West were probably wondering whether the market system alone would be sufficient to match the massive military-industrial buildup that was occurring in the Soviet Union. That was certainly the view espoused by President Urho Kekkonen, whose influential pamphlet "Do we have the patience to prosper?" (in Finnish *"Onko maallamme malttia vaurastua?"*) advocated a State-sponsored program of massive investment in productive equipment (Kekkonen, 1952). Kekkonen was no Socialist and was probably not interested in ideological controversies about the relative roles of the State and private investors. By contrast, he was keen to generate economic growth via investment, by whatever means, be it via direct discussions with industrialists or with more sophisticated policy schemes.

Figure 5 The ratio of investments to GDP in Finland (Source: Statistics Finland)



In the period up to the first oil crisis, public saving was in Finland higher than in almost all comparable countries: its share of GDP hovered around 8 per cent in the 1960s and 1970s (Kosonen, 1992), and it was even higher in the 1950s. The structural budget surplus did not vanish until the 1980s, and public savings accounted for as much as 30 per cent of aggregate savings during the 1950s and 1960s. This surplus was partly channelled to support private investments in capital equipment throughout the country, and partly used to start public companies in some key sectors of the economy. State companies were established in the basic metal and chemical-fertiliser industries as well as the energy sector.[9] As late as in the 1980s, state-owned companies contributed about 18 per cent of the total industry value-added in Finland (Kosonen, 1992). It is noteworthy that this interventionist attitude to selective and *ad hoc* industrial policies was accompanied by a conservative attitude to fiscal management in general. Fiscal deficits were abhorred and the public sector ran a structural economic surplus throughout the 1950s and 1960s (Pekkarinen and Vartiainen, 1995).

Credit rationing Another instrument for capital accumulation was the administrative rationing of credit. This took the form of interest rate controls as well as a policy of selective approvals of loans for capital equipment investment. Even that area of policy in many ways predated the 1950s. In the 1920s, when banks were faced with bankruptcies among their farmer debtors and market interest rates were on their way upwards, the central bank ("Bank of Finland") initiated a collusive interest rate agreement between the main banks. The objective of the agreement was to limit the banks' competition for their depositor customers, since it was that competition that was perceived as the force that drove interest rates upwards. By the same token, the banks were to offer more advantageous credit to their business customers, the overwhelming majority of which at that time were of course farmers. Formally, the contract was a voluntary cartel on deposit interest rates. That cartel proved remarkably long-lived, since it persisted in one form or another until the mid-1980s. At the same time, the policy rhetoric of the central bank was quite conservative and distrustful of other forms of economic interventionism.

In the war economy of 1939-1944, selective rationing of credit to military production purposes was made all the easier, since the main banks and the central bank were accustomed to talking to each other and the government. A direct regulation of lending interest rates was established and the Ministry of Finance was endowed with rights to approve or disapprove any larger credit decisions suggested by the banks. Similarly, trade in foreign currencies became subject to the central bank's approval, and the Bank had the right to freely deliberate whether a currency trade was justified in the name of national interest.

Once the war was over, this administrative steering of interest rates continued and was flexibly adopted for purposes of industrial policy. Of course, at that time, Finland was hardly alone in her endeavours to regulate the credit market. In the 1950s in particular, monetary policy was in many countries seen as a poor demand management instrument. Instead, it was often thought that interest rates were to be structurally and permanently low, so that the economy would have room to grow,

[9] An important example was Neste, which established a monopoly on oil refining and then continued into different lines of petrochemicals and plastics.

and the growth rate was in turn to be steered by fiscal demand management.[10]

That view eventually gave way to a more balanced view of the roles of monetary and fiscal policy. In Finland, however, the emphasis was again clearly on structural growth issues. The aims of credit rationing were to generate advantageous loans for businesses. Borrowing by households was in general not possible, with exception of housing mortgages. Mortgages in turn usually required a lengthy period of ex ante saving at low interest rates, and the households had not until the 1980s access to any form of market-rent-bearing investment assets. Thus, a form of forced saving from depositors to debtors was sustained. Together with the State's role in saving, this setup helped to sustain the economy's high investment rate. In the period 1960-1984, gross fixed capital formation was 26.3 per cent of GDP, a figure only exceeded by Norway in the OECD area (Kosonen, 1992). Figure 5 depicts the dramatic rise in the investment-GDP ratio in the period from World War II through the 1980s.

Historical traditions of the state To sum up, we see a curious combination of conservatism and supply-side interventionism. Without wanting to question the market economy's legitimacy per se, nor fundamental private property rights, the Finnish business elites colluded to "distort" the markets in a way that sustained a high investment rate. This combination is reminiscent of the Asian tiger states' conservative interventionism. It also illustrates the point that economic "planning" can to some extent be quite effective if it is presented as a means of accelerating some stated economic policy goals but not as a challenge to the market economy per se.

Such conservative dirigisme can with hindsight be legitimised by thoroughly modern economic ideas. If the authorities adopt interventionist policies, it is all the more important to be clear on the ultimate values of capitalism. By these means, private investors and entrepreneurs can be made much more tolerant of activist interventionism. This point is nicely borne out by many of the success cases of late industrialisation. The accounts by Robert Wade (1991) and Alice Amsden (191) show that Taiwan and Korea were not much behind the German Democratic republic in overall dirigisme. Peter Katzenstein's work shows that there was at times more effective planning in the Austrian economy than in some of its nominally (formerly) socialist neighbours (Katzenstein, 1985, 1987). Yet, whatever their dirigisme, all of these economies were committed to becoming successful capitalist economies. A contrasting failure case is provided by Peru in the years of Alan Garcia's presidentship (1985-1988). Even Garcia wanted to mobilise investors for a broad program of industrial restructuring. His "leftist" political orientation and his anti-IMF rhetoric aroused the suspicion of the national business elites, and his economic policy resulted in failure, although its overall degree of interventionism was less ambitious than those of the Asian tiger countries.

Another modern economic idea has to do with growth externalities. It is one thing for the government to force the rate of growth because of purely geo-political considerations, but if there are important externalities between the various channels of economic growth such, an intervention might even be Pareto improving. This assumption is the backbone of modern ideas of endogenous growth.

[10]These policy strategies are described by Niels Thygesen (1982) in general and, for Sweden and the UK, by Assar Lindbeck (1975) and J.C.R. Dow (1965), respectively.

Models of endogenous growth can often have multiple equilibria. Economic policies *can* in such models make the economy "jump" from one equilibrium growth path to another. An "exploitation of economic externalities" would probably have seemed an intelligent characterisation of the policymakers' action at the time. According to such a view, many production processes are interdependent in such a way that the machinery and human capital investments of individual firms and workers could appear profitable only if complementary investments were undertaken by other firms.[11] In the Finnish context, this was obvious after the war, since the country's two economic pillars, the forest industry and the metal industry, were obviously dependent on each other. The forest industry, with its paper and pulp sectors, was for a long time the main motor for export incomes, and the metalworking industry grew in a symbiotic relationship to that sector. It was typical in the 1950s and 1960s that the ten largest export firms between themselves generated almost half of the country's export incomes.

Some other historical contingencies probably contributed to a favourable outcome. There was a nationalistic and meritocratic civil service in place, and the prestige and strength of this bureaucracy was largely due to the country's "autonomy" period under Russian rule. At that time, its legalistic tradition provided a protective shield against the imperialistic aspirations of Russian politics. This provided for a meritocratic self-esteem within the bureaucracy, so that it saw itself as a bearer of national success, something that probably weakened any aspirations for individual optimisation through corruption.

Finally, as we emphasised in the Introduction, there was the remarkable external challenge, in the form of the Soviet Union, that concentrated minds and wills. For investors and capital owners, it meant that any strategy for growth would have to cater to the workers as well, lest the appeal of Communism increase to a dangerous extent. For policymakers, it was clear that the country could not really afford an economic failure. In game-theoretic terms, it might have changed the payoffs in a way that made today's sacrifices for tomorrow's high prosperity a preferred alternative.

We illustrate this with a game-theoretic argument that captures the effect of this external challenge.[12] Suppose there are two industries in the economy and suppose they both can either invest a lot or just seek short-term rents by influencing policymakers. If there are productive externalities in investment, the payoff table might look like those depicted in Table 2.

Table 2 Payoffs of two industries, no external threat

	Industry 2	
Industry 1	Seek rents	Invest a lot
Seek rents	Poor, Poor	Excellent, Miserable
Invest a lot	Miserable, excellent	Good, good

We assume that the outcomes are ranked by both parties in the same way: "Excellent" is best, "Miserable" is worst and "Good" is in between. The Nash equilibrium of such a game is "Seek

[11]The successful South Korean and Taiwanese experiences are analysed precisely from this perspective by Dani Rodrik (1995).

[12]This argument is based on Vartiainen (1999*b*).

rents", "Seek rents", which does not yield a Pareto efficient outcome. However, suppose now that there is an external threat that might lead to a loss of national sovereignty unless economic growth is high. Suppose also that sufficiently high growth can only be achieved if all industries invest a lot. The payoff matrix of the transformed game might then look like the one shown in Table 3 (assuming that the loss of sovereignty is as bad as the "Miserable" alternative). Since the somewhat worse outcome now became miserable for all parties, the Pareto-efficient outcome is now a Nash equilibrium.[13]

Table 3 Payoffs of two industries, with external threat

	Industry 2	
Industry 1	Seek rents	Invest a lot
Seek rents	Miserable, Miserable	Miserable, Miserable
Invest a lot	Miserable, Miserable	Good, good

Thus, one equilibrium of this transformed game is "Invest a lot", "Invest a lot". This example might seem naive, but it captures the idea of how an external threat can improve the economic outcome by establishing a sense of national urgency. It is, of course, a factor that could not and should not be used as a basis of regular policy recommendations. One would not in general like to live in a world that is so unsecure that economic outcomes would have to be legitimated by external security threats.

Finally, although the above example was constructed as a game between two industries, the main social contract was explicitly and implicitly struck between organised labour and the business community, with the State acting as a mediator. As we have described above, Finnish corporatism had from its outset in the first half of the 20th century acquired a "conservative", pro-business character. After the outcome of WWII, a political realignment occurred. The older generation of politicians was discredited, and the trade unions as well as the political Left were vindicated. In such a situation, it became a political imperative to forge a social contract in which workers would accept the need for wage moderation so that firms would have the incentives to invest. The key to such a mutual understanding was in the promise of higher prosperity tomorrow. The development of basic export industries thus became a general objective for economic policies, accepted by all the main parties in government. This also required the inclusion of central trade unions into the Finnish system of corporatist policymaking. We will describe this aspect of the Finnish growth model next.

4 The labour market and functional income distribution

A volatile economy In the previous section, we outlined the Finnish growth model, based on pragmatic interventionism and co-operation between the state and the private actors. In this section, we take a closer look at the labour market, since labour market corporatism has been one crucial part

[13] So is the pair "Seek rents, seek rents" as well, of course.

of the "social contract" on economic growth. As we explained in the last section, Finnish economic policymaking reflected an intertwining of the State and business elites.

Postwar economic interventionism thus acquired a "conservative" character. Fiscal policy never became Keynesian in the sense that it would have been used to stabilise business cycles. Attitudes towards such a form of interventionism were reserved, and any form of public borrowing was treated with suspicion. Central bank financing of the public sector was explicitly rejected on legalistic grounds.[14] Although the public sector ran a solid structural surplus throughout the 1950s and 1960s, cyclical troughs would at times have required some short term borrowing since the public sector was throughout that period even an important investor. Whatever their political colour, most governments were quite reluctant to engage in such deficit financing (Pekkarinen and Vartiainen, 1995).

As described by Pekkarinen and Vartiainen, fiscal policy became in these circumstances pro-cyclical in an endogenous way. Volatility in export incomes was a key source of cyclical shocks, but these shocks were reinforced by domestic policy reactions. When export growth was strong, incomes grew rapidly throughout the economy, and the State's tax incomes were boosted accordingly. In such cyclical upswings, even discretionary spending usually accelerated: it was difficult for policymakers to argue against spending increases when new spending seemed to be legitimated by greater tax revenues in a "natural" way. By the same token, when economic growth faltered and tax revenues stagnated or even decreased, it was typical for the government to reach for austerity measures[15].

Thus, conservative attitudes towards public borrowing contributed to a volatile GDP growth path. Monetary policy was not very well suited for stabilisation purposes either. The monetary policy reaction function was not as clearly pro-cyclical as the fiscal policy one, but it did probably not stabilise the economy either (Vartiainen and Vredin, 1994). Market-driven interest rate instruments in the modern sense did not exist. Instead, the central bank used a discretionary scale of interest rates for central bank credit to the banks. These borrowing terms at the discount window were set separately for the main banks, so that the banks could borrow at low discount rate up to a quota. Above that quota, the Bank of Finland applied an increasing punitive scale of interest rates.

With such a setup, it was in general not possible to dampen an export-led boom, since high export incomes usually translated into a generous liquidity situation and the banks rarely needed any discount window borrowing. They typically became more dependant of central bank credit at the end of booms, so that the dampening effect of monetary policy usually occurred as the economy was shifting from boom to bust. The accommodating nature of monetary policy was in Finland operative through this intricate relationship between the private banks and the central bank: during a boom, banks typically engaged in a lending spree, and the central bank had to in general accommodate their demand for central bank credit once liquidity dried out. The alternative would have driven many debtors into bankruptcy, and possibly altered the relative market positions of the big banks substantially. Deposit interest rates were not used very actively to steer aggregate demand, and the strategic interplay between private banks and the central bank was the key arena of monetary policy.

[14]Such a rejection may seem more natural now but it was certainly atypical in the Keynesian era.

[15]This pro-cyclical pattern is documented by Jukka Pekkarinen and Juhana Vartiainen (1995) who show that the discretionary component of fiscal policy invariably moved in the same way as the automatic component. This pattern was particularly clear in the 1950s and 1960s but quite clear even afterwards.

Incomes policy for economic and political stability With such political and institutional limitations for stabilisation policy, it became all the more important to manage industrial competitiveness and profitability by other, more direct means. In these circumstances, Keynesian interventionism took the form of repeated devaluations and incomes policies. For many small and open economies, the predominant form of activist, or, in modern parlance, "accommodating" monetary policy took the form of a "soft" exchange rate policy. This was very much the case for Finland as well. Devaluations typically occurred at 10-year intervals (1949, 1957, 1967, 1977-1980). They were usually accompanied by comprehensive "incomes policy" settlements which tied down wage growth for two or three years at least, so that the profitability-enhancing effect of the devaluation would not immediately evaporate. With such a powerful control mechanism for nominal wage costs in place, accommodating exchange rate changes became an extremely potent instrument for adjusting the relative price between tradebles and nontradables.

That instrument required the acquiescence of the worker part of the labour market, of course. But an inclusion of trade union organisations and an encouragement of unionisation served even other purposes, at least in the eyes of key political players. Tho foremost among them was president Urho Kekkonen, who sought to build a solid national consensus on economic and social policy, so that no political contradictions on the domestic scene would undermine the country's thin geopolitical elbow room.

Thus, a political demand for "social corporatism", i.e. social partnership between business, trade unions and the state arose quite naturally out of the country's external and internal challenges. Analogously to other policy areas, even here it was the war economy that initially established the practice of such contacts. Immediately after the war, the nation was confronted with a rampant inflation as well as a stringent war indemnity claim by the Soviet Union. Export growth was soon rapid as well, in particular during the Korea war boom of 1950-1951. In these circumstances, the government, the unions and the business representatives established a kind of improvised incomes policy. Comprehensive agreements on wages and prices were concluded in 1950 and 1951. The aim of such programs was to get inflation in control as well as to avoid industrial conflicts that would have disrupted the promising growth of export incomes.

Trade union and Left representatives were willing to cap the growth of nominal wages as long as the government promised to regulate key prices such as that of milk and those of other necessities. An *Economic Council* had been established in October 1946 to provide one formal arena for this tripartite consultation. Although the Council's formal agenda was to discuss even far-reaching economic planning, a pragmatic consensus soon emerged that limited its role to the crafting of wage and price agreements.

Thus, tripartite social contracts, or what has later become known as "incomes policy", dates from the early 1950s already. At that time, however, the trade unions were still rather weak. The very term "incomes policy" was coined later, in the 1960s, both in Finland and the rest of Europe.[16] In

[16]Landesmann and Vartiainen (1992) argue that this was due to a general labour supply shift in Europe: in the 1960s, the agricultural reservoir of labour dried out, so that labour's bargaining power improved and a direct control of nominal wage costs via an incomes policy became politically attractive. In most countries, however, such attempts failed and could not prevent an accelerating inflation.

Finland, however, the direct control of wages became a prominent economic policy mechanism that has persisted up until today.

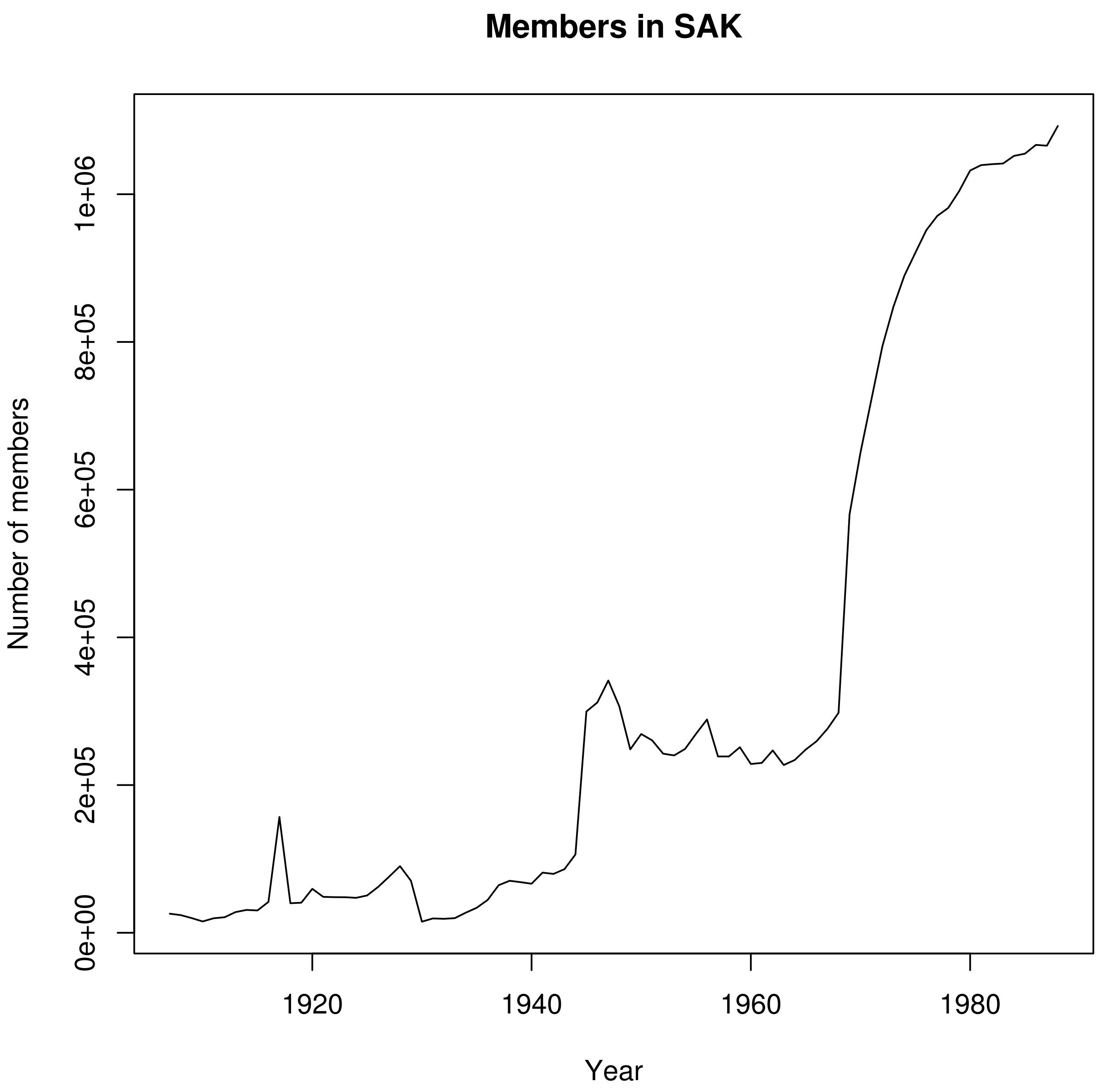
The early stages of this incomes policy were anything but harmonious. It was typical for the 1950s and 1960s that wages were freezed, or that wage increases were agreed upon for only a couple of years. Then inflation would accelerate, possibly aided by a devaluation, and the workers' organisation would eventually start claiming higher wages, and so on. The 1956 general strike became a big political event that was a sign of the disagreements about the proper functional income distribution. Different trade unions were often in disagreement, and many unions were even internally divided between the two main parties of the Left, the Communists and the Social Democrats. The government had to act as a broker between many conflicting objectives: not only those of labour and business, but even those of farmers who had an obvious interest in the prices of necessary foodstuffs as well as those of timber. This early phase of incomes policies was thus a failure in the sense that all of the social contracts eventually ended in wage-price inflation and a new devaluation.

Unionisation took a big boost in the period 1965-1975. This was partly due to a new organisational setup. The two rivalling central trade union organisations merged into one in 1969. At the same time, the country's political alignment became quite favourable to a more established cooperation between social partners and the state. The two political parties of the Left joined a common government coalition after 1966. In these circumstances, unionisation was even actively encouraged by the government. For some state actors, such as President Kekkonen, a forging of such a broad consensus on economic matters probably even played a positive role for the country's external security. Even the 1970s were a period of intense Cold War, and President Kekkonen probably thought that the broadest possible acceptance of economic policy was one safeguard against an expansionary Soviet Union. This was particularly true because a large minority of the workers' organisations was inclined to follow Communist politics: it was surely better to include such radical aspirations into a consensual model of economic policy than to alienate them altogether. Figure 6 depicts the growth in the membership of the main central trade union federation, the SAK, and its predecessors.

At the same time, purely economic factors made it attractive to establish a calmer industrial relations climate. Through a series of trade agreements, the Finnish economy was being gradually integrated into the world economy. This brought large potential benefits but also required that economic policy preserved the country's competitiveness. Import regulation was gradually dismantled, and a sound current account balance became in the 1970s a prominent policy objective (Vartiainen and Vredin, 1994). This necessitated a proper functional income distribution. The employers soon realised that dealing with a large trade union federation resulted in more wage moderation than a multitude of collective bargains with rival unions. Finally, the intellectual underpinning of "incomes policy" was being elaborated upon in the economic literature. The now infamous Phillips curve had become a piece of received wisdom (Lipsey, 1960), and direct control of nominal wage costs was being promoted by British policy advisors (such as Nicholas Kaldor) of Harold Wilson's Labour government in the UK.

In the 1960s, incomes policy became one main arena of economic policy, in which the government as well as business and labour organisations were active. It was used actively in conjunction

Figure 6 Membership in the main central trade union (SAK)



with the aggressive devaluations of the 1960s and 1970s. The policy documents of the time reveal a belief in active devaluations as a means of promoting growth and structural change. Yet even in the 1970s and afterwards, the outcome was not smooth. Wage drift usually accelerated a couple of years after a devaluation, and a new devaluation eventually became necessary. This pattern was of course not unique to Finland. It was not until a proper inflation target was set in the 1990s that this inflationary cycle was broken.

Thus, the Finnish policy model was no unqualified success, in particular as far as stability was concerned. Investment and saving were high on average, but economic downturns were severe even in the 1960s and 1970s. For example, the dramatic increase in the emigration of prime-age workers to Sweden in the 1960s and 1970s was a manifest symptom of such failures. The devaluation cycle showed that there was an underlying disagreement on the proper functional income distribution. On the other hand, the combination of devaluations and even transitory incomes policy agreements meant that the industry's profitability was quite good most of the time. After all, the management of the exchange rate plus incomes policies was potentially a very effective instrument for controlling labour costs, even when that control functioned somewhat imperfectly. Also, the recurring bouts of inflation implied that real interest rates were negative for much of the period from the 1950s through the 1970s: since interest rates were set administratively, increased inflation directly translated into lower and even clearly negative interest rates.

Conclusion on the growth regime: backward or enlightened? With hindsight, it is easy to be quite critical of the Finnish growth regime. The rejection of any kind of public debt led to a crude kind of pro-cyclical fiscal policy. By the same token, a monetary regime that depended on rigid interest rates as well as a continuous bargain between the central bank and private banks was probably not very well suited to sustain economic stability. And, finally, Finland would like many other countries gradually learn that inflationary shocks were not a sustainable way of keeping employment and investments high.

On the other hand, some of these policy choices appear quite "modern" if one wants to see them in a more charitable light. Modern ideas of economic growth emphasise productive externalities, and it is at least superficially easy to see such positive spirals in action in the Finnish case. The capital-intensive forest industry provided a solid demand base for metal and engineering products, and the metal sector in due course established the preconditions for a successful electronics industry.

Furthermore, the "conservative", anti-Keynesian stance can in the light of modern ideas be understood as a commitment to capitalism and private property rights: even if the allocation of credit to industries was anything but market-driven, the policymakers and the society at large wanted to signal a willingness to play by the rules of capitalism. Even the austerity periods can in this light be interpreted as "reminders" of the regime's ultimate commitment to economic orthodoxy, fiscal prudence and the sustaining of investment incentives.

Thus, state interventionism was of a pragmatic character and not advocated as an ideological alternative to capitalism. It was also associated with a determinate endeavour to participate in the international economy. Export growth has been generally accepted as a means of increasing the country's prosperity. It is this combination of ruthless interventionism and conservatism that makes the Finnish case so reminiscent of the East Asian late industrialisers.

The connection with the State and social policy History does not conduct randomised laboratory experiments and we can not and even do not want to engage in too many counter-factual arguments. But we submit the idea that the buildup of social insurance schemes may have contributed to the policy outcome of rapid capital accumulation. More generally, we believe that the state has played a positive role inasmuch as it has brokered a "deal" that has made economic transformation more palatable for organised interest groups and individuals. This "brokering role" can be thought of in macroeconomic as well as in microeconomic terms.

The macroeconomic perspective has to do with the management of distributional conflicts. In Finland, the challenge of postwar politics was to forge a compromise in which the workers' organisations would accept wage moderation "today" in return for higher income "tomorrow".

This is a well-researched issue in dynamic economics. There is a well known dynamic externality associated with the division of the returns of productive investment.[17] It is an endemic characteristic of all economies in which some agents are "large" so that the prices of inputs and outputs are not determined competitively and treated as given parametric constants by the concerned economic agents.

More concretely, if distributional variables such as wages are determined in collective bargains, the *ex post* returns of investment do not in general correspond to the *ex ante* costs in an optimal way. The paradigmatic examples of this so-called "hold-up" problem include the following:

- The case of investment in productive equipment when there is a trade union which bargains about the wage; once the machinery is installed, the bargained wage probably goes up and the union expropriates a part of the return on the investment. This is sometimes seen as one reason for delegating wage bargains to higher-level organisations (Teulings and Hartog, 1998).

- The political acceptance by organised workers of a rate of profit that makes possible a rate of investment necessary for adequate economic growth. If the workers could be convinced that the extra profits lead to extra investment, they would vote for high profits today. It is not clear, however, that the standard institutions of capitalism permit such a "contract". In this light, the State's very direct involvement in the investment process could be seen as a crude but straightforward way of convincing the "workers" of this ultimate policy goal.

These dynamic externalities imply that the incentives for productive investment are in general not optimal and do not lead to an efficient exploitation of investment opportunities. This problem has no easy solution, but it can perhaps be alleviated by state action that guarantees certain rules of and principles of equitable distribution. While the state cannot in a market economy directly determine the final allocation of goods, it can with its tax instruments and other instruments create expectations of fair treatment and an atmosphere which is conducive to mobilisation of the nation's resources.

[17]This dynamic inefficiency of capitalism" literature was initiated by Kelvin Lancaster (1973).

The state can be seen as a kind of broker that ensures that the ex post distribution of resources is such that it corresponds to those incentives that were ex ante necessary to induce the necessary investments. For example, a politically powerful working class may in principle accept a lower level of consumption as of today if this sacrifice can ensure a higher rate of capital accumulation and thereby a higher consumption set in the future.

However, in a private market economy, there is probably no simple contract form that would ensure such a trade off. From the point of view of the working class, the outcome in which the capital-owners either use their extra returns for personal consumption or transfer the profits abroad is a rather plausible scenario as well. In such a situation, the state may be able to intervene in the economy in such a way that high investments become the preferred behaviour of the capital owners. For example, it might ration credit to productive investment and keep interest rates low; or it might tax away a part of these profits and undertake direct public investments into productive capacity; or it might introduce legislation that prevents international transactions of wealth. Such policy measures have been commonplace in the Nordic economic policy regimes after WWII.

It is, however, the "microeconomic" challenge of making economic transformations acceptable that has a more direct link to social insurance.

There is an inevitable individual uncertainty associated with economic transformations and economic restructuring. In this case, an even more direct relationship between social insurance and investment can be posited. Suppose that there is a large amount of individual investment projects that can be undertaken by future to-be-entrepreneurs and suppose, quite plausibly, that the average return of these projects is high enough to meet the average cost, so that, on average, the projects should be undertaken (supposing that their number is so large that a law of large numbers applies).

However, the return of each individual project is a random variable, and, with risk-averse individuals, the expected utility of the project is less than the utility of the expected return. This implies that the number of realised projects will be less than the optimal one if there is no social security network. The formal interpretation of social security in such a model is that of an insurance pool: by setting an appropriate tax and social insurance system, the state can increase the expected utility associated with failure and thereby increase the amount of investment. This argument is simple but it provides a theoretical support for a safety net as a factor that enhances economic growth and development.

To put it simply, you are more likely to become an entrepreneur if you are not drained down the gutter even if you fail. One nice formalisation of this idea is presented by Hans-Werner Sinn (1995). In Sinn's model, the welfare state is identified with an insurance device that makes lifetime careers safer. Protected by the welfare state, people engage in productive and risky activities that they would otherwise not undertake. Sinn shows that this innovation-enhancing effect can even become too strong, so that people take too much risk and fail to take such necessary measures that would effectively insure them against adverse conditions. There is consequently an optimal rate of redistributive taxation.

Sinn's argument has to do with the optimal level of redistribution in an economic environment that is stable but where individual risk taking determines average income. But there is another ver-

Table 4 The argument of Fernandez and Rodrik

	Before		After	
	Traditional sector	Modern sector	Traditional sector	Modern sector
Size of labour force	60	40	50	50
Income per capita	100	100	90	120
Average income	100		105	

sion of the argument that applies to structural change and economic transformations. Structural change is always associated with uncertainty and the possibility of completely unforeseen contingencies, partly due to changing bargaining position of different agents. The state, with its multidimensional policy tools, is perhaps best equipped to ensure that the final economic outcome is not outrageously disadvantageous for any particular group – which, in turn means that no particular group need be vehemently opposed to structural change and development.

To fix ideas, suppose that an economy could enhance average productivity by reforming its institutions (say, it might liberalise financial markets, end agricultural subsidies or abolish price rationing in some market). Suppose, reasonably, that such reforms increase the economy's average income. However, the final general equilibrium outcome of a process of structural change cannot be accurately predicted. Even if one might have an idea of what some macroeconomic variables might turn out to be, nobody can predict for sure the changes in individual allocations that will result. Since most individuals are risk-averse, they might consequently adopt a negative attitude towards structural reforms, even if these reforms would beyond reasonable doubt increase average income. Thus, many voters would ex ante want to vote for parties that oppose modernisation and reforms. Such attitudes are commonly ascribed to irrationality and backwardness, but the risk aversion argument suggests that they can be perfectly plausible in the light of the theory of rational choice under uncertainty.

Thus, risk aversion can be an obstacle to economic development. A less obvious result of the political economy literature suggests that reforms can be hampered even if all agents are risk-neutral. This idea has been nicely formalised and analysed by Fernandez and Rodrik (1991). In their model, the reform in question is trade liberalisation. Yet the intuitive idea applies more generally and can be simplified in the following way. Suppose that there are two sectors in the economy, one of which (the "modern" sector) stands to benefit from modernisation (like trade liberalisation or comprehensive industrialisation) while the other (the "traditional" sector) is going to lose.

In the initial state, the majority of the economy's manpower is located in the traditional sector. Moreover, income is originally the same in both sectors (and same across individuals), whereas the modernising reform would increase income in the "winner" sector and shrink it in the "loser" sector. The crucial but plausible assumption, however, is that the modernising reform will also lead to a transfer of people from the traditional sector to the modern sector. Let the economic data of this example be summarised in the Table 4.

Thus, the modern sector people gain from modernisation, since their income grows from 90 to 120. The reverse is true for the traditional sector individuals, as their income decreases from 100 to 90. Furthermore, 10 people shift from the traditional sector to the modern sector. It is ex ante impossible to know who those shifters will be.

How will this economy's people vote if their opinion is asked for in a referendum on trade liberalisation? Suppose that all agents are fully rational and completely aware of the data of the above table. A traditional sector person understands that he or she will have a probability of 1/6 of increasing his or her income from 100 to 120. With probability 5/6, however, income will shrink by 10 units. The expected gain is therefore $(1/6)\times(20)+(5/6)\times(-10) = -5$ <0. Thus, the traditional people will vote against the reform. Since they form ex ante a majority of the voters, the reform will not gather a majority of votes (the modern sector people will obviously vote for the reform, since their expected income change is positive). This is the outcome of the democratic process even if reform increases average income and even increases the income of the majority of people.

A salient feature of this model is that if the reform is eventually passed, it will turn out to be popular afterwards: only a minority of voters would want to return to the original state of affairs. Even in this case, there is an obvious and constructive role for public redistribution of income. If the state can put up an income redistribution scheme that does not waste too much resources, it can ex ante introduce legislation that will ensure that the losers will be a minority (or even that there are no losers).

To sum up, we believe that a state power that is to some extent committed to an egalitarian outcome can make economic growth and structural transformation politically possible. This is particularly true of countries that have had a clear outward orientation. Authors like Dani Rodrik (1998) have convincingly argued that the relationship between globalisation and the welfare state is a positive one. This conclusion turns out to be quite robust to various statistical tests and alternative specifications of the statistical model. Rodrik presents a simple theory to explain these facts, based on risk aversion. Open economies are more exposed to the uncertainty generated by volatile export markets. In particular, economies whose export products are concentrated in a few markets (as is typically the case of Finland) suffer from greater uncertainty at the individual level. A rational political reaction to this is to build up a welfare state that redistributes income and by these means effectively insures people against uncertainty of factor incomes. Such reinsurance can take many forms. In any given period, it can entail redistribution from the currently successful to the currently unsuccessful. But a large public sector will also enable insurance from one generation to another. Suppose that an entire economy is largely dependent on the international price of a crop, say. Then, if there are large and long-term swings in this price, a welfare state will also enable redistribution along the temporal axis.

5 Welfare-state institutions

We argue above that the history of Finnish economic development in the 20th century can be seen as a series of compromises aimed at managing conflicts between labour and capital in order to facilitate growth. The evolution of Finnish welfare-state institutions can in turn be seen as a series of "packages" of legislation and arrangements intended to manage social risks. In many cases these packages were in fact driven by the very same compromises that were intended to solve conflicts in the labour market.

Before we outline one account of the history of the welfare state in Finland, we need to discuss briefly some problems associated with describing the historical record. Finnish welfare-state institutions were legislated mainly during a period of about 50-60 years and are still being implemented. There is a great danger of misrepresenting *ex post* the reasons behind each individual law or package of laws in an attempt to account for the developments seen through a currently popular social-policy or economic theory. On the other hand, modern theories of the welfare state are aimed at understanding the reasons behind institutional developments.

For instance, in his well-known textbook, Barr (2004) accounts for any welfare-state institutions as solutions to market failures driven by asymmetric information or moral hazard. Finnish politicians in the 1960s were undoubtedly unfamiliar with these notions – the theories of information failures were being developed by Arrow (1963) and Stiglitz (1974) at the time. It is perfectly legitimate to describe unemployment insurance in terms of solving the problems of moral hazard associated with endogenous probabilities even if the legislation made no mention of these concepts. It is, on the other hand, important to bear in mind that interpreting ex post the decisions made in light of modern theories is not to give an account of the ways in which the decisions were thought of and motivated *at the time*.

Kettunen (2001) critically discusses the idea that Finland was late in becoming a Nordic welfare state. Härö and Kalimo (2001) briefly discuss the history of social provision in Finland.

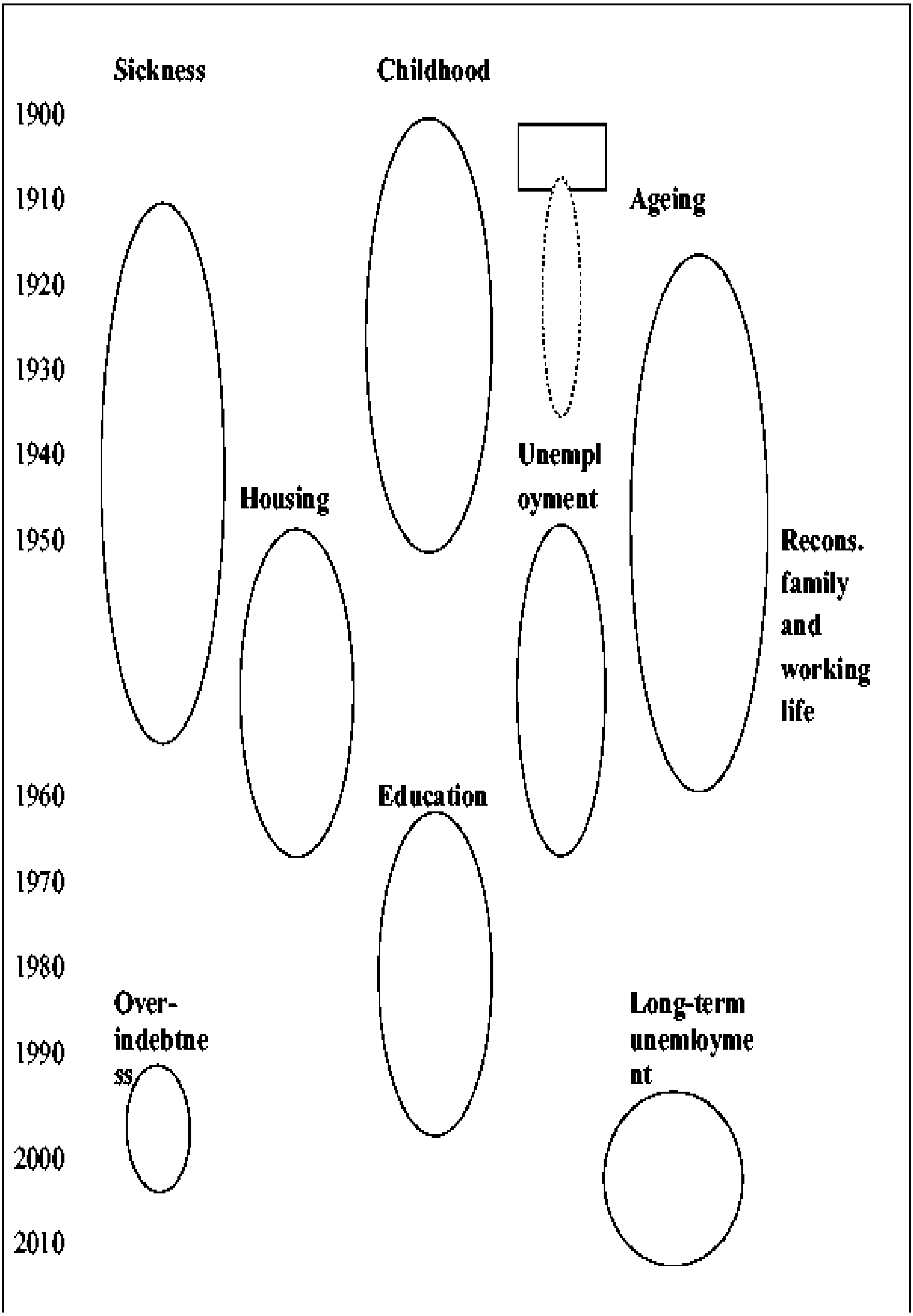
Our account of the history of Finnish welfare-state institutions is based on when these institutions were legislated.[18] We have in Figure 7 grouped the main sets of risks together and show in which periods these risks were brought into the welfare-state framework. The earliest risk groups were the sick, young children and the elderly.

Probably the first modern welfare-state arrangement was occupational accident insurance in 1895 (*tapaturmavakuutus* in Finnish). The inter-war period witnessed the build-up of the municipal hospital network and specialised hospitals (such as mental asylums and tuberculosis hospitals). The state and regional hospital system was legislated after the second world war, at which point the accident-insurance system was reformed. In the 1960s Finland introduced health-related early retirement (1962; *työkyvyttömyyseläke* in Finnish) and general health insurance legislation that included both the active and passive populations. The legislation on public health in 1972 and occupational health care in 1978 clarified the responsibilities of various parts of the health system. Private health care costs were tax deductible up until the 1990s and private health care is still in part subsidised by central government through the public sickness insurance system. This mix of public provision of a service *and* a public subsidy, in this particular instance through a tex deduction, turns out to be quite characteristic for Finnish welfare-state arrangements.

Infants and young children were another risk group to be targeted by risk management systems. The earliest "institution" aimed at this group were mid-wives, whose national and state-controlled network was legislated after the first world war. The network for pre-natal care (Finnish *neuvola*) was established after the second world war along with control of abortions (which became legal in

[18] The information on welfare-state legislation in taken from http://www.finlex.fi.

Figure 7 The evolution of social risk management in Finland 1900-2005



the 1970s). At this point child births were moved out of private homes and into hospitals. Child-related public transfers started with tax deductions for children in 1921, maternity packages in 1934 and maternity allowances in 1941. A universal child allowance was established in 1948 to subsidise families with children regardless of income level. Child-related tax deductions were an important part of public transfers to children until they were abolished and in part transferred into child allowances in the early 1990s. Maternity leave was established as part of the sickness insurance law in 1963 and substantially lengthened in the 1970s. Parents of a child who suffers from a long-term illness started to receive public support (Finnish *hoitotuki*) in 1969. While the school system probably needs to be thought of differently, it is arguable that free school lunches were an early part of the risk management system aimed at small children, securing adequate diets for these children.

The elderly became a separate group early on (being first part of the set of risks associated with sickness). The first stage of risk management aimed at the elderly consisted of the elderly wards in municipal pauper's houses (Finnish *köyhäintalo*), later developed into separate homes for the elderly. Along with such homes the 1950s saw the development of municipal open care for the elderly with service delivery at home. The public sector had their own pension arrangements early on (separate for state and municipal employers), but the national pension laws of 1937 and 1956 extended for the first time pension insurance to all elderly persons, even if the 1937 law was fully implemented only after the second world war. Many private employers had arrangements for elderly employees, including some private pensions. The pension laws in the 1960s extended mandatory pension arrangements first to private sector employees and then to state and municipal sector employees and farmers. These mandatory pensions were driven both by changes in the population age structure, increased economic mobility and structural changes in the economy, all of which required coordinated pension policies rather than reliance on voluntary efforts by employers.

The education system was developed in stages. The first law about organising primary education came into force in 1866. This law did not make primary education compulsory, but it contained provisions by which central government could subsidise municipal primary schools. Basic education became compulsory in 1921. Children were obliged to to go to school, or to receive an equivalent education (such as being taught at home or attend a private school), from ages 7 to 12. The organisation of education was left to municipalities. Urban municipalities were granted a five-year period after which all children were to be able to go to school. Rural municipalities, however, had a 16-year transition period, and even after 1937, many municipalities received up to a 10-year stay in implementing the reform. Thus, the primary school system only became nationally compulsory after the second world war.

The primary and secondary education system consisted of separate tracks for academically oriented students and those aiming for vocations training. This was changed starting in the 1960s, with a common school system for all under 15-year olds in a common comprehensive school system. As in many countries, the university system was substantially expanded in the 1960s and 1970s. Students were supported during their studies both by the absence of tuition fees and by income support and subsidised student loans.

The later risk management systems were also driven by structural changes in the economy in the

1960s and 1970s. The large decline in agricultural employment led to a qrapid increase in urban populations which led to a need for housing policies. The increase in the urban labour force and the high level of female labour force participation led to the need for family policies, such as parental leave and formal child care arrangements. Along with subsidised child care, legislated in the 1970s, Finland started in 1980 to pay a transfer to parents of under three year old children who were not in formal child care (Finnish *kotihoidontuki*). In the majority of cases, these children were in their mother's care. Free school lunches, mentioned above, were also part of the risks associated with combining market work with family.[19]

Housing policy was developed starting in the 1960s. This was preceded by the resettlement of refugees from areas lost to the Soviet Union in the second world war. These refugees, mainly farmers from Karelia, were mostly settled in rural areas. The later housing policies were aimed at providing housing to urban populations whose growth was driven by the decline in agriculture. They consisted of tenant protection (the earliest law was legislated in 1925), various publicly subsidised or guaranteed loans for housing, and rental subsidies.

The increased problems of unemployment – given that a higher fraction of the active population was employed outside of the agricultural sector – led to demands for unemployment insurance. Unemployment benefits first became common in the 1960s but were extended to include an earnings-related part in the 1970s, at which time also labour market training was also introduced (although active labour market programmes have not in Finland been as extensively used as in the other Nordic countries). Finland also introduced in the 1970s an unemployment pension, which targets the elderly long-term unemployed when they run out of unemployment benefits. Laws that guarantee wages in case of employer bankruptcy and the various employment-protection measures were all part of the packages that targets unemployment risks.

Social policy in the 1990s concentrated on attempts to coordinate overlapping risks, some of which were exposed by the severe recession on the early 1990s. This recession led to massive unemployment and with time to a fairly large group of long-term unemployed, a new problem. The recession was associated with large declines in various financial assets and many business failures, which resulted in substantial numbers of persons with large negative net worth. In the absence of the possibility for natural persons to declare bankruptcy, these "over-indebted" persons are another new risk group whose problems needed to be – and were, in part – met during the 1990s.

Many overlapping risk management systems generated very high marginal rates of benefit withdrawal, which was considered detrimental to work incentives. Income support, intended to be the last-resort benefit, became an important element in providing income for the long-term unemployed, a group whose problems have still not been adequately dealt with. While many of the reforms – detailed in, for instance, Laine and Uusitalo (2001) – were quite controversial, they were minor in the sense that they did not fundamentally change the risk management system for any group.

This brief history of welfare-state institutions sees them as laws and arrangements targeted at

[19]While not a national policy, the importance of school meals in facilitating market work for parents of young children is underlined by the fact that the city of Helsinki provides free meals to children, delivered at children's play grounds, during the summer leave, on the theory that children need to eat while their parents are at work even in the summer months.

managing particular groups of social risks. The earliest risks groups belonged to the passive population (the sick, the elderly, young children), the somewhat later to the active population (schooling, housing, unemployment, family policy, child care) and finally some new risks (long-term unemployment, the over-indebted).

Telling the history of social policy institutions in terms of social risk management has many benefits. For one thing, one type of "risk" is often tackled using several different tools. For instance, Finland provides municipal child care, subsidises parents who place children in private day care and subsidises parents who stay home with under three-year old children.

The subsidy of home-staying parents is the result of a political compromise between social democrats and the centre (former agrarian party), since it provides for rural families where both public and private day care may be sparse. It is indicative of a general tendency in Finland to provide many alternative, functionally equivalent, solutions to the same set of risks. Thus, Finland tends to both provide public health services and to remunerate the use of private services and to provide both earnings-related and flat-rate unemployment benefits depending on the length of labour force attachment and whether or not one belongs to a labour union.

6 Socio-economic outcomes

In this section, we examine the inequality of selected socio-economic outcomes. We focus on the inequality of income, both across time and across nations, on the extent of intergenerational mobility in Finland compared to other nations and on selected aspects of gender equality in the labour markets. The main focus for these outcomes is on fairly recent history, the chief reason for which is that there are relatively few data sources from earlier periods. The main exception to this is the series on income distribution, which extents back to 1920. However, data on income distribution that satisfy modern conventions of measurement are available only starting in 1966.[20]

Cross-sectional income inequality Finland has one of the most equal distributions of income in the world, or at least among the OECD countries Atkinson et al. (1995); Gottschalk and Smeeding (2000). The conventional wisdom of how this came about, based in large part on Uusitalo (1989), suggests that differences in the inequality of disposable income declined very rapidly between 1966 and 1976 and stayed more or less flat until the early 1990s. Inequality started to increase after 1994 and is now at about the same level that was measured in 1971.

Little is known of income inequality prior to 1966, but the decline that is registered in the late 1960s and 1970s is sometimes interpreted as the tail of a long secular decline in inequality. In the absence of micro-data covering earlier periods, speculation was the chief option. The first modern, nationally representative Household Budget Survey (with income information from various registers

[20] See Atkinson et al. (1995), Atkinson et al. (2002) and Expert Group on Household Income Statistics (The Canberra Group) (2001) for basic references on definitional issues. There are a few studies of historical income differences in Finland, including Hjerppe and Lefgren (1974), Brummert (1963) and Fougstedt (1948), although only the first is concerned with more long-run trends. See also Morrisson (2000).

added on) was gathered in 1966, with new data collected in 1976, 1981 and 1985. These surveys were the basis for Uusitalo's work and explain why his series start in 1966. An Income Distribution Survey started in 1987 and has been collected annually since then and is now considered the most reliable source of income information.

However, ever since the advent of modern income and wealth taxation in 1920, Statistics Finland has collected and published tables showing the distribution of taxable income, or similar concepts, on a fairly frequent basis. While far from perfect, these data allow for an examination of income distribution trends covering much of the last century. The tale those data tell is not one of a long secular decline in inequality that ended in the late 1970s. Rather, they suggest that inequality peaked in the late 1960s after two decades of increase to decline to about the same levels in the early 1980s (Eriksson and Jäntti, 1998). The data in Figure 9 are drawn from the Luxembourg Income Study, the best available source for international income inequality comparisons. The patterns in the figure suggest that Finland has a relatively low level of inequality.

Intergenerational socio-economic mobility Studies of annual income inequality are often criticised by economists for capturing only an incomplete picture of inequality. Many economists are interested in the inequality of very long-run, or permanent income. There are several ways this interest can be motivated. For instance, if all persons had the same long-run income but these were subject to random transitory shocks, income differences would disappear when measured in terms of long-run averages. Countries would appear to have very different levels of inequality if the transitory shocks varies across countries, even if long-run inequality were equally low in all countries.[21]

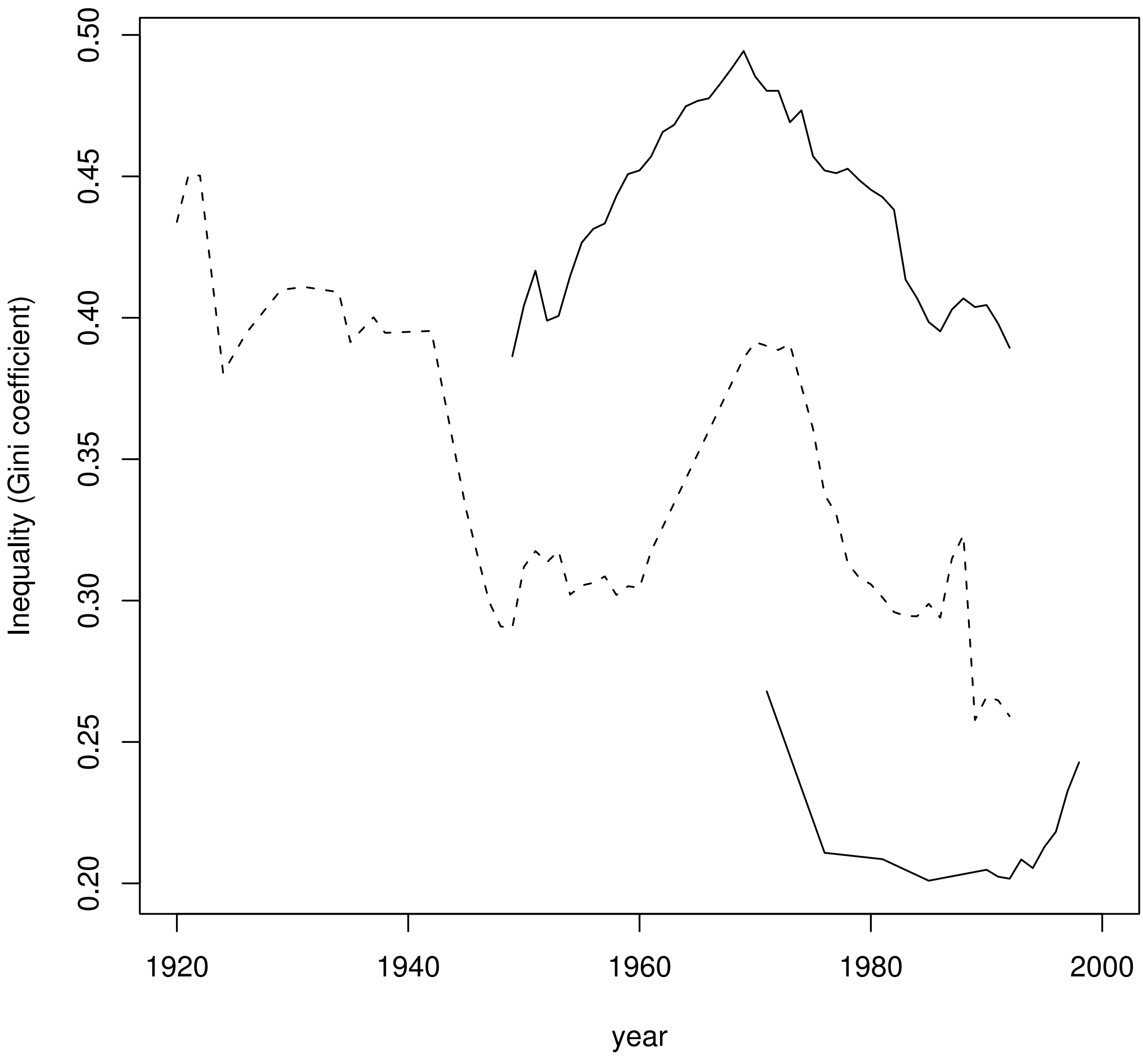
We are unfortunately not aware of any studies that allow the study of disposable income inequality in Finland averaged over several years, or indeed, of intra-generational income mobility. We can only refer to evidence from other countries. The most interesting for our purposes is the comparison of the other Nordic countries – Denmark, Norway and Sweden – with the United States by Aaberge et al. (2002). This study, which looks at 11-year averages of different income concepts, including disposable income, suggests that while differences between the United States and the Nordic countries diminish slightly because of the time-averaging of intra-individual incomes, this effect is not very large. Moreover, there is little evidence to suggest that the greater extent of U.S. cross-sectional inequality is compensated for by a higher degree of intra-generational mobility.[22]

An another, even more long-run perspective is to examine intergenerational socio-economic mobility. There are several approaches to this. There is a very strong sociological research tradition on intergenerational mobility, which roughly speaking is concerned with intergenerational mobility measured either in terms of *class* or in terms of occupational status. The former is conducted using discrete contingency tables (Erikson and Goldthorpe, 2002, 1992) and the latter uses a continuous

[21] It does not immediately follow that short-run income differences are ethically unimportant. For transitory income differences not to be welfare-reducing, persons need perfect knowledge of their permanent income and must be able to smooth their income using perfect capital markets. Neither of these conditions is likely to always be met.

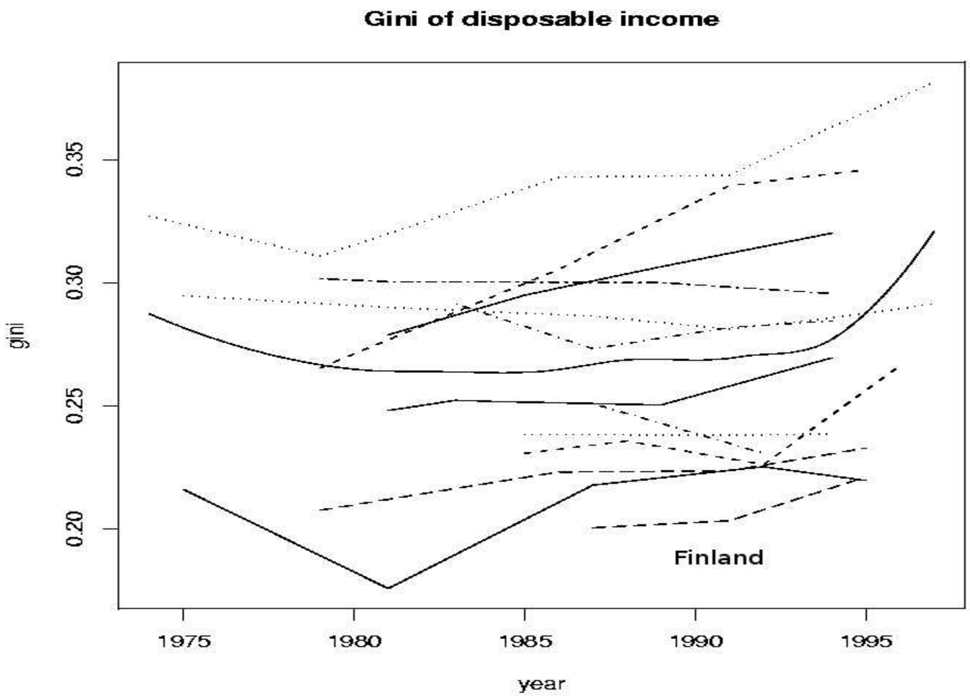
[22] The other international comparisons of over-time income inequality and income mobility we are aware of are papers by Richard Burkhauser and coauthors (Burkhauser et al., 1998; Burkhauser and Poupore, 1997; Burkhauser et al., 1997) on Germany and the United States.

Figure 8 The distribution of income



Sources: Authors' calculations from published tax records on grouped income distributions (Statistics Finland); the Household Budget Survey micro-data for 1966, 1971, 1976, 1981, 1985 and 1990; and Income Distribution Survey Microdata for 1990-1997.

Figure 9 The Gini coefficient in selected industrialised countries trends in disposable income



Note: The times series here consist of a "smoothed" set of estimates, using Generalised Linear Models against time to show the level and trend in inequality in the LIS countries.
Source: Authors' calculations from the Luxembourg Income Study database.

index of occupational prestige (see e.g. Ganzeboom et al., 1991; Ganzeboom and Treiman, 1996).

Economists have long been interested in measuring the mobility of income. Here, too, there are different approaches. One approach is to use data on two successive generations – most commonly on fathers and on their sons in adulthood – and examine how closely related these are (using Galtonian regressions or mobility matrices). Another approach is to examine how closely related the incomes of siblings are. The latter approach captures also such socio-economic effects on offspring income which are unrelated (or only weakly related) to parental income. (Solon, 1999, 2002)

We do not have comparative evidence of the type compiled by Erikson and Goldthorpe (1992) on how Finland lines up with respect to class mobility. We do know, however, from roughly comparable research how Finland lines up on both intergenerational income correlations, on intergenerational status correlations and on sibling income correlations. For instance, in Table 5 we show all estimates compiled by Björklund and Jäntti (2000) (see also Solon, 2002). These suggest that Finland had a fairly low degree of intergenerational earnings persistence, that is, a high degree of intergenerational mobility. That the economic position of the offspring is not highly dependent on origin is in general considered to be a good thing.

We show in Table 6 intergenerational correlations in occupational prestige, from Björklund and Jäntti (2000) but provided originally by Ganzeboom and Treiman. Although this set of countries is quite small, Finland again has a correlation that is in the low end of the range observed, suggesting a high degree of mobility even in occupation prestige.

The results for sibling correlations are fairly similar. Finland, along with other Nordic countries, tend to have a low degree of family background persistence.[23] While research in this field is really taking off now, due to the availability of long panels in several countries, the evidence hitherto suggests that Finland has a fairly high degree of intergenerational mobility.

Gender wage differences There are many aspects of gender equity that could and perhaps should be discussed. For instance, Finnish women have "historically" (that is, from the time modern labour market statistics became available in 1959) had high levels of labour force participation. It is possible that this has not been accompanied by gender equality in the distribution of household work. If that were the case, it could be argued that women are in fact worse off than men, since they get to enjoy less leisure.[24]

We focus here on women's rate of hourly earnings relative to men. Finnish women do fairly well in the labour market relative to men when labour market position is measured in terms of *annual earnings*, since part-time work, even for women, is not very common in Finland compared to other countries. A possibly better measure of gender equality, however, is to take earnings per hour worked. Waldfogel (1998, Table 1, p 140) suggests that on this measure, Finland does not do that well. Sweden, Australia and Norway top the list with female-male hourly earnings ratios of 90, 88 and 87 percent. Finland is 7th on this list of 14 countries, with women earning per hour 78 percent of

[23] See Solon (1998), Solon (2002), Björklund et al. (2002), Björklund et al. (2004) along with the introduction to that latter volume, (Corak, 2004).

[24] See, however, Juster and Stafford (1991).

Table 5 Intergenerational correlations of long-run income or earnings between fathers and sons

Authors	Country and Data set	Measures of income	Sample size	Age of sons	Estimate of ρ	Comments
Solon (1992)	United States, PSID	1. Annual earnings 2. Hourly wage 3. Family income	348 father-son pairs	25-33	1: TA: 0.41 (0.09) 1: IV: 0.53 (0.14) 2: IV: 0.45 (0.10) 3: IV: 0.53 (0.12)	S. showed that the TA-technique provides a downwards biased estimate and the IV-technique an upwards bias.
Zimmerman (1992)	United States, NLS	1. Wages + salaries 2. Hourly wage 3. Duncan index of status	876 father-son pairs, but lower in most estimations	29-39	1: TA: 0.54 (0.08) 1: MM: 0.40 (0.05) 2: TA: 0.39 (0.07) 2: MM: 0.38 (0.04) 3: TA: 0.33 (0.08)	A. The presented estimates are elasticities, which are close to the correlations that are reported in the paper. B. Z. also presented IV estimates that are close to those obtained by TA and MM techniques.
Altonji and Dunn (1991)	United States, NLS	1. Family income 2. Annual earnings 3. Hourly wage	675-735 father-son pairs	29-39	1: TA: 0.32 1: MM: 0.36 2: TA: 0.22 2: MM: 0.39 3: TA: 0.34 3: MM: 0.42	A & D argue that the MM-estimates are more reliable than the TA-estimates.
Atkinson (1981), Atkinson et al. (1983)	Britain, a sample from York	1. Weekly earnings 2. Hourly earnings	307 pairs of fathers and sons	Probably in their 40s.	1. 0.36 2. 0.43	Probably understated because of homogeneous samples.
Dearden et al. (1996)	Britain, National Child Development Survey	Weekly wages	1565 pairs of fathers and sons	31	IV: 0.59 (0.07) TSIV: 0.39 (0.03)	The presented estimates are elasticities.
Corak and Heisz (1999)	Canada, register data	1. Annual earnings 2. Annual market income	≃ 350 000 pairs of fathers and sons.	28-31	1. TA: 0.13 2. 0.19	A. The estimates are elasticities. B. Non-linearities implying greater mobility at the lower end of the distribution were found.
Jäntti and Österbacka (1995)	Finland, register data	Annual earnings	22 324 pairs of fathers and sons	Average age: 34.8	TA: 0.22	
Couch and Dunn (1997)	Germany, German Socio-Economic Panel	1. Annual earnings 2. Annual hours 3. Years of education	272 pairs of fathers and sons	Average age: 22.8	1: TA: 0.12 2: TA: 0.17 3: TA: 0.24	The sons are younger in this sample than in the other studies using US data which might explain that the earnings correlation is lower.
	United States, PSID	1. Annual earnings 2. Annual hours 3. Years of education	322 pairs of fathers and sons. Larger samples of education.	Average age: 24.9	1. TA: 0.17 2. TA: 0.19 3. TA: 0.42	
Wiegand (1997)	Germany, German Socio-Economic Panel	1. Monthly earnings 2. Annual earnings	1. 102 2. 130 pairs of fathers and sons	25–33	1. TA: 0.29 (0.07) IV: 0.36 (0.15) 2. TA: 0.10 (0.08) IV: 0.20 (0.27)	The presented estimates are elasticities.
Björklund and Jäntti (1997)	Sweden, Level of Living Surveys	1. Annual earnings 2. Market income (incl. income of capital)	400 sons, 500 fathers	29-38	1: TSIV: 0.23 (0.07) 2: TSIV: 0.29 (0.09)	A. The Swedish data set lacks information on fathers' age which is not controlled for in the estimations of neither the Swedish nor the US ρ. Adding such controls for the US raises the correlations by around 0.05. B. The method and data set differ slightly from the one used by Solon, but is the same for both countries.
	United States, PSID	Annual earnings	About the same as Solon	28-36	TSIV: 0.33 (0.10)	
Gustafsson (1994)	Sweden, 222 Stockholm boys.	Market income	185	25-41	OLS: 0.14 (0.07)	A. The estimates are elasticities. B. As emphasised by G., the estimates are downwards biased for two reasons: fathers' incomes are noisy because they only exist for one year, and the sample is homogeneous. A correction for the former problem done by G. suggests that the coefficient should be in the range 0.17-0.20.

Note: Data sources: PSID: Panel Study of Income Dynamics. NLS: National Longitudinal Study. Econometric technique: TA: time averaging. MM: Method of Moment estimation. IV: instrumental variable technique. TSIV: Two-sample IV (see Björklund and Jäntti (1997) and Dearden et al. (1996)). OLS: Ordinary least squares using annual data for fathers.
Source: Björklund and Jäntti (2000).

Table 6 Intergenerational correlations of occupational status between fathers and sons

Country	Sample size	Estimated correlation
Austria	452	0.500
Finland	388	0.342
Germany	2964	0.419
Ireland	1793	0.491
Italy,	372	0.372
Netherlands	2246	0.404
Northern Ireland	2250	0.410
Switzerland	380	0.474
United Kingdom	6895	0.351
United States	20490	0.343

Note: The sons are 21–64 years old, and must work at least 30 hours a week to be included in the sample. The ISEI status scale is used as the measure of status. Source: Ganzeboom and Treiman, quoted in Björklund and Jäntti (2000)

what men earn, between New Zealand (81 percent) and Belgium and the United States (75 percent).

The normative and political interpretation of the gender gap of course depends on its statistical determinants. It most of it is explained by gender differentials in productive characteristics like education or age, the problem is one of education, differential participation rates within age groups or in general a lack of equal opportunity. If, on the other hand, the gap cannot be explained by productive characteristics, it can be interpreted as potential discrimination.

A later comprehensive study of the gender wage gap among full time wage earners confirmed the fact that Finnish women on average earn on average about 80 per cent of men's earnings (Vartiainen, 2002). Blinder-Oaxaca type decompositions of the gap show that the overall wage gap of about 21.5 per cent cannot be accounted for by individual characteristics, since age and educational qualifications are rather similar for men and women. When industry and occupational qualifications are included in the regressor matrix, the unexplained part shrinks to about 50 per cent of the gross differential. Thus, roughly, half of the gap can be accounted for by individual characteristics and occupational dummies, mostly by the latter. There remains an unexplained gap of about 10 per cent. This leaves open the issue of whether the allocation of men and women to jobs of different complexity levels is discriminatory or not.

A further interesting characteristic of the unexplained gap is the fact that it is not evenly distributed on the income cake. The same study revealed that the unexplained gap tends to be higher in high-income groups. In other words, women have a longer education and who work in well-paid occupations tend are more disadvantaged vis-à-vis their male colleagues endowed with similar productive characteristics than what is the case for women in low-paid occupations. Figure 10, taken from (Vartiainen, 2002) illustrates this fact. For this figure, all female wage earners were ranked according to the wage that their productive characteristics would predict for them if they were men. This ranked set of female observations was then partitioned into 20 groups, from the least well endowed to the best endowed. Then, for each of these 5 per cent groups, the author calculated the average gap between this "what if these women were men" wage and their actual wage. There is a clear pattern: the unexplained gap is higher in groups with higher productive characteristics. The figure also indicates the share of women in each subset of productive characteristics.

7 Concluding comments

We have shown that, rather than being a historically low-conflict society with a high degree of equity, Finland's socio-economic history of the "long" 20th century is characterised by large socio-economic shocks and initially high inequality. We argue that by managing both social conflicts and social risks, Finland has been able to attain a high rate of economic growth while it has arrived at outcomes that are, in the main, highly equitable in international comparison.

Finland started out the long 20th century as a poor country that was highly vulnerable to shocks such as the great famine of the 1860s. Relative ethnic homogeneity did not stop the country from descending into a bloody civil war in 1918. However, speedy land, education and tax reforms and a strong external threat induced cohesive national policies in the 1920s and 1930s. After World Way II, the State played a powerful indirect and direct role in the economy, pacifying the trade unions and employers' organisations and investing heavily in the manufacturing industries. Centralised wage bargaining in the late 1960s coupled with several social policy reforms intended to reduce various social risks were the means chosen later for the management of growth that resulted also in fairly equal outcomes.

With hindsight, we argue that the pro-growth policies chosen in Finland have contributed not only to growth but also to equity. The extent to which the increase in equitable outcomes was a conscious goal is debatable. Some policies undoubtedly had a strong equity motivation, apparent even at the time they were made. E.g. the separate taxation of married couples was explicitly motivated on grounds of equity. An even more prominent example is land reform. In part, however, the more equitable outcomes may have been unintended consequences of efforts to solve some difficult conflict. The fact that in the late 19th and for much of the 20th century, socialism and communism were perceived of as strong threats to bourgeois society, as well as Finland's vulnerable geopolitical position, probably played a strong role.

It is futile to ask if the Finnish development experience can be replicated. The initial conditions facing Finland were unique. Also and importantly, many of the growth policies that were implemented were shaped in an economic order that no longer exists, with limited capital mobility, (globally) undeveloped capital markets and international economic cooperation highly regulated. All the same, the Finnish case does attest to the possibility of achieving economic development in part through policy choices that promote both economic growth and economic equity.

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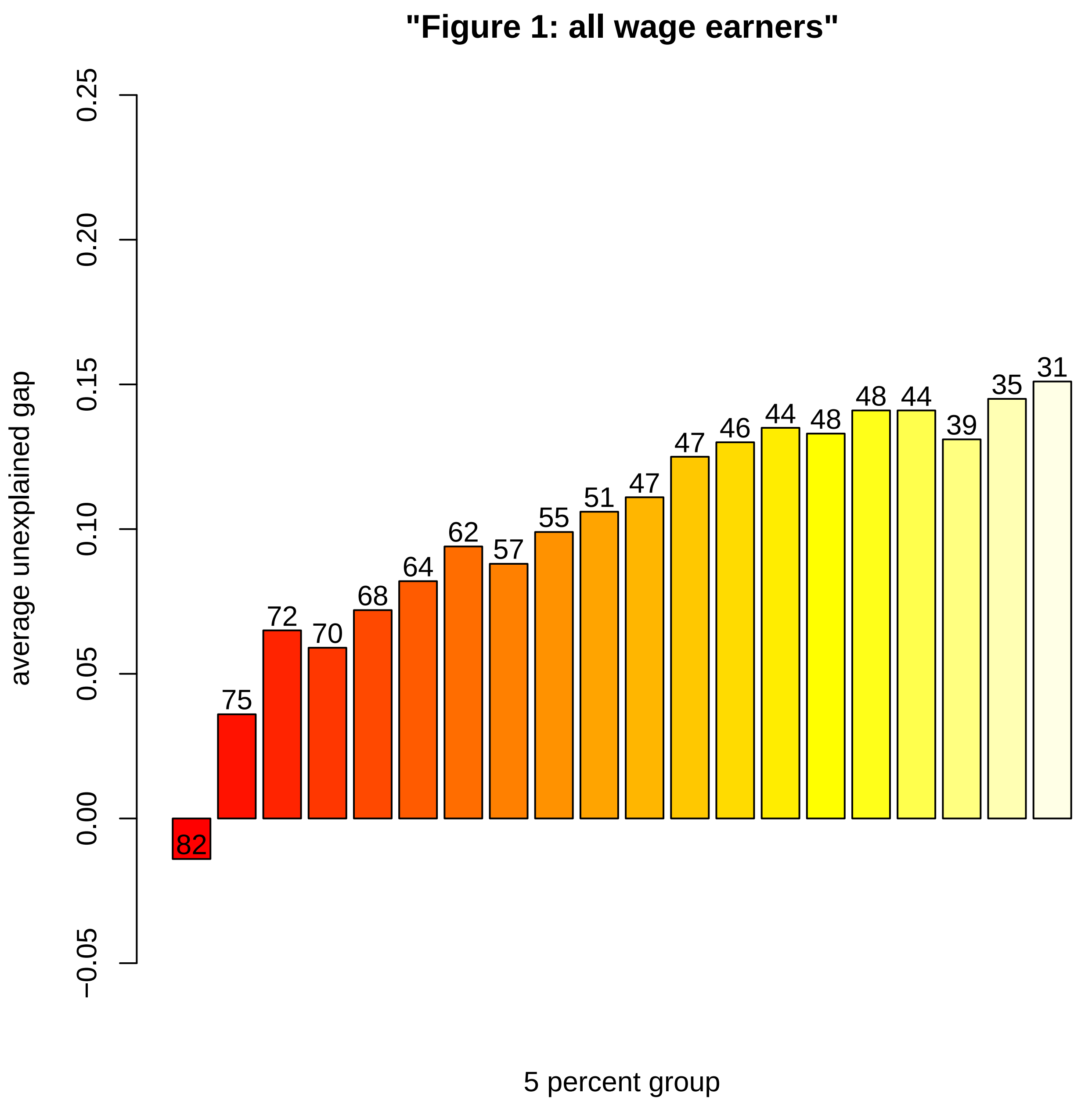
Figure 10 The distribution of the unexplained gender wage gap



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