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THE EVOLUTION OF THE FINNISH MODEL IN THE 1990s: FROM DEPRESSION TO HIGH-TECH BOOM

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Abstract: Finland has recently got much admiration due to economic success reflected in rankings of competitiveness, technology, education and economic growth. This success has largely been embodied in the growth of Nokia group and ICT sector. Yet the economic boom and the success of the Finnish high tech industries is a relatively new phenomenon, starting from the mid-1990s. In fact, the years of good economic performance were preceded by an exceptionally deep recession in the beginning of the 1990s. This paper discusses the roots of the crisis of the Finnish economy, and the factors which helped it to recover and to create the technology-driven growth of the last decade. The focus is both on macroeconomic issues and on institutional change and the role of public policy. The main conclusion of this paper is that the institutional reforms (or the absence of them) seem to have played only minor role in the emergence of unemployment and in the subsequent employment revival in Finland in the 1990s. In addition to the breakthrough of ICT technologies, more traditional macroeconomic factors like changes in monetary policy and exchange rate, and pro-cyclical fiscal policy may have been of great importance. In spite of the severe economic shocks and industrial restructuring, the Finnish political governance and corporatist institutions have remained relatively stable. Political decision making has all the time been largely based on national consensus building like before. The structures of welfare state survived the fiscal crisis of the mid-1990s though the welfare state was forced to go through many small incremental changes, which reduced many entitlements. The central labour market institutions – strong trade unions with high unionization rate, and centralized incomes policy – have remained almost intact.

Key words: Finland, economic growth, social corporatism, structural change

Tiivistelmä: Artikkelissa tarkastellaan Suomen kansantalouden voimakasta kasvua vuoden 1993 jälkeisenä aikana ja siihen vaikuttaneita tekijöitä. Monia muita Euroopan maita paremman kasvukehityksen taustaksi tuodaan esiin Suomen vuosina 1991-93 kokema poikkeuksellisen syvä taloudellinen lama. Keskeisinä kasvutekijöinä esitetään voimakkaasti parantunut hintakilpailukyky sekä Nokia-ilmiön myötä tapahtunut teknologiajohteinen rakennemuutos. Kilpailukyvyn paraneminen taas johtui valuuttakurssimuutoksista ja kilpailijamaita nopeammasta tuottavuuden kasvusta. Suhdanteita myötäillyt finanssipolitiikka saattoi myös voimistaa nousukautta. Lamavuosien jälkeen työn verotus keveni ja julkiset menot kasvoivat, mikä ei kuitenkaan estänyt samanaikaista julkisen talouden tasapainon voimakasta parantumista.

Asiasanat: Suomi, kasvu ja työllisyys, talouskriisi

Contents

1. Introduction

Finland has recently got much admiration due to economic success. Finland has come to news because of high rankings in competitiveness, technology, education and economic growth (see e.g. IMD (2003) and WEF (2003) and the many indicators in EU (2003)). In most comparisons Finland ranks among the top three, whether it comes to competitiveness or indicators of technology and knowledge-based growth. The success has largely been embodied in the growth of Nokia group and ICT sector. Yet the economic boom and the success of the Finnish high tech industries is a relatively new phenomenon, starting from the mid-1990s. In fact, the years of good economic performance were preceded by an exceptionally deep recession in the beginning of the 1990s. At that time, the Finnish GDP shrank by 10 percent in 1991–93, and employment decreased by 20 percent. As a consequence, unemployment rate rose from 3 to 17 percent between 1990 and 1994.

However, the economic crisis and the rise of unemployment turned out to be not permanent. Instead, the Finnish economy started a strong recovery, and unemployment fell during the latter half of the 1990s by 7 percentage points. Economic growth was fast, too, averaging 4½ percent in 1994–2000. In 2001–03 the unemployment rate stabilised on 9 percent level, mainly due to the recession of the European economy. The employment rate, however, was clearly higher than the European average, and the Finnish GDP per capita exceeded the EU average. It is also worth noticing that although the cyclical downturn increased unemployment throughout Europe in 2002–03, that did not happen in Finland.

This paper discusses the roots of the crisis of the Finnish economy, and the factors which helped it to recover and to create the technology-driven growth of the last decade. The focus is both on macroeconomic issues – which we think have been important – and on institutional change and the role of public policy.

Finland was by no means the only country experiencing a significant drop in unemployment and a revival in employment towards the end of the 1990s. Recent experience shows that numerous countries have been able to reduce their unemployment rates significantly; such countries include Sweden, Denmark, Ireland, the Netherlands and Spain. It is common that employment has improved in these countries more than anyone relying on earlier estimates of high structural unemployment would have predicted. It is also noteworthy that this improvement took place without any deep labour market reforms – or at least it is hard to find evidence of such path-breaking institutional changes (a point which has recently been emphasised e.g. by Fitoussi et al (2000)). However, in the case of Finland these changes have been more abrupt than elsewhere, and the role of technological change in the recovery has been more visible than in other European countries. How that has been possible in the case of Finland? The most obvious answer is rapid economic growth. After all, some kind of rebound in growth rates should not have been even surprising given the very deep and deflationary recession of the early 1990s.

Many commentators and analysts have been inclined to see the high unemployment and related underemployment as an evidence of structural weaknesses typical to European welfare states – arising from the disincentives inherent to the European social model and overly regulated labour markets. It has been claimed repeatedly by e.g. the OECD and many others that the high unemployment of many European countries is structural by its nature and hence requires a certain set of reforms in order to be cured. Perhaps the most magisterial and exhaustive presentation of this evidence was provided by the 1994 OECD Jobs Study. After that OECD has repeatedly emphasised in its economic analysis the importance of incentive-improving structural reforms as a necessary precondition of sustained improvement in employment. The set of proposed reforms usually includes cuts in taxes and benefits and labour market deregulation. It is commonplace that such proposals include only supply side measures and exclude all references to the need for aggregate demand stimulus.

In the light of the Finnish experience, such a uniform view of sclerotic European economies and rigid labour markets does not entirely fit the facts. The main conclusion of this paper is that the institutional reforms (or the absence of them) seem to have played only minor role in the emergence of unemployment and in the subsequent employment revival in Finland in the 1990s. In addition to the breakthrough of ICT technologies, more traditional macroeconomic factors like changes in monetary policy and exchange rate, and pro-cyclical fiscal policy may have been of great importance. It is likely, too, that the fact that employment has not fully recovered notwithstanding the rapid economic growth, can be largely explained by using the same macroeconomic factors. The surge in productivity and the rapid up-grading of the industrial structure which took place in the 1990s were changes that are harder to explain by traditional macroeconomics. They can be viewed as a result of more complex process where long term development of national innovation system, technological breakthroughs and industrial change induced by 'creative destruction' were important parts.

In spite of the economic shocks and industrial restructuring, the Finnish political governance and corporatist institutions remained relatively stable. Political decision making was still in the beginning of the new century largely based on national consensus building like before. The structures of welfare state survived the fiscal crisis though it was forced to go through many small incremental changes, which reduced many entitlements. The central labour market institutions – strong trade unions with high unionization rate, and centralized incomes policy – remained almost intact.

2. The background of the Finnish miracle: the economic crisis of the 1990s

2.1 Eurosclerosis avoided in the 1980s

In the 1980s Finland was known among experts as a small and relatively rich EFTA country with advanced welfare systems and corporatist labour market institutions (among wider international public Finland was not known at all; for a positive expert view, see Pekkarinen et al. (1992), and Rehn (1996)). At that time, EFTA was a free-trade association of half a dozen small non-EEC European countries: Austria, Finland, Iceland, Norway, Sweden and Switzerland. That group seemed to be immune to the rise of unemployment and related economic and social problems experienced elsewhere in the Western Europe (or EEC countries) at the same time.

In the 1980s the unemployment rates in Finland and in other EFTA countries were among the lowest in the OECD and the employment rates were the highest – the small countries seemed to be immune to the economic problems of the larger European countries, an observation which got attention through Katzenstein (1985). In the 1970s and 1980s unemployment rates rose almost continuously in the member countries of the EEC while unemployment in the Nordic EFTA countries fluctuated between 2 and 6 percent without any serious upward trend. Finland together with the other EFTA countries was able to escape the perils of recession and mass unemployment plaguing most other European countries. It is most likely that the differences in unemployment developments between the EFTA and EU countries in the 1980s reflected corresponding differences in macroeconomic policies (cf. Blanchard and Summers (1986) and Ball (1999), who emphasize the role of macroeconomic shocks): the EFTA countries were more protective, more accommodative and more flexible in their economic policies.

Finally that situation changed. Unlike most other industrial countries, Finland did not suffer from a recession in the beginning of the 1980s. However, after a long period of rapid economic growth and almost full employment, the Finnish economy entered an unexpected and exceptionally deep economic recession in the beginning of the 1990s. To some extent, the same happened also in the US and in the Western European countries, but in Finland and Sweden the crisis was much most severe than elsewhere. In the case of Finland, one may even talk about a 'depression', because the crisis resembled very much the Great Depression of the 1930s.

2.2 Financial market deregulation and the creation of bubble economy

The Finnish economic crisis of 1990–93 was preceded by a debt-financed boom in the latter half of the 1980s (the different periods of economic growth are summarised in Table 1). That, of course, was not exceptional. Most OECD economies boomed in 1987–89, and some of them experienced speculative bubbles with rising asset prices. Well-known examples are the Japanese economic 'miracle' in the 1980s and the house price bubble in the UK, both of which were followed by recessions. It is interesting to note that many of the countries which enjoyed an employment miracle in the 1990s (like the Netherlands, Spain and Ireland), did not suffer from asset price bubbles in the 1980s.

In Finland and Sweden the bubble of the 1980s was caused by a credit expansion initiated by financial market deregulation. Before the liberalisation the banking sector and credit markets were tightly regulated in Finland, and most households faced liquidity constraints – i.e., they were not allowed to borrow as much they would have liked. When these constraints were lifted in 1986 – as a part of an international wave of deregulation – household debt started to climb up quickly. Loans were use to finance purchases of houses and durable goods. Debt service was not expected to cause problems, because the real after-tax interest rates of households were expected to remain low due to modest level of nominal interest rates, relatively rapid earnings growth and tax deductions. The indebtedness of corporate sector increased rapidly, too. At that time, corporate taxation favoured debt finance, and firms – especially in construction and service sectors – were eager to invest. As a result, private sector debt and asset prices doubled within a short period, in 1986–1989. The bubble was good to real economy. It helped to speed up economic growth, and to achieve full employment. The Finnish employment rate was record high at 74 percent in 1989–90.

The boom ended in 1990 when international interest rates started to increase. Domestic interest rates in Finland were linked to German interest rates through exchange rate targeting. The central banks of all Nordic countries had a policy to maintain their exchange rates almost fixed vis-à-vis other European currencies, which were linked to the Deutschmark. That was a bit curious choice since Denmark was the only Nordic country which was a member of the EU. Finland and Sweden joined the Union only in 1995.

As a consequence, the Nordic interest rates could not be lower than those in Germany, which was the anchor of that semi-fixed and self-imposed exchange rate system. Additionally, any uncertainty about the sustainability of the fixed exchange rate policy would cause an additional increase in interest rates. Such worries started to increase in 1989. Due to inflation both Finland and Sweden were losing their competitiveness, which reduced export growth. At the same time booming domestic economy raised the demand for imports. As a result, current account deficit widened. In the Finnish case a special problem was caused by the disintegration of Soviet Union, which reduced Finnish exports to that country. That was a serious shock since still in the mid-1980s the Soviet Union absorbed more than 20 percent of Finnish exports. In 1989–91 that market was lost almost totally due to the internal problems of the Soviet Union.

Table 1. Summary of the cycles of the Finnish economy in 1978–2000

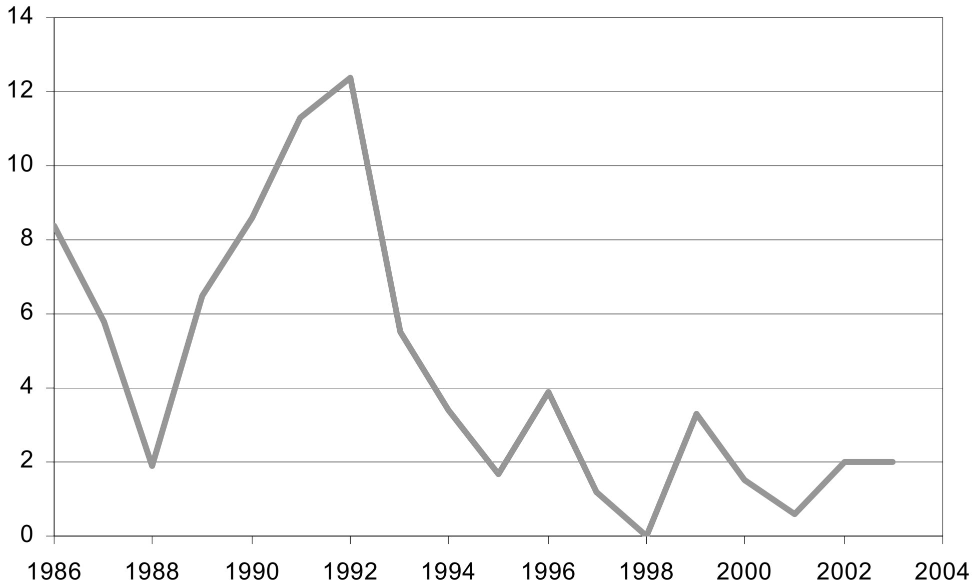
Period	Economic cycle	Labour market	Economic policy
1978–1985	Period of balanced growth with declining inflation rate (g = 3 %)	High employment (u = 6 %)	Regulation of financial markets, public sector growth
1986–1989	Period of unbalanced rapid growth (g = 4 %)	Full employment with wage inflation (u: from 6 to 3 %)	Financial market deregulation, failed attempts of co-ordinated wage moderation
1990–1993	Years of economic crisis (g = -2 %)	Mass unemployment (u: from 3 to 17 %)	Collapse of exchange rate regime
1994–2000	Period of export-oriented rapid growth and structural change with stable prices (g = 4½ %)	Rising employment with wage moderation (u: from 17 to 10 %)	Fiscal consolidation, tax reforms, EU and EMU membership, strengthened wage co-ordination though corporatist institutions
2001–2004	Cyclical downturn in export markets, strong domestic economy (g = 2 %)	Stable employment, slowly decreasing unemployment with continued wage moderation (u = 9 %)	Fiscal expansion through tax cuts and increased infrastructure investment

Note: g refers to average annual rate of economic growth, u to the average unemployment rate.

2.3 The recession: exchange rate targeting, interest rate shock and debt-deflation

The crisis was closely related to the policy regime of exchange rate targeting. The attempt to maintain fixed parity with the D-mark finally turned out to be unsustainable. However, before that the Bank of Finland (and the Swedish Riksbank) tried to defend the exchange rate by raising the domestic interest rates. This led to a three-year period (1989–92) of very high real interest rates. In a economy where households and firms had accumulated large debts this interest rate shock was disastrous. As can be seen from Figure 1 the interest rate shock was huge. Within two years the real short term interest rate went up from 2 to 12 percent.

Figure 1. Real short term interest rate



With higher than expected interest rates the debt-financed boom came to an end. The economic growth stopped in 1990, and in 1991 the economies of Finland and Sweden begun to shrink. The boom was followed by a bust – a three-year period of high interest rates, falling output and collapsing asset prices, debt-deflation, financial and banking crisis and currency crisis. In debt-deflation declining asset prices increase the real value of debts, which puts the debtors under financial stress by decreasing their net worth. That is exactly what happened in Finland (the concept of debt-deflation was originally introduced by Irving Fisher (1932) who tried to explain the Great Depression); there was a wave of bankruptcies which caused huge credit losses to banks, who suffered also from declines in their own assets. Many households ended up in a situation where their mortgages exceeded the value of house (for literature on the Finnish crisis, see e.g. Kiander and Vartia (1996), Honkapohja and Koskela (1999), Bordes, Currie and Söderström (1993), Jonung, Stymne and Söderström (1996), and Kalela et al. (2001)).

High interest rates in a debt-ridden economy constrained private demand effectively. Firms and households which had a few years earlier accumulated lots of debt faced now liquidity constraints, and were forced to sell their assets. That fuelled further falls in asset prices. Within four years the Helsinki stock market index fell by almost 70 percent and house prices decreased by half. Falling asset prices caused negative equity and balance-sheet problems to indebted households, firms and to their creditors. Solvency problems reduced consumption and investment; consequently, output and employment fell both in Finland and Sweden in three consecutive years (1991–93), and unemployment soared. In Finland the crisis was two times as deep as in Sweden if measured either by output losses or unemployment; in Finland GDP shrank by 10 percent, and employment by 20 percent.

It is tempting to argue that the basic factor behind the recession was a monetary shock: a sharp rise of interest rates in 1989–90 bankrupted many debt-ridden firms and forced households to cut their spending, which caused a deflationary spiral and a recession. In that respect the crises of Finland and Sweden can be seen as unintended consequences of changing economic policy regimes in Western Europe (i.e., financial market deregulation and strong commitment to fixed exchange rate) and policy makers' surprising determination to fight inflation, notwithstanding the fact that inflation was not a very serious problem in that time.

The explanation of the Finnish and Swedish recessions seems to be a macroeconomic policy failure and a necessary pre-condition for the severity of the recessions of Sweden and Finland was the huge build-up of private sector debt after the financial market deregulation. King (1994) discusses that point in more detail. The monetary and exchange rate policies were in the 1990s not used to stabilise the economy – unlike in earlier crises in the 1970s and 1980s. Instead, things were made worse by stubborn (but in that time fashionable) policy of exchange rate targeting which prevented the needed currency depreciation and which forced the central banks to maintain high interest rates. Under fixed exchange rates high interest rates are needed to defend the exchange rate, if investors think it is overvalued, which was the case in most European countries in 1990–92.

The rules-based exchange rate policy doctrine was adopted widely by politicians and central bankers. The idea of the policy was to fight inflation by creating 'an anchor' for the value of domestic currency. However, the consequences of the deflationary policy were not properly understood at the time, and the resulting recessions were to large extent surprises to decision makers and economists.

Furthermore, it is likely that the Finnish recession was made deeper by discretionary fiscal tightening. The recession caused a huge budget deficit. The government attempted to cure it by increasing taxes and cutting discretionary spending during the recession, which made the recession even worse by reducing domestic demand further.

2.4 Political response to the crisis

The economic crisis coincided with a political one. A very long post-war tradition of coalition governments of the two major parties – Social Democrats and the Centre Party (formerly called Agrarian Union) – was broken in 1987 (see Table 2). The years of economic liberalisation and boom was governed by new coalition, an 'unholy alliance' of Conservatives and Social Democrats, both of which were in favour of pro-market economic reforms and rules-based monetary policy. In 1991, at the outbreak of the economic crisis, a new coalition was formed after a landslide victory of the Centre Party in parliamentary elections. The government of Esko Aho, the leader of the Centre Party, was the first centre-right coalition in decades. Rather quickly it proved to be highly controversial. The Aho's government tried to maintain the exchange rate targeting and to support that goal by restrictive budgetary policies. The government also tried to persuade the trade unions to accept a cut in nominal wages. After that attempt failed, the relations between the government and the trade unions soured. The government tried in vain to introduce reforms which would have weakened the bargaining position of the trade unions.

Table 2. Governments

Years	Prime minister	Major coalition partners
1983–87	Kalevi Sorsa (SocDem)	Social democrats and Centre Party
1987–91	Harri Holkeri (Cons)	Social democrats and Conservatives
1991–95	Esko Aho (Centre)	Centre Party and Conservatives
1995–99	Paavo Lipponen (SocDem)	Social democrats and Conservatives
1999–2003	Paavo Lipponen (SocDem)	Social democrats and Conservatives
2003–	Matti Vanhanen (Centre)	Social democrats and Centre Party

Economic crisis, mass unemployment and tight fiscal policy made the centre-right coalition unpopular, and it was easy for the Social Democrats to regain power after the parliamentary elections in 1995. A new 'Rainbow coalition' led by the Social Democratic Party leader Paavo Lipponen (consisting not only the Social Democrats and the Conservatives but also the Green Party and even the Left Alliance (i.e. the former Communist Party)) reigned over two terms, until 2003. That coalition was very explicitly oriented to co-operation with labour market parties.

The centre-right coalition of the recession years created a discontinuity into the Finnish tradition of consensus-building and over-the-block co-operation. It ignited conflicts and distrust. It utilized the crisis mood to make unpopular reforms like reductions in almost all welfare entitlements and public services. Although many decision makers and analysts viewed these measures as necessary, it is possible that the government's inability to create co-operation made the crisis longer and deeper by eroding the confidence of consumers and investors – or the financial market and wider public.

The exceptional character of the subsequent Rainbow coalition manifested a widely desired return to older modes of political co-operation. Unpopular reforms were continued, but they were more incremental and they were negotiated with the labour market parties. Instead of ad hoc crisis management, the government policy became more predictable and more dominated by long term goals.

3. The recovery and the Finnish ‘miracle’

3.1 Turnaround in economic policy

The deflationary pressures caused by high real and nominal interest rates and currency overvaluation ended when Finland – together with many other European countries, most notably the UK – was forced to abandon the policy of exchange rate targeting in the autumn of 1992 and let the currency float. The European countries were forced to change their exchange rate regime because the market pressure against the fixed parities grew too much. The abandonment of the restrictive monetary policy was not actively seeked.

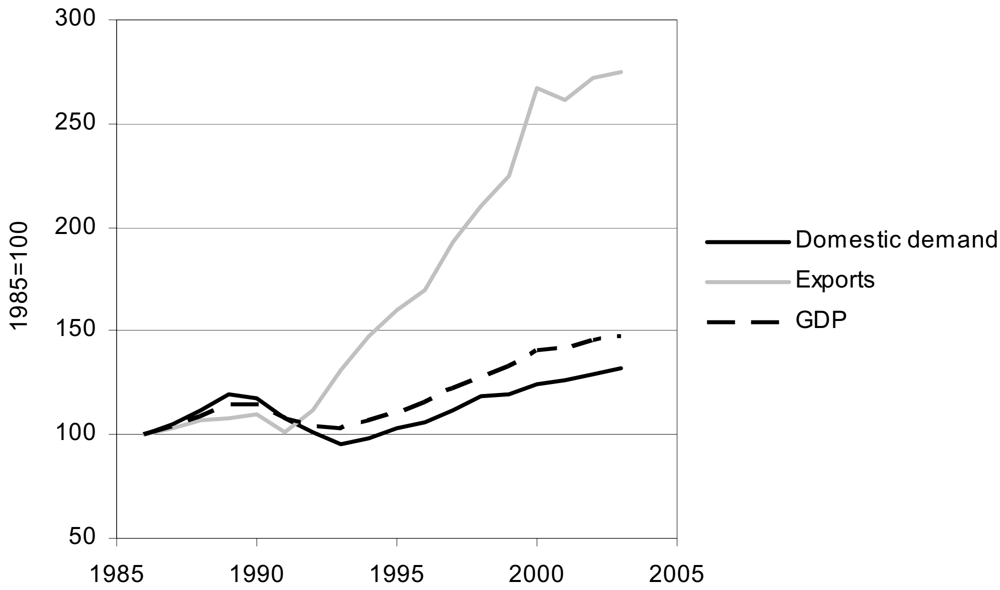
As a result of floating, the Finnish currency depreciated quickly – by more than 30 percent. However, the depreciation was not all that bad because it improved the competitiveness of Finnish exports. Floating also enabled the central bank to cut short term interest rates by 10 percentage points within couple of months. Without any fixed exchange rate target there was no need to defend the exchange rate by high interest rate anymore, and rates fell.

If we think that the excessive monetary tightening was the main cause of the recession, then it is not illogical to think that the biggest macroeconomic change contributing to the recovery was the loosening of monetary policy together with currency depreciation in the aftermath of the 1992 EMS crisis. The lower interest rates helped to stabilise and reflate the asset prices, which ended the deflationary process. Private consumption and investment began to grow again in 1994.

The competitiveness problem which constrained Finnish export growth in 1989–91 was solved when the Finnish markka depreciated significantly after it was allowed to float with many other EMS-currencies in the autumn of 1992. The currency depreciation in 1992–93 helped Finland to gain a marked and sustained improvement in competitive position. The improved competitiveness led to rapid export growth.

The post-crisis output growth was export-led in Finland, and the rising net exports contributed positively to the growth of GDP in 1994–2000. The export growth was clearly faster than the development of domestic demand, which remained subdued and which did not exceed the 1990 level in real terms until in 1999. In this respect Finland differed from all other European countries, in which the growth contributions of external and internal sources have been much more balanced (see Figure 2). Rapid export growth together with depressed domestic demand caused an unexpectedly strong improvement in current account, which went quickly from a deficit of 5 percent of GDP to a surplus of 7 percent of GDP.

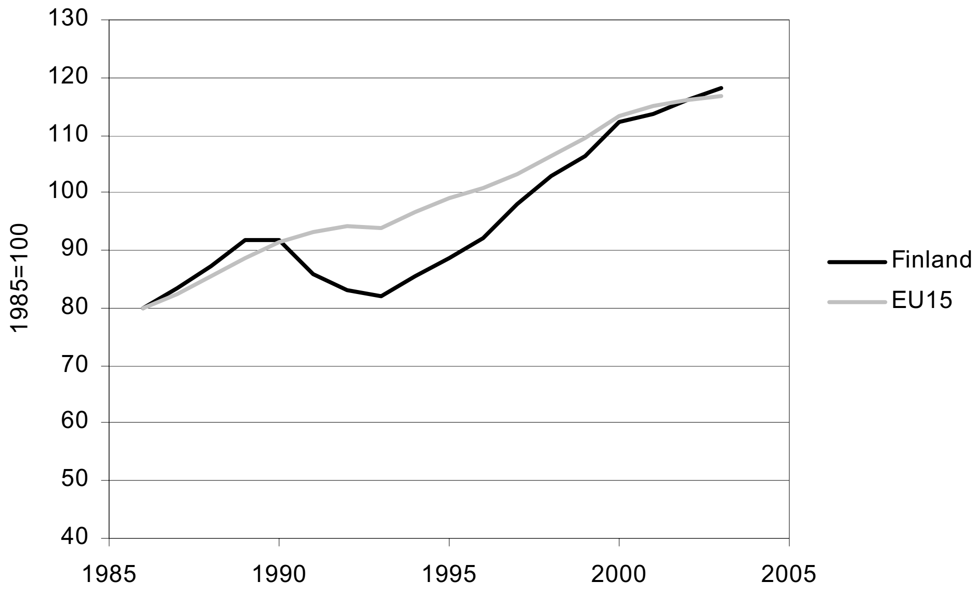
Figure 2. GDP, domestic demand and export volumes



Although the domestic demand and investment remained depressed throughout the 1990s, the growth record of GDP in the post-crisis years was impressive. In 1994-2000, the annual rate of economic growth averaged 4½ percent and employment growth was 2.1 percent. In the ten-year period of 1994–2003 the Finnish GDP growth surpassed the growth rate of EU15 in nine years (see Figure 3). Productivity growth was fast, too. As a result, unemployment rate was reduced from 17 percent in 1994 to 9 percent in 2001. Total employment rose by 15 percent at the same time, and employment rate increased 8 percentage points.

Employment record was good, but it was not sufficient to enable a return to the earlier full employment. Employment could have increased more and more quickly, if the economic growth had been stronger in labour intensive sectors like services and construction. However, until year 2000 the main contributors to the Finnish economic growth were exports and industrial production. That helped to improve average labour productivity faster than elsewhere, but it also made the economic growth less labour-intensive.

Figure 3. The evolution of GDP volume in Finland and EU15

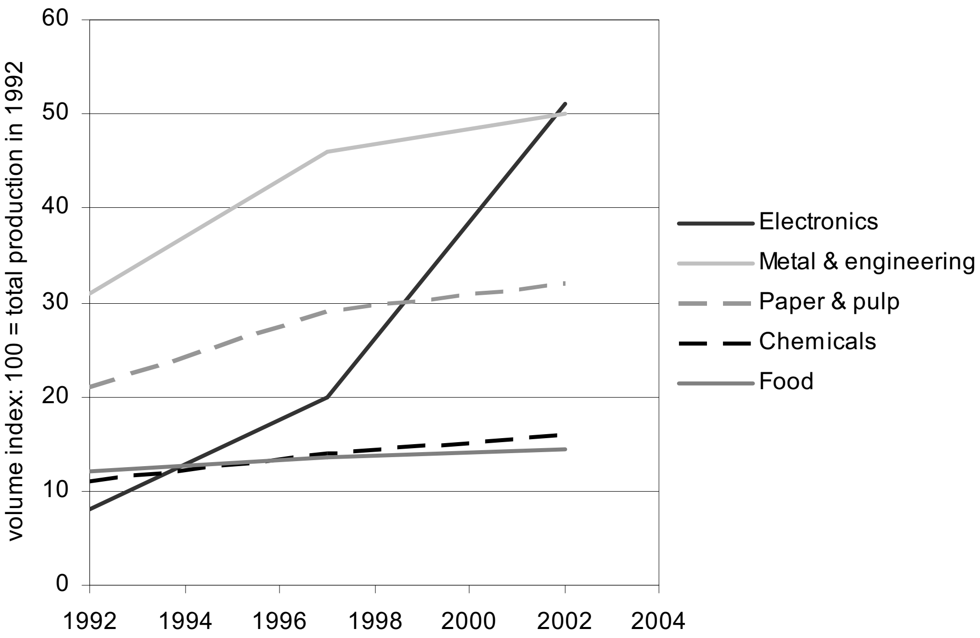


3.2 Creative destruction and knowledge-based growth

A decisive improvement in competitiveness was first achieved through currency depreciation. However, the depreciation was not permanent. Part of it resulted clearly from financial market overshooting which was not long-lasting, and after that the Finnish currency appreciated again in 1995–96 before it was irreversibly linked to euro. More durable factors contributing positively to competitiveness were wage moderation and productivity growth, which together helped to reduce unit labour costs almost every year after 1991. Since 1995, wage moderation was achieved through wide agreements between the government and the labour market parties, and they were supported by tax cuts.

The rapid productivity growth of the 1990s was caused by structural change. Finland made a qualitative leap from an economic structure dominated by mostly resource-based heavy industries to one with knowledge-based, mostly ICT industries as a leading sector. Still in 1990 Finnish industrial production and exports were dominated by paper, pulp, metal products and machinery. By 2000 the electronics industry had became the biggest export industry. It is rare that a new dominant industry can grow so quickly. That, of course, was mainly due to the growth of mobile communications revolution. In 2000 Finnish Nokia Group was the world's biggest manufacturer of mobile phones and the Finnish production of telecoms equipment had a global market share of 7 percent.

Figure 4. Industrial production: growth and main industries

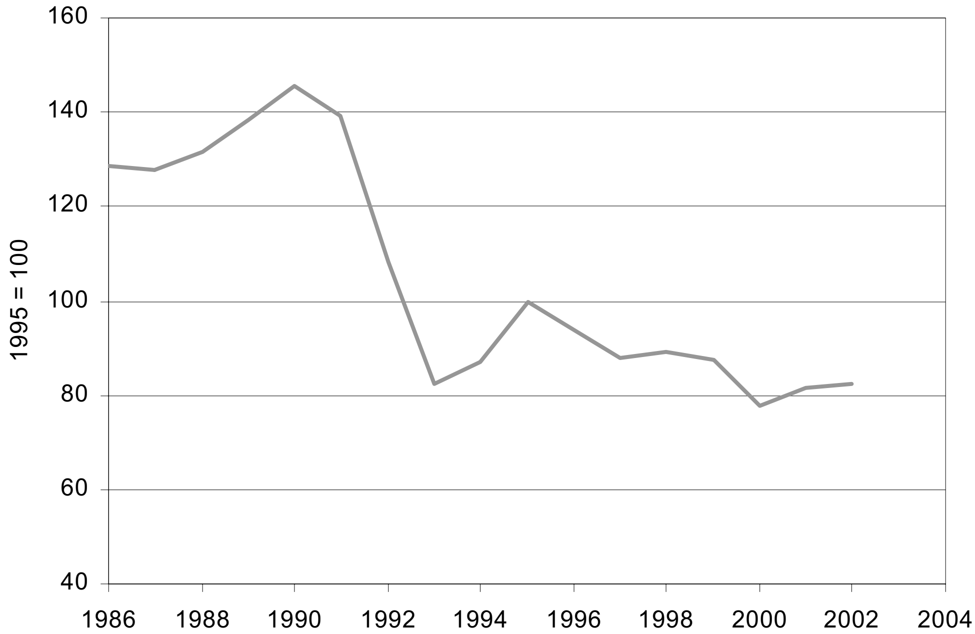


The growth of the electronics industry in the post-recession years was truly spectacular. The output of that industry was multiplied more than six-fold and its relative share grew from 8 percent to over 27 percent of total industrial production – at the time when the total production was also almost doubled. In 1992 the electronics sector was smaller than the metal, paper and pulp, food and chemical industries. In 2000 it was the largest sector (see Figure 4).

That structural change contributed also to a productivity acceleration which took place at the same time and which improved the real competitiveness of the Finnish economy. The development of the competitive position of Finland vis-à-vis other industrial countries is depicted in Figure 5, which shows the level of real relative unit labour costs. The measure is a combination of relative changes in labour costs, productivity and exchange rates. It is surprising that in spite of the currency appreciation in 1994–96 and improving employment (which should have added to wage pressures), the unit labour costs continued their decrease. At the same time, also total factor productivity growth was accelerated.

The accelerated productivity growth which followed the crisis launched a productivity catch-up process. As a result, during the latter half of the 1990s the average labour productivity in Finland get closer to the productivity frontier of the USA and EU15 (see Figure 6). Recent research has linked that change to something which can be called ‘creative destruction’ (Maliranta (2001) and Jalava and Pohjola (2002)). The economic crisis triggered or forced a process of rapid structural change and rationalization, which caused first a contraction of employment and improvement in productivity. Restructuring of companies at the plant level was the main cause of that; lots of old plants and companies were either closed or bankrupted, and typically they were the least efficient units. The remaining ones were – almost by definition – more productive. It is likely that capacity underutilization and the existence of slack resources caused by the crisis facilitated organisational restructuring (e.g. through mergers and acquisitions) and reallocation of resources.

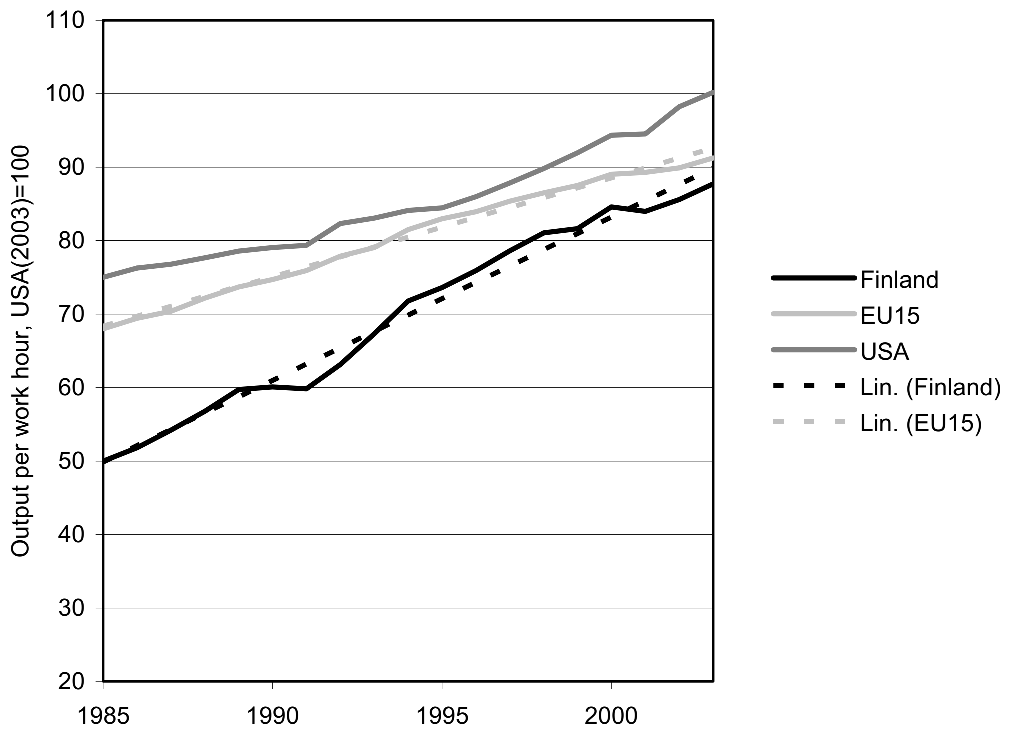
Figure 5. Competitive position



That was not the end of the process. In the next phase the improved competitiveness made it possible to the remaining firms to increase their exports rapidly. The growth of industrial production in 1992–2000 was record-high, on average 7 percent per annum. The annual rate of labour productivity growth in manufacturing was 6 percent. Due to the accelerated productivity growth, the Finnish manufacturing sector jumped into the group of countries with the highest productivity.

Especially the rise of wireless communication technology (or the so called Nokia cluster – the leading firms in that field were in the 1990s the Finnish Nokia and the Swedish Ericsson) manifested that change. The role of 'new economy' in the Finnish productivity miracle was decisive (it has been recently studied by Daveri and Silva (2004); for reviews of the growth of the Finnish wireless technology sector and Nokia corporation, see Ali-Yrkkö (2001), Rouvinen and Ylä-Anttila (2003) and Paija and Rouvinen (2003)). The spectacular ICT sector growth contributed significantly both to the Finnish GDP and exports growth, and to the productivity growth. The share of business sector value-added produced by the ICT sector increased almost by 10 percentage points in the 1990s. Moreover, the rapid growth of electronics and electrotechnics industry was largely based on productivity gains and increased use of intangible inputs. National technology policy played an important if not decisive role behind that phenomenon. Innovation policy and a long-term approach in building national innovation system were already active in the 1980s. Industrial R&D spending grew throughout the 1980s and 1990s faster than in any other OECD country. Today the Finnish R&D spending is more than 3 percent of GDP which is among the highest figures in the world. These investments have also been supported by public sector support to higher education, and especially increases in high-level technical education (for studies on the Finnish ICT cluster, see Jalava (2002), Koski et al. (2001) and Paija (2000).

Figure 6. Labour productivity in business sector



The growth of the Finnish ICT cluster made a crucial contribution to the productivity gains achieved in the 1990s. The direct impact of the growth of Nokia had a large macroeconomic impact on the Finnish economic growth. Finnish producers benefited also from worldwide trends in prices: decreasing prices of semiconductors and machinery improved the profitability (and value-added) of many Finnish ICT firms (not only Nokia), which contributed positively to the measured total factor productivity.

Table 3. Productivity in Finnish manufacturing industry in the 1990s; annual average growth rates

	Total manufacturing	Electronics (the ‘new economy sectors’)
Labour productivity		
1991–1995	6.9	10.9
1996–2000	6.4	20.3
Capital productivity		
1991–1995	2.2	10.6
1996–2000	7.4	14.9
Total factor productivity		
1991–1995	5.3	11.2
1996–2000	6.6	16.7

Source: Junka (2003).

Table 3 shows the difference made by the ‘new economy’ or the Nokia sector to the Finnish manufacturing productivity. Total factor productivity, labour productivity and the productivity of fixed capital all increased by double-digit rates in the 1990s.

3.3 Role of policy reforms

It would be intriguing to argue that such a good growth, productivity and employment performance as experienced in post-recession Finland would have been caused by a wave of institutional reforms. However, there is not much evidence of any radical changes. There are only few signs of any kind of supply-side changes or institutional reforms – in addition to aforementioned public support to R&D and higher education – which could have improved the productive potential and work incentives.

It is evident that all European countries went through many minor reforms and adjustments during the 1990s. Still, in the end, most of them remain examples of the so called European social model with regulated labour markets even after the 1990s. The same applies to Finland, too. Perhaps the biggest change which took place in the 1990s in Finland was the adoption and wide acceptance of a policy of long term wage moderation. However, that was a quite natural response to high unemployment even in unionised labour markets, and for the unions it was a positive alternative if compared to their marginalisation or exclusion from decision making.

A shift in political power launched some attempts to for an institutional reform. The usually dominant Social Democrats were in opposition after an electoral defeat during the recession years (1991–95). The center-right government which was in power in 1991–95 expressed intentions to diminish the role of trade unions and to get rid of the old corporatist wage bargaining system dominated by central organisations of trade unions and employers. These initiatives were successfully opposed by the trade unions which threatened twice to arrange a general strike.

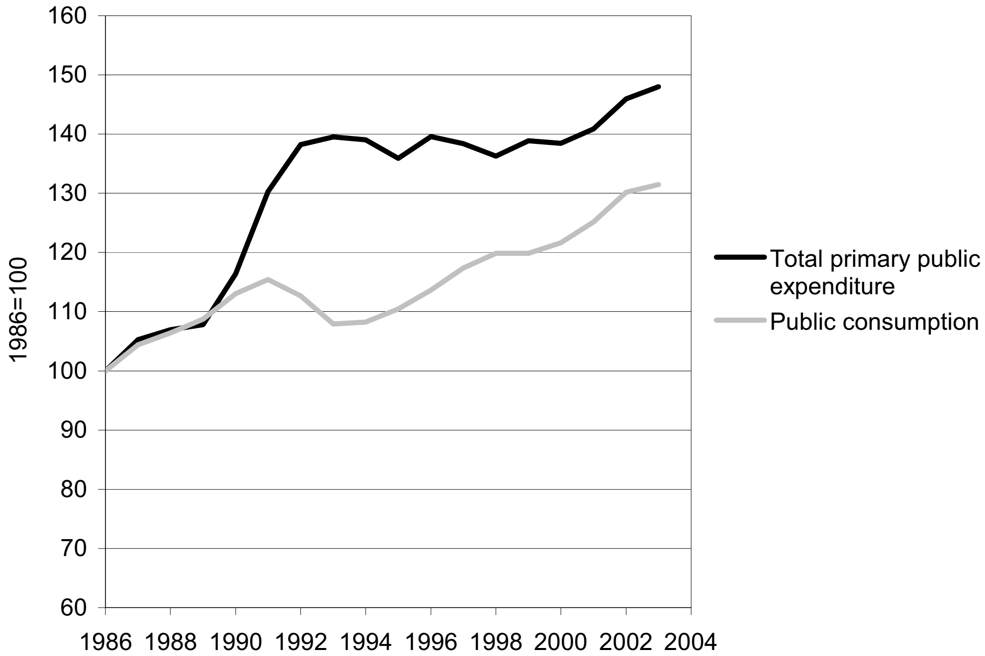
The center-right government lost the general elections in 1995 and the Social Democrats were able to retake their position as the biggest party and to hold the position of prime minister in two coalition governments in 1995–2003. These governments were careful to restore the close co-operation with trade union and to maintain the old corporatist model and the strong position of trade unions in the Finnish economic and social policy.

There were some changes in taxation and welfare benefit system in 1990s which probably supported the economic recovery and improved public finances. The boldest change took place when the corporate and capital income taxation was reformed in 1993. A new system was introduced where profits, capital income and capital gains were taxed by a proportional 25 percent rate. At the same time the tax base was widened by abolishing several deductions. The reform improved the after-tax profits of firms and the incentives of entrepreneurs. Another part of policy was a gradual reduction of labour taxes in the latter half of the 1990s – after increases in taxation in the first half the same decade. To large extent that meant only a return to pre-recession tax rates.

The work incentives were improved by a new earned-income tax deduction and by reductions in the levels of welfare benefits. Most entitlements programs were subject to savings measures throughout the 1990s. A usual way to erode the value of entitlements was to reduce their relative and real value by not doing full adjustments to inflation. As a result, the replacement ratio of unemployment benefits and old-age pensions declined. More drastic cuts were made to child benefits and other family support programmes. Health care subsidies were also reduced and the user fees increased. In the end of the 1990s the relative level overall level of social spending (excluding the unemployment-related expenditures) was about 10 percent lower than in the beginning of the decade although the number of pensioners had increased (Kiander 2001; see also Table 4 in the chapter on Germany in this book).

Figure 7 shows how the volume of public consumption (i.e. the public services) was reduced in the midst of the recession. At the same other expenditures increased. That was mostly due to increased social spending caused by higher than expected unemployment. Later on, when unemployment declined, also transfer spending started to decrease.

Figure 7. Total public sector primary expenditure and consumption expenditure



Motivation for the budgetary cuts was twofold: first they were justified as necessary savings, but later also as a way to improve work incentives of the unemployed. The cuts were not popular. However, majority of voters accepted them reluctantly as the only way to save the basic structures of the Finnish welfare state.

In the 1990s fiscal policy was more or less pro-cyclical in most European countries, and Finland does not make an exception. In the first half of 1990s fiscal policy was tightened with discretionary tax increases and spending cuts. These policies aimed to fiscal consolidation and to fulfilment of the EMU convergence criteria. There was a relatively deep fiscal deficit (7 percent of GDP) in 1992–94 when the rate of unemployment was highest. The deficit was not much cured by the spending cuts made in the same years; higher taxes and reduced public spending increased unemployment, which lead to higher than expected social spending and lower than expected tax revenue.

In the latter half of the 1990s the opposite took place; lower interest rates and earlier budgetary savings created new leeway for policy-makers, who used the higher than expected tax revenues to finance tax cuts and some increased public spending. In the environment of decreasing real interest rates, improved competitiveness and growing employment expansionary fiscal policy did not threaten fiscal stability. Instead, fiscal balances were improving. Thus the improvement in fiscal balance achieved in 1995–2000 was not caused by higher taxes but instead by strong growth, lower interest payments and declining unemployment-related expenditures. After six years of rapid growth and falling unemployment, Finland had a record high (7 percent of GDP) fiscal surplus in 2000. The huge improvement in fiscal balance was achieved at the same time with steadily increasing public consumption and reduced taxes. That fiscal miracle (which resembled very much the famous Laffer curve) was made possible by rapidly increasing tax bases (due to output and employment growth) and by decreasing transfer payments (caused by lower unemployment-related and interest expenditures, and by erosion of the relative value of some transfer programs).

It can be argued that pro-cyclical discretionary fiscal policy had a positive impact on employment growth after the recession of the early 1990s. The growth contribution of fiscal policy may not necessarily have been very important but still it was clearly supportive for growth.

4. Structural issues: welfare state and labour market institutions

The recession and the subsequent output and employment losses helped to make the case that the crisis and slow growth were not results of a mere macroeconomic co-ordination failure but instead a deeper systemic malfunction ultimately caused by the structures of welfare state. In the midst of the recession it was argued that the Nordic welfare state is generally bad for growth because it creates bad incentives. Many observers were ready to conclude that the rising unemployment in Sweden and Finland was evidence of the malfunction of the Nordic welfare state. An eloquent piece of such criticism and an assessment of the 'Swedish experiment' is provided by Lindbeck (1997). According to such view, overly generous benefits, labour market rigidities and high taxes will finally discourage investment, job creation and labour supply. It is easy to find examples of such opinions by reading e.g. *The Economist*, or the country reports of the IMF and the OECD (a good example of a theoretically sound argument showing how excessive social protection can lead to persistent unemployment is presented by Ljungqvist and Sargent (1998)). That line of argumentation was adopted by many decision makers during the years of economic crisis. The restrictive economic policies and attempts to reform the welfare state and labour market of the centre-right government were based on a pessimistic view on the capability of the old corporatist system to adapt.

Since both Sweden and Finland recovered from the crises within a couple of years, they cannot any more be used as an ultimate evidence of the failure of the Nordic model. It is now more widely admitted that the recessions were mostly related to financial factors and policy failures, not to serious systemic malfunctions. Both in Sweden and Finland, the sudden rise of unemployment turned out to be largely a temporary shock. The unemployment in the Nordic countries was much less persistent than that of the large EU countries. In Finland, the sudden rise of unemployment in 1991 was not a result of a long term deterioration of employment but a consequence of a drastic destruction of jobs within a period of three years. After the crisis employment recovered quickly, supporting the view that the Finnish labour market was relatively flexible, after all. The relation between employment and output did not change much after the surge in productivity in the mid-1990s.

4.1 Nordic welfare state may be good to economic growth

The relation between advanced welfare state and competitive economy is a complex one, at least in theory. There is a classical trade-off between equity and efficiency in economic thinking. It is also easy to find expressions of such an 'orthodox' view which emphasises the dismal economic consequences of redistributive welfare ('tax and spend') policies. During the Nordic crisis in the 1990s it was widely thought that the large budget deficits of 1992–95 would be incurable without abolishing the welfare state. The analytical background to such a view was (and still is) provided by mainstream economic theory on one hand and by the seemingly permanent economic problems of many EU countries since the 1970s on the other.

However, the good standing of the Nordic countries – Sweden, Denmark and Finland – in the various measurements of growth, employment, high tech indicators and R&D (see e.g. OECD (2003) and Koski et al. (2001)) have even given rise to a new positive evaluation of the economic impact of the Nordic welfare state. The rapid growth and especially the strong performance in new technologies improved the image of Finland as a dynamic, innovative and modern economy. It has even been argued that the Nordic welfare state model may actually have been good for such knowledge-intensive growth because it supports research and education and enables individual risk-taking. Such a positive interpretation has recently been presented e.g. by Castells and Himanen (2002) who think that the 'secret' of the improving employment rates and the industrial growth may partly be the Nordic welfare state itself. The high taxes of welfare states may be harmful to private sector employment but the high level of public sector employment more than compensates that. The Nordic welfare states are systems, which create incentives and possibilities to increase labour supply, and particularly labour supply of women. Taxation based on individual (instead of family) incomes together with many incomes-related benefits (most importantly pensions, but also maternity and sickness benefits) favour a family model where both parents work. Publicly provided and heavily subsidised day-care for children makes that an easy option even for the mothers of small children and for those which low incomes. Furthermore, the large scale public provision of social services offers lots of employment opportunities, especially to women (that has been pointed out even by critical analysts of the Swedish model; see Rosen (1996), Slemrod (1998) and Freeman (1995)). As a result, the Nordic countries have labour markets where men typically work in business sector and women in public sector jobs.

The large public sectors of the Nordic countries seemingly do not crowd out much private sector employment. The number of business sector employees as share of population is in Finland roughly the same in other European countries. The main impact of the large public sector is that it has created new jobs in public services and shifted a part of unpaid household work (mostly done by women) to the market (cf. Kiander 2004). That is mostly reflected in the high labour supply of women.

The Nordic welfare states have traditionally been good in improving the wellbeing of their citizens and equality between them (see also Tables 6 and 7 of the chapter on Switzerland in this book). The Nordic social policies are by their nature egalitarian and universal in order to create inclusive systems. They aim to promote equality not only in regard of income distribution but also between genders. Some of the benefits are universal and independent of family income like basic pensions, child and student benefits, while some benefits decrease with income like housing benefits, and some are earnings-related like unemployment insurance and occupational pensions. The low overall poverty rates and especially the very low child poverty rates of the Nordic countries are due to deliberate social policies which help to maintain the disposable incomes of families notwithstanding their labour market position. The egalitarian outcome is helped a lot by subsidised social services like day-care provided by the public sector.

The effect of these policies is most visible when one compares the poverty rates of families with single mothers across countries. In most countries the poverty risk of such families is very high, but not in the Nordic countries. Kangas and Palme (2000) show that it is the differences in social policy which explain the low family-related poverty rates in the Nordic countries. The same pattern is reflected by the results of Haataja (1999), according to which poverty in the Nordic countries is not connected with unemployment. Finland is an especially egalitarian society with low income differentials and almost non-existent child poverty.

Denmark and Sweden have welfare state systems which are most generous in the provision of public services and income transfers, while Finland is more modest and less ambitious. Due to the fiscal belt-tightening in the 1990s the difference between Finland and the more generous Swedish and Danish welfare systems widened.

4.2 Labour market institutions and corporatism

The Finnish society can be described as a parliamentary democracy with a Nordic welfare state system and highly corporatist labour market institutions. Unionization rate is in Finland one of the highest in the world (more than 80 percent) and the coverage of collective agreements is almost 100 percent. Wide union membership is supported not only by political tradition but also by deductible membership fees and unemployment insurance system run by the unions. Employers are also highly organized.

The strong voice of the unions and employers is partly due to their co-operation and continuous dialogue. An unexpected and probably unintended consequence of the economic transformations of the 1990s was the strengthening of the corporatist system (cf. Kettunen 2003). All post-recession governments have been eager to emphasize the importance of the co-operation of the labour market parties. A positive result from that consensus has been continued wage moderation and improved competitiveness. Union members have benefited from low inflation, lower taxes and improved employment. Wage moderation has resulted from biannual centralized bargaining between the confederations of trade unions and employers.

There seems to be a strong continuity in the Finnish corporatist institutions. The recession of the early 1990s was a tough test for that system, and it was challenged by the centre-right government. However, that attempt failed to ignite a systemic shift. Since 1995 the governments have (like in the 1980s) co-operated with the labour market parties and relied on their support in big decisions, like ones on reforming pension system and joining the EMU.

The decision to join the EMU was seen risky on the ground that in past Finland had experienced many asymmetric shocks which were cured by using exchange rate flexibility (indeed, that was the main argument why Sweden decided to not join the EMU). Trade unions were ready to accept Finnish membership only after the government and the employers agreed to establish so called buffer funds (i.e. surplus funds in the social insurance system) to be used to stabilise labour costs in a case of asymmetric shock in future. The buffer funds decision effectively gave part of the control a fiscal policy into the hands of the labour market parties, and further strengthened the institutional basis of the corporatist system.

4.3 On the prospects of the Finnish model

Starting from poverty, Finland has in the 20th century succeeded first in catching up other (more advanced) European countries and finally in surpassing the EU15 average GDP per capita level. The new economy phase of the 1990s enabled Finnish manufacturing sector even to achieve the global productivity frontier. In a light of such performance the Finnish economy can be viewed dynamic. The trends of output and productivity growth are still stronger than those of other EU countries and the USA. If they can be maintained, then Finland will surpass most other European countries in GDP per capita and productivity, and get closer to the American productivity and output frontier.

Thus the economic prospects of Finland are bright; together with Sweden Finland is the only EU country fulfilling the Lisbon targets of high level of R&D spending. As a consequence of the deep financial crisis of 1990–93, the Finnish unemployment rate is still relatively high. Yet the average employment rate of years 2001–4 was 67 percent, higher than in most other EU countries and reasonably close to the Lisbon target of 70 percent. The Finnish welfare state model and even the corporatist labour market institutions are supportive to wide labour markets participation and full-time work. That is why we can expect the employment rate to continue its growth and to finally achieve the level of almost 75 percent which prevailed in the 1980s.

In longer term the biggest challenge to the Finnish economy will be caused by demographic changes. The Finnish labour force is ageing rapidly and it is expected that labour supply will start to shrink after 2010. If strong economic growth is to be continued, Finland is going to need immigration and higher average retirement age (i.e. longer careers). The ageing will increase public pension and health care expenditure in the future. However, Finland is prepared to that change better than most other countries; the public finances are on surplus, and the government sector has more financial assets than debts.

5. Conclusions

In recent years Finland has got much attention as an economic star performer. That view has not only been based on traditional economic indicators like GDP growth but on other indicators measuring wider competitiveness, technological achievement, and the development of so called new economy – i.e. information and communications technology (ICT). Much of that success is very closely related to the Nokia phenomenon. The transformation of an old industrial conglomerate into the world's biggest producer of mobile phones has clearly made a difference in a small country. In macroeconomic terms, the biggest change has been a productivity revolution – sustained and exceptionally rapid productivity growth in manufacturing industries in the 1990s. That change was also associated closely with the rise of electronics industry.

The odds of such growth were very low in the beginning of the 1990s. As a result of a financial crisis, Finland suffered a serious shortfall of growth and employment in 1990–93. However, against worst fears, that crisis turned out to be only temporary. In spite of large cyclical swings, the long term growth record (even of the 1990s) of Finland has not been bad. To the contrary, Finland has been able to catch up the most advanced economies. The economic crisis of the 1990s forced the Finnish economy to go through a period of painful adjustment and restructuring. The crisis launched a period of 'creative destruction'. The rationalisation processes together with the unexpected rise of mobile ICT technologies created the productivity miracle of the 1990s. It was based not only on technological advances but also on a huge improvement in competitiveness induced by currency depreciation in 1992. In the rapid rise up to quality ladders – from resource based to knowledge-based production – the role of intangibles and knowledge base has been indispensable. Finland has clearly benefited from long term policy of investing in national innovation system development and supporting R&D.

In spite of rapid growth, the most burning social problem in the 1990s was mass unemployment. Although the rate of job creation in the post-crisis period (i.e., since 1993) has been rapid and the unemployment rate was reduced by 8 percentage points between 1994 and 2001, there is still underemployment. Employment has not returned to the level achieved in the 1980s. However, due to high labour force participation, the Finnish employment rate has all the time (even in 1993-94 when the unemployment rate was more than 16 percent) exceeded the average level of the EU, and it is likely to continue its growth.

The Finnish economic development – from boom to bust, and from creative destruction to technology-driven prosperity – makes one to wonder the roles of social corporatism and welfare state in that process: were the institutional characteristics of the Finnish society an advantage or a hindrance? In the 1980s

Finland was clearly one of the small European welfare states with large public sectors and corporatist labour market institutions. As usual, such institutions tend to be resilient and slow to change. That applies to Finland, too. The structure of welfare state and the corporatist institutions survived the crisis period more or less unchanged although the replacement rates of most welfare programs were cut in the 1990s. By accepting wage moderation, the trade unions were able to maintain and even to improve their traditionally strong position, and the corporatist system survived.

In spite of mass unemployment and fiscal problems in the mid-1990s, the Finnish political governance and corporatist institutions remained relatively stable. There were short-lived attempts by the centre-right government in the first half of the 1990s to introduce more radical institutional reforms which would challenged the corporatist system. Without sufficient electoral support they did not succeed. Rather quickly the political decision making returned to its old mode of consensus building and incremental reforms. Although the structures of the Finnish welfare state survived the crisis of the 1990s, they were subjected to many small incremental changes, which reduced many entitlements and widened the difference between the Finnish and Swedish variants of the Nordic welfare state.

The prospects of the Finnish economy are relatively good. Given the strong technological base and abundance of skilled labour, Finland has still potential to grow faster than other Western European countries. The main challenge is ageing population. Demographic change is expected to reduce labour supply and put public finances under stress between 2010 and 2020. However, the Finnish public finances are in a good shape to face that change.

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