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**THE FINNISH ECONOMY IN THE LAST 25 YEARS: DEPRESSION,  
GROWTH AND RECESSION**

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## INTRODUCTION

The final objective of this thesis is analyzing the Finnish business cycle in the last 25 years. Indeed, the time sample that I took in consideration offered a sequence of three different economic periods, providing the opportunity to investigate the ability of Finland to cope with distinct economic scenarios.

The first one concerns the deepest crisis that Finland experienced during the XX century: the Great Depression of the 1990s. Although the collapse of the Soviet Union and the subsequent decline of the Soviet market had a role in worsening the economic downturn, it was substantially caused by the deregulation of the financial markets in the 1980s, leading to an unexpected bubble in the stock and real-estate markets which was destined to burst. The second economic context examined in depth is the recovery phase that lasted since 1994 until the first years of the 2000s, namely over a period in which the Finnish growth rate was higher than the EU average. Efficient macroeconomic moves, the process of European integration and the spread of the ICT sector helped Finland to come out from the crisis, starting a strong period of economic growth. Finally, the third context is the global crisis that disturbed and still disturbs the international economic equilibrium since 2008. Indeed, as a small open economy, Finland was not able to avoid it, going through severe repercussions in its GDP, industrial productivity, exports and labour market.

The choice of this topic is strictly related to my personal experience. One year ago, I spent four months in Jyväskylä, a small town in the south of Finland, for my Erasmus experience. I have always been fascinated by the Scandinavian countries, their economic structure, their strong welfare state, their culture, and their essence, permanently divided between two worlds, the East and the West. Living in Finland allowed me to go through the reality of a country which was experiencing the severe consequences of the last global economic collapse since the depression of the 1930s. Speaking with Finnish people and living on site, I realized the gravity of the economic period and the pressure that its repercussions was exerting on the population, afflicted by a static economic growth and a high rate of unemployment. However, during my LUISS university course of International Economics, I was surprised of how, at the

beginning of the 2008 crisis, Finland, together with a few other countries, could boast a deficit/GDP ratio and a debt/GDP ratio still within the limits established by the European Stability and Growth Pact. What had changed? It was the question that I wanted to answer. To receive guiding ideas and useful instructions for a correct analysis, I asked the help of Kari Heimonen, the School of Business and Economics' vice dean of Jyväskylä University. After having spent a long cold afternoon debating about Finnish economy, paper industries, Nokia and Soviet Union, he recommended to me to reconstruct the entire Finnish economic cycle since the collapse of the USSR until today. Indeed, the Professor emphasized the considerable importance of the Great Depression of the 1990s, stressing how it gave to the Nordic country the necessary strength to rebuild its economy during the recovery period. However, the industrial sectors responsible of the growth experienced during the first years of the new millennium (ICT and paper firms) were precisely the same that undergone a decline in their share of exports during the 2008 crisis. For this reason, Professor Heimonen wisely suggested to me to embrace the entire century's quarter, analyzing each different phase. That was the birth of my thesis.

In the first chapter, after a brief overview of the floating development of the Finnish economy during the 20<sup>th</sup> century, I am going to focus on the last, significant and heaviest peace time crisis of the 1990s: the Great Depression of 1990 – 1993. Firstly, I am going to analyze the collapse of the Finnish-Soviet trade relation, examining the thesis of Gorodnichenko *et al.* according to which the latter can be considered the decisive factor of the crisis taken into consideration. Indeed, it provoked a severe trade shock which resulted in higher production input costs. Secondly, I will go deeper in the second and most plausible explanation of the crisis: the financial liberalization of the 1980s. Indeed, it was implemented without those prerequisites that make it efficient. As a result, it caused a sharp credit expansion and the blast of house and stock prices, followed by a severe financial and banking crisis. Finally, I examined in depth the effects of the crisis on the Finnish welfare system, the most peculiar feature of the Nordic economic model.

In the second chapter, I am going to investigate the subsequent recovery phase, that lasted since 1994 until the first years of the 2000s. Indeed, the financial crisis and the subsequent financial integration aimed to overcome it made the Nordic economy more

reactive, inclined to “Schumpeterian” values and able to increase its growth prospect. Firstly, I am going to offer an overview of the macroeconomic moves that followed the depression, considering their effects on the economy. Secondly, I am going to analyze in details the process of European integration started by Finland in 1994. In doing this, I will go deeper in the pros and cons of a single currency area, particularly focusing on the benefits and the risks that derived from the euro zone. To conclude this part, I am going to consider the relation between integration and growth, explaining how the former effectively fosters the latter. Finally, I will describe the strong development of the ICT sector, as the most productive industrial sector of the Finnish economy since the mid of the 1990s.

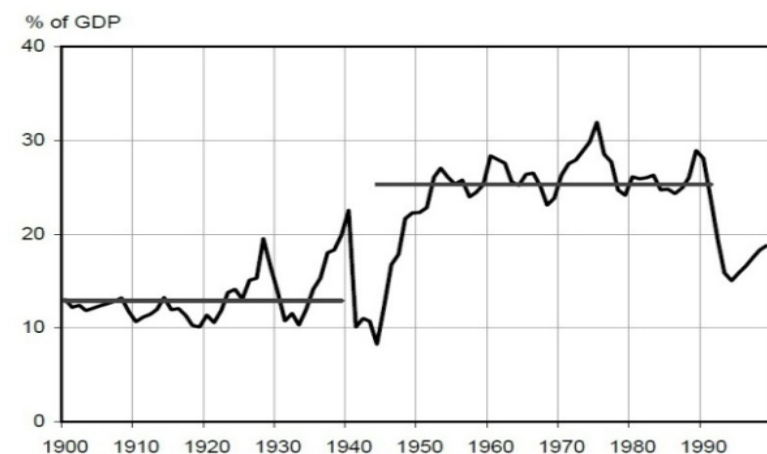
In the third and last chapter, I am going to identify the principal features of the last economic scenario taken into consideration: the 2008 economic crisis. Firstly, I am going to outline the principal differences between the two crises. Indeed, the 1990s economic collapse was predominantly homemade and, consequently, totally different from the current crisis, caused by a decline of export demand. Secondly, I will focus on the present economic downturn, analyzing in details the effects that it has had and is still having on Finnish GDP, industrial production, exports and labour market. Finally, I will describe possible solution to foster growth, in order to improve the long-term sustainability of public finances, reduce unemployment and raise labour productivity.

# 1. The Finnish Great Depression of the early 1990s

## 1.1 The Finnish economic crises in the 20<sup>th</sup> century

Before focusing the attention on the Finnish Great Depression of the 90s, considering it the most important Nordic economic downturn of the last two decades, it is intriguing giving a brief overview of the fluctuating development of the Finnish economy throughout the entire 20<sup>th</sup> century. Heikkinen e Kuustera<sup>1</sup> divided it into three main phases: the first, stretching from the middle of the 1890s to the Second World War, the second protracting from the Second World War to the end of the 1980s, and the third lasted from 1990 to the end of the century. According to the writers, the first phase, although characterized by both the First World War and by the depression of the 30s, did not essentially threat the growth path that began in the 1890s. The annual growth rate was 3.0 % for real GDP and 2,1% for GDP per capita and the percentages remained the same for the periods 1895 – 1913 and 1913 – 1938.

**Figure 1.1** *Investment ratio 1900-1999*



The second phase includes the so called “golden years” that Finland experienced in an exceptional manner: they did not end with the oil crisis of the 1970s, but lasted until the end of the 1980s. In particular, the overall investment ratio of the Finnish economy rose

<sup>1</sup> Heikkinen, S., Kuustera, A., *Finnish Economic Crises in the 20<sup>th</sup> Century* In: Kalela, J., Kiander, J., Kivikuru, U., Loikkanen, H. A., Simpura, J., N.B. (eds.) *Down from the heavens, up from the ashes: the Finnish economic crisis of the 1990s in the light of economic and social research*, Helsinki, Government Institute for Economic Research.2001.

<sup>2</sup> Ivi, p.28.



to a decisive new level after 1945 (figure 1.1). Finally, the beginning of the third phase can be identified with the deepest Finnish depression of 1990s, that started at the end of the 1980s and that was defined by Joseph A. Schumpeter as a period of “creative destruction”.

Going deeper in the description of the period cited above, it can be argued that five different crises characterized the three phases just listed. The first one was strictly connected with the First World War and the closure of the Western markets. However, albeit the GDP dropped in 1914 and 1915, this did not represent a lethal complication for the Finnish economy, that, by 1916, regained the pre-war speed thanks to the rapidly increasing exports to Russia. However, in 1917, the collapse of the old Russia disturbed the normal economic activities in Finland. At that time, the Bank of Finland was constrained to accept Russian roubles at a fixed, overvalued rate and they poured in the Finnish Bank. Therefore, the Russian war-induced inflation deeply affected the Nordic economy, leading the value of the markka to diminish to less than a third of the 1913 level and causing the collapse of the entire monetary system. After independence, Finnish firms focused on their new goal to replace Russian market, identifying in Western Europe a possible trade partner. The companies comprised in the open sector (sawmill, pulp and paper-industry firms competing in global markets) chose cooperation as their strategies, setting up extensive selling associations aimed at conceiving a more protective customs policy. Moreover, an autonomous monetary policy eased the recovery in the early 1920s. Indeed, the Finnish markka was fixed at an undervalued level, losing its value and bringing to a substantial decrease of the nominal debt. It was the first time that the monetary policy opted for devaluation as the best appropriate instrument to run out of the crisis, increasing the competitive position of the both export and home-market firms. On the other hand, the power of the trade unions was seriously undermined by the negative events of 1918. Labours had no bargaining power during the first years of independence, labour market became quite flexible and wages went up and down with the cycles. The direct consequence was that private consumption sharply declined among ordinary middle-class people whose wealth was in monetary claims: they represented the real losers of the aftermath of the First World War and agriculture started to be considered not only as a possible way of living, but mainly as a strategy to secure the political and economic stability of the whole society.

The second Finnish economic decline that can be analyzed over the century was the inter-war crisis of the 1930s. It began in Finland in 1929, when the boom of the 1920s left the room to the crop failure of 1928. It immediately led to an increase in imports, causing a deficit in the trade balance. As it was stressed by the authors, the consequences were largely similar to those of the previous one: “a decline in GDP, a rise in unemployment, falling prices and bankruptcies in both industrial and agricultural sectors”<sup>3</sup>. The decline in real GDP was minor in Finland compared to other countries: it was only 4% lower in 1932 than in 1929. At the same time though, private consumption represented again the main depression indicator: it fell by 17% in the same 4-year period. Wholesale prices fell by 17% from 1928 to 1931 and if this meant a positive incentive for wage earners and salaried employees, that was not the case for the farmers. The agricultural deficiency pushed the demand down so that farmers’ nominal income fell, and the maintenance of a high level of interest rates exacerbated further the situation. Indeed, the strong connection between the main export industry, namely the forest industry, and the rural economy was one of the main features of the Finnish economy between the two World Wars. Since the farmers owned the majority of the forest, variation in exports of forest products had considerable effects on their income as well. Again, also in this case, the basis of exports recovery laid in the devaluation of the currency in 1931. Without that move, it seemed clear that the depression in pulp, paper and sawmill industries would have lasted even longer. As in the 1920s, some home-market producers acted against the crisis promoting cooperation: the cotton manufactures founded a domestic cartel in 1932. At the same time the flexibility of prices and wages had a great role in the rapid recovery from the depression. The weak bargaining power of the trade unions and the evident lack of unemployment benefits or minimum wages let the wages to decline. In order to come out of the crunch, no large-scale government intervention was needed. The most suitable strategy appeared believing in an automatic stabilization. Consequently, instead of stimulating private consumption, the government focusing its attention on supporting export industries through devaluation. This solution, together with price flexibility of the factors of production improved radically the international competitiveness of Finnish producers. Moreover, another important determinant move in ensuring the economic recovery was

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<sup>3</sup> Ivi, p 32.

constituted by the interest-rate regulation: the banks, supported by the Bank of Finland, agreed on a common level in 1931, causing a fall in real interest rates.

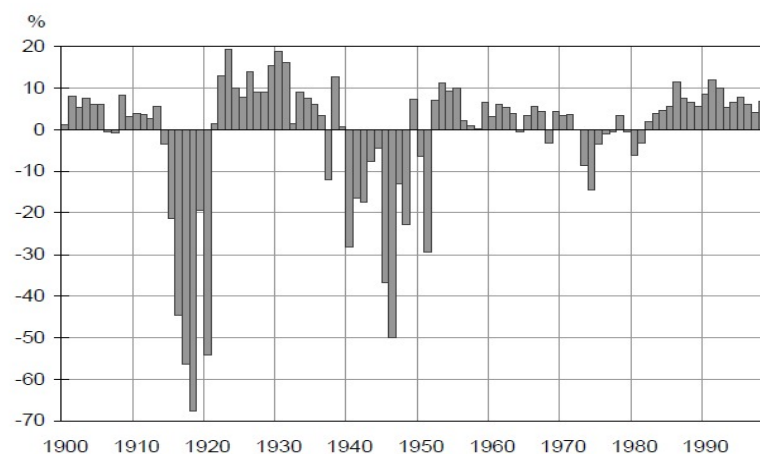
The third period identified stretched from 1953 to 1958, consisting of the so called “turbulent fifties” and characterized by a drop of growth to almost zero after a burst export-led, fuelled by the Korean boom. In the early 1950s the terms of trade rose by 37%, more than in any other year of the 20<sup>th</sup> century and the real GDP grew by 8.5% in 1951. The main export industries, i.e. paper, pulp and wood, gave a boost to the whole economy, leaving behind the period of strict post-war regulation. As the Korean boom relieved, export prices started to drop and domestic ones kept on rising, resulting in a “costs crisis” in the export industry. Differently from the previous crises, prices and wages were no more flexible: collective bargaining was introduced and pressure groups of agricultural producers and forest owners gained a powerful position. In a world of sticky prices and nominal wages, automatic stabilization could not be the correct solution for the economic recovery. Therefore, regulation was adopted through a stabilization programme aimed at halting inflation, preventing prices and wages from rising and fighting the “cost crisis” of the export industry. The “freezing” strategy was quite successful in the short term, but nominal wages started to rise again after 1953. Labour-market regulation no longer worked and adjustment was once again obtained using devaluation of the markka in 1957, which gave impetus to inflation. In addition, a high level of private and public investments prevented the latent crisis of the 1950s from turning into an open one.

Among the Finnish economic declines of the 20<sup>th</sup> century, it is worth analyzing the stagflation years of 1975 – 1977. When the Organization of Petroleum Exporting Countries (OPEC) strengthened its cartel policy, Finland, like the whole world economy, was hit by an exceptional price shock in 1974. The price of crude oil more than tripled in a few months, causing high inflation to all developed countries. Inflation rate began to rise in Finland in 1972, reaching its highest level in the middle of the decade. Between 1975 – 1977, export to western countries declined sharply, making the industrial production fell during the two years. However, the bilateral trade with the Soviet Union played a big role in saving the Finnish economy from a deeper depression, because the more the western markets became hard to reach, the more Finland exported products to Soviet Union. At that time the money market was still highly regulated and

the interest rates were kept artificially low, ensuring a negative real interest rate. Also in this case recovery from the crisis followed the Finnish tradition, and at the end of the 1970s, three devaluations characterized the markka. Moreover, in the same period, a strict price regulation was applied to almost half of the commodities in the average consumption basket.

Finally, the last but not the least significant crisis of the century taken into consideration is the deregulation crisis of 1990 – 1993. It is considered deeper than any other peace-time crises in Finland and, at a later stage, I will examine in depth the different factors that, combining among themselves, determined it. In short, it was caused by the deregulation of the financial markets in the 1980s, which led to an unexpected boom mainly heard in the stock and real-estate markets. The deregulation increased lending, leading to a great level of indebtedness in the economy. Moreover, the Finnish export industry had difficulties adjusting to the new regime of fixed exchange rates and the overvaluation of the currency undermined its competitiveness.

**Figure 1.2** *Real interest rate 1900 – 1999*



After the collapse of the Soviet Union, and the consequent decline of the Soviet market, the crisis seriously spread, unemployment rose to record levels and the banking system nearly collapsed. This was principally due to the fact that, in the first phase of the crisis, the Bank of Finland committed to a new policy of fixed exchange rates, aggravating the

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<sup>4</sup> Ivi, p. 39.

economic situation: the transition from negative interest rates to high positive ones was a real cultural shock to all economic actors (figure 1.2). In order to restore the competitive position of Finnish exports, the Bank of Finland relied once more on the old “D-vitamin”, the devaluation of the currency which took place in the autumn of 1991. However, this time the economic recovery was not as elementary as in the previous episodes. The exceptionally high real interest rates, the inferior financial structure of firms, and the corporatist rigidities in the economy, delayed the economic reconstruction. When the real interest rates started to fall and new export industries (IT firms, with Nokia in the lead) expanded vigorously, the economy began to flourish again.

After having considered the five Finnish economic crises of the last century, it seems quite opportune trying to list some common features and dissimilarities of the economic downturns, basing our evaluation on the precise analysis of Heikkinen e Kuusterä<sup>5</sup>. The first similarity that stands out from an overall perspective is the fact that all the crises analyzed were export-led. This was caused by the war in the first crisis (1914-1919) and in other cases by global cyclical downturns. Since Finnish exports consisted mostly of manufacturing products, the decline in exports adversely affected the manufacturing sector in all the crises. Differently, the construction sector was hit during the First World War, the Depression of the 1930s, characterized by the agricultural depression as well, and the Deregulation crisis of the 1990s. Furthermore, bearing in mind that Finland is an export-dependent economy, the common strategy used in order to counteract the cyclical downturns has been an active exchange-rate policy. It is not a case that in all five crises recovery was obtained and accelerated by depreciating the value of the markka. The aim of the devaluations was restoring the competitive position of Finnish export industries and, therefore, encouraging economic growth. However, the length of the recovery represented an essential difference between the five crises taken into account. The investments level and the situation of the labour market changed considerably with the recessions. With no doubts, investments have fluctuated more than GDP over the years, growing at a faster rate during the boom phases and declining more rapidly in depressions. However, during the 1950s, the investment volume kept on growing more rapidly than GDP, assuming a countercyclical behaviour, while in the

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<sup>5</sup> Ivi, pp. 40-44.

1990s, they recovered more sluggishly than in any other crisis. Focusing our attention on the labour markets, the situation was different in each of the five crises. While inflation fixed the downturn adjustment of real wages during the First World War years, the deflation of the 1930s made the nominal wages fall more than consumer prices, causing a fall in real wages. However, in the 1950s the social scene started to change dramatically. Labour gained more power, nominal wages became sticky and real wage adjustment was carried out by means of price and wage control. In the 1970s, the unions gained even more power and the corporatist system of wage control began to crack. During the oil crisis inflation became rampant, favoring a vicious circle of wages and prices rising. Despite high nominal wages increased, the real ones fall but without achieving the equilibrium of the labour market, increasing unemployment. However, the most dramatic rise in unemployment took place during the 1990s crisis.

The object of the first part of my dissertation is the last crisis cited above, the Finnish Great Depression of the early 1990s. This decision takes its roots in two principal considerations. The first one is temporal. I have decided to analyze the business economic cycle in Finland in the last 25 years, in order to concentrate on a not too long period, ensuring a sense of real continuity between one economic phase and the other. The second reason is purely substantial and it is linked to the buried effect that the depression has had on the economic history of Finland. In the next section, I am going to investigate the possible factors, or combination of factors, that have originated the economic downturn taken into consideration.

## **1.2 USSR-Finland trade relation: the soviet-led theory**

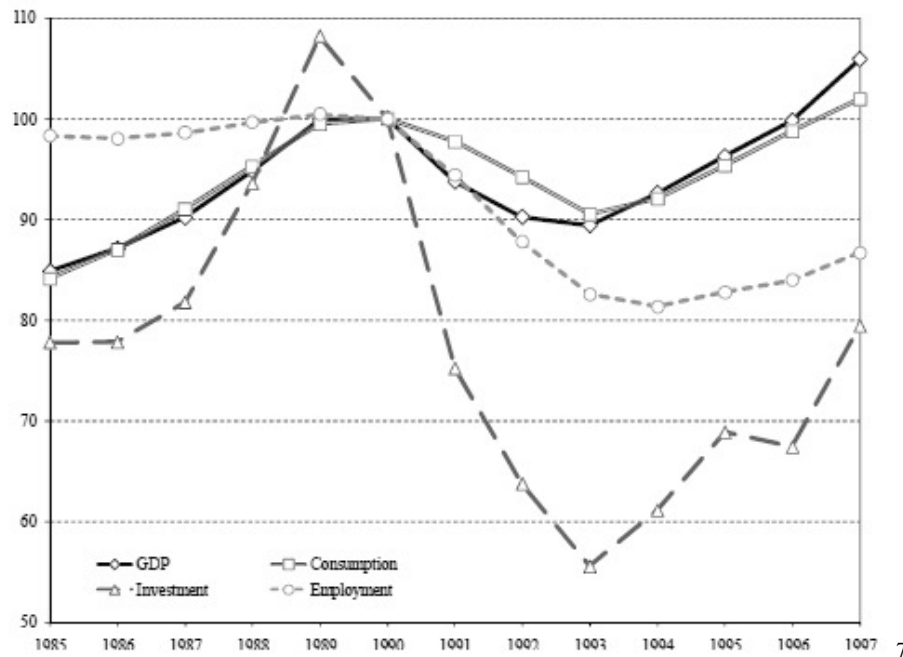
During the years 1991 – 1993, “Finland experienced the deepest economic slump in an industrialized country since the 1930s and the deepest peace-time recorded recession in Finnish history”<sup>6</sup>. As it is visible from the figure 1.3, over this period, real GDP declined by 14%, real consumption dropped by 10% and investment fell to 55% respect to the 1990 level. However, the most significant indicator of the crisis was the level of

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<sup>6</sup> Gorodnichenko, Y., Mendoza, E. G., Tesar, L., *The Finnish Great Depression: From Russia with Love*, Cambridge, National Bureau of Economic Research, 2009.

unemployment. During the depression, Finland went through a quadrupling of unemployment, moving from 4% to a peak of 18%, and the stock market lost 60% of its value.

**Figure 1.3** *Real GDP, Investment and Consumption in Finland*



Among the possible explanations of the 1990s Finnish Great Depression, there is one theory that refers to the collapse of trade with the Soviet Union as the decisive factor of the crisis. According to Gorodnichenko<sup>8</sup>, the collapse of the Soviet market caused a costly restructuring of the manufacturing sector and a rapid, important increase in the cost of energy. Indeed, the USSR-Finland barter type trade arrangements had always allowed the Nordic country to export competitive manufacturing products in exchange for energy imports at an overvalued exchange rate.

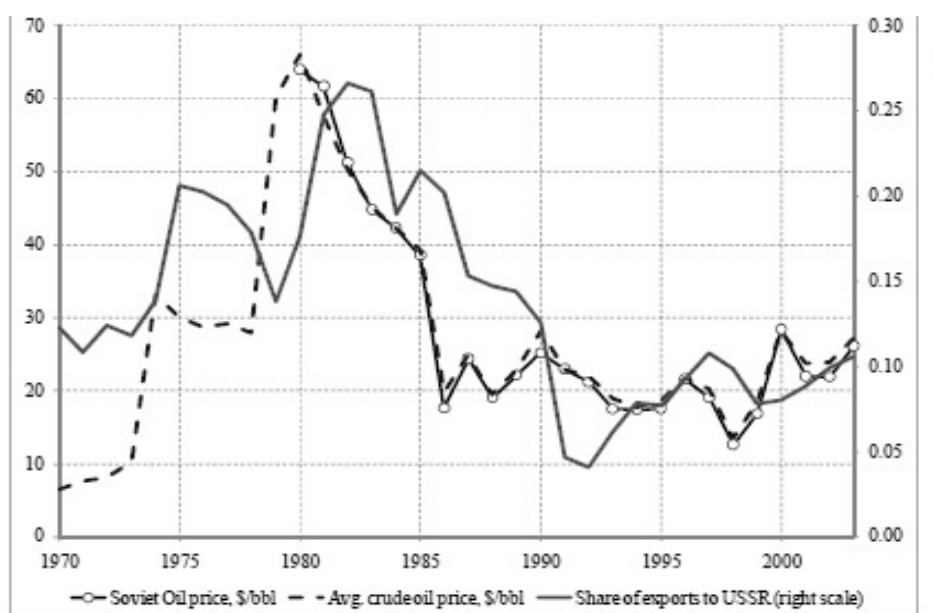
Finland and USSR trade relation had been characterized by a series of five-year, highly regulated trade agreements, quite similar to those established between the Soviet Union and its Eastern European allies. The first one was signed in 1950, making Finland the first market economy to sign a five-year agreement to exchange goods with the USSR for 1951 – 1955. Later, seven further five-year trade agreements were endorsed. Those arrangements regulated the volume and composition of trade between the two countries

<sup>7</sup> Ivi, p. 35. The data are from OECD National Accounts database.

<sup>8</sup> Ivi.

and, by the late 1980s, they gave the birth to a barter of Finnish manufactures for Soviet crude oil. As it is shown in figure 1.4, the relation between the two countries became more intense since 1975, when the USSR was Finland's most important trading partner.

**Figure 1.4** *Finnish exports to USSR and dollar price of Soviet oil*



During the early to mid 1980s, the USSR accounted for 20-25% of Finnish trade flows. Thenceforth, the trade relations between the two countries started to progressively decline, until the total collapse of the trade agreement. The latter was principally due to two main factors. The first one is closely linked to an endogenous contraction resulting from falling oil prices. Differently, the second one is strictly connected with the reforms adopted under Perestroika, which, during the second mid of the 1980s, attempted to decentralize Soviet decision making system, making difficult for Finnish authorities to identify those with real ascendancy on the Soviet end of the bargain<sup>10</sup>. On the 18 December, 1990 the entire trade regime fell down, leading to the absolute cancellation of the contracts with the Union of the Soviet Socialist Republics.

In the early 1980s, approximately 80% of Finnish imports from the USSR were constituted by mineral fuels and crude materials and, therefore, it is not surprising that more than 90% of imported oil and 100% of imported natural gas came from the Soviet

<sup>9</sup> Ivi, p. 35, Soviet oil price series is from International Energy Agency.

<sup>10</sup> Ivi, p. 4.



partner. Consequently, from the Finnish perspective, the aggregate of bilateral trade was a function of Finnish import demand given the world price of oil. In particular, during the fatal oil crisis of the 1970s, the oil-for-manufactures trade agreement allowed Finland to be armed against the cyclical fluctuations experienced by the most other-industrialized countries. As oil price started to rise, Finland was able to expand employment and production in those sectors exporting to the USSR, being capable to balance the higher cost of energy imports. As far as exports are concerned, the bilateral trade agreements fixed the total volume and the explicit quotas for the export of manufactures, while the specific quantities and unit prices of the items to be exported were established through direct negotiations conducted by trade associations. Finnish goods sold to USSR consisted mainly of forest products (paper and paperboard), ships and machinery, equipment and vehicles. In the early 1970s, after having paid off war reparations, ships were the largest single pieces transported to Russia. However, their share declined dramatically from roughly half of the total exports in the 1950s to about 20% at the end of the period. Other important groups of exports were chemicals, metals, textiles, clothing, footwear, beverages and foodstuffs.<sup>11</sup>

It was widely perceived how exporting to the USSR constituted a lucrative business for Finnish firms. Analyses and studies of managers and industry experts defined the Soviet trade as a low risk, low cost and long term business. Indeed, for Finnish enterprises, Soviet trade represented a relatively stable export market. The general volumes of trade were established in five-year accords, offering a reasonably predictable market; in particular, target volumes were agreed in advance and significant prior payments were made in certain periods to some actors. For this reason, firms did not need complicated export credit systems for larger and the more expensive goods. Moreover, on average, Soviet exports were also more profitable than exports to other markets. Ilkka Kajaste<sup>12</sup>, using unit prices of Soviet and non-Soviet exports, estimated that in 1985 the prices of exports to the Soviet Union were at least 9.5% higher than those for exports to the West. This difference in export prices was highest in non-metallic sector, foodstuffs and forestry. In addition, the quality of the products destined to Soviet Union was not always as high as in the West and, consequently, there was no demand on other

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<sup>11</sup> Ollus, S. E., Simola, H., *Russia in the Finnish economy*, Helsinki, Sitra Reports, 2006.

<sup>12</sup> Kajaste, I., *Soviet trade and the Finnish economy*, Ministry of Finland, Discussion paper n° 33, 1992.

markets. This fact was also due to the high degree of specialization of the Finnish exports to the USSR. Again, Kajaste reported that because of the extremely specialized nature of goods traded with the COMECON (Council of Mutual Economic Assistance), the collapse of trade with Eastern partners was compensated only to a very limited extent by redirecting trade to the Western markets. Furthermore, while some manufacturing sectors were exceptionally specialized in goods reserved to the Soviet market, no sector was fully exempted from the collapse of Soviet trade.

Although some of the effects of the bilateral trade affected only small sectors, while others affected the economy in general, it can be argued that the agreements with the Soviet Union had generally a clearly positive impact on the Finnish economy. To sum up, the most evident consequence was the counter-cyclical effect on Finnish trade when oil prices were high, thanks to the increasing of Soviet demand. Secondly, as I have already explained, the trade was profitable, stable and predictable. Then, Finland used the Soviet market as a springboard to Western market. Fourthly, the employment effect was absolutely compelling. Indeed, the bilateral trade considered above had a direct and indirect employment effect for Finland, especially in the metallurgy, clothing and textile industries. In particular, since the early 1970s the phenomenon definitely increased. At the beginning of the 1980s about 130000 people became employed and, if the effect of the construction projects in the USSR and trade of services are comprised, the figure reached the peak of 150000 in 1985 and averaged at 140000 during 1980 – 1985, coinciding to the 6% of the total workforce at that time. In addition, the unit costs of Finnish exporters to the USSR were lower than in trade with other countries, due to the economies of scale and low marketing costs. Finally, the trade centralized management reduced transaction costs. On the other hand, the grasped economic relation had also negative effects. First of all, it caused an excessive addiction on Soviet trade, making exporters quite lazy, relaxed and protected from external competition. Secondly, as a result, the exports favored less competitive industries and determined the production structure in Finland. Moreover, difficulties in balancing the clearing trade increased the Soviet debt and the bureaucratic and corporatist nature of the trade discriminated against Finnish Small and Medium Enterprises (SMSs).

Going deeper with the analysis of the trade relation, Ollus and Simola<sup>13</sup> considered the bilateral trade as more concentrated than the rest of the Finnish foreign trade markets during the same period. In 1989, the number of Finnish exporters to the Soviet Union was 1688 of which the five largest exported about 40% of total exports. The high concentration can be explained by the centrally established nature of the trade and the common use of production alliances with the USSR. In short, bilateral trade with Russia grew faster than Finland's trade to the West in the 1970s and 1980s, accelerated by the two oil crises, when the oil prices grew significantly and Finland had to increase exports in order to balance the imports. In the early 1980s the Finnish trade surplus with Russia started to turn up and when oil prices started to fall, at the end of the second crisis of mid-1980s, the USSR was not capable to balance the trade anymore, leading to a considerable Finnish surplus in the clearing trade.

The bilateral trade ceased to exist at the end of 1990, when no new trade agreements were signed. Already in the late 1980s the Soviet Union had problems to fulfill its obligations, when the trade surplus had expanded and many enterprises and authorities in the USSR started to prefer hard cash payments instead of clearing. To a certain extent, the collapse of the Union was unanticipated so that Finnish governments officials and firms remained quite optimistic about the future of the trade relation with the USSR. However, the collapse was quick and deep and in a three-year period, from 1989 to 1992, imports of oil from the USSR fell sharply, from 8.2 million tons to 1.3 million tons. Generally, the loss of Soviet market caused the entire fall of the total Finnish exports, implying the impossibility to redirect the goods to other countries. Moreover, after December 1990, entire industries had to be reorganized, and also those that showed some recovery were deeply hit, necessitating major transformations in product lines. Furthermore, the collapse of exports to the Soviet Union deeply contributed to the overall increase in unemployment observed at that time. Specifically, during the years of the crisis, the Finnish labour market was characterized by a high degree of unionization. In 1993, 85% of workers belonged to unions and almost 95% were covered by collective agreements<sup>14</sup>. Since most employers are organized in

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<sup>13</sup> Ollus S. E., Simola H., *Russia in the Finnish economy*, Helsinki, Sitra Reports, 2006.

<sup>14</sup> Bockerman, P., Uusitalo, R., *Erosion of the Ghent System and Union Membership Decline: Lessons from Finland*, British Journal of Industrial Relations 44(2), 283-303, 2006.

federations, the wage bargaining normally starts at the national level and if a federation or a union rejects the nation-wide agreement it can negotiate its own terms. This is exactly what did happen during the early 1990s. Unions did not agree to cut nominal wages in 1992-1993, namely the peak years of the depression. The fraction of workers with no wage change reached 75% and, given that inflation was quite moderate, it can be argued that real wages fell only to a limited extent, showing one of the prominent feature of the Finnish labour market during the Great Depression of the 1990s: the wage stickiness.

In order to support their thesis, i.e. the theory that identified in the collapse of the Soviet market the principal factor crucially responsible for the crisis of the 1990s, Gorodnichenko *et al.* (2009) elaborated a model of the Finnish economy capable to capture the key features of the trading relationship between and of the Finnish labour market. They construed Finland as a small open economy, namely as a price taker country distinguished by an economic structure that is smaller compared to the world markets in which it participates<sup>15</sup>. In particular, they distinguished three well defined sectors. The first one, the “non-Soviet sector”, fabricated and traded products consumed at home and sold abroad in western markets; the second one, the “Soviet sector”, produced goods that can be consumed at home or sold exclusively to the USSR; finally, the third one, the “services sector”, concerned only non-tradable goods. After having overcome the difficulty to separate a “Soviet” sector from a “non-Soviet” one, due to the pervasiveness of Soviet exports throughout the manufacturing sector, they succeeded in separating the share of exports of industry  $i$  at time  $t$  to the Soviet Union from the total exports of industry  $i$ . Later, taking 1989 as the “pre-collapse” benchmark year, the Professors analyzed the changes experienced by the economic branch over the 1989 – 1992 period.

In studying the response of the Finnish economy to the collapse of trade with the USSR, the authors considered the latter as once-and-for-all unanticipated even at  $t = 0$  in a deterministic environment. Looking at the analysis of Gorodnichenko *et al.* from an overall perspective, the key information that stands out is that the event investigated produced two distinct shocks for Finland. The first one interests the loss of one of its

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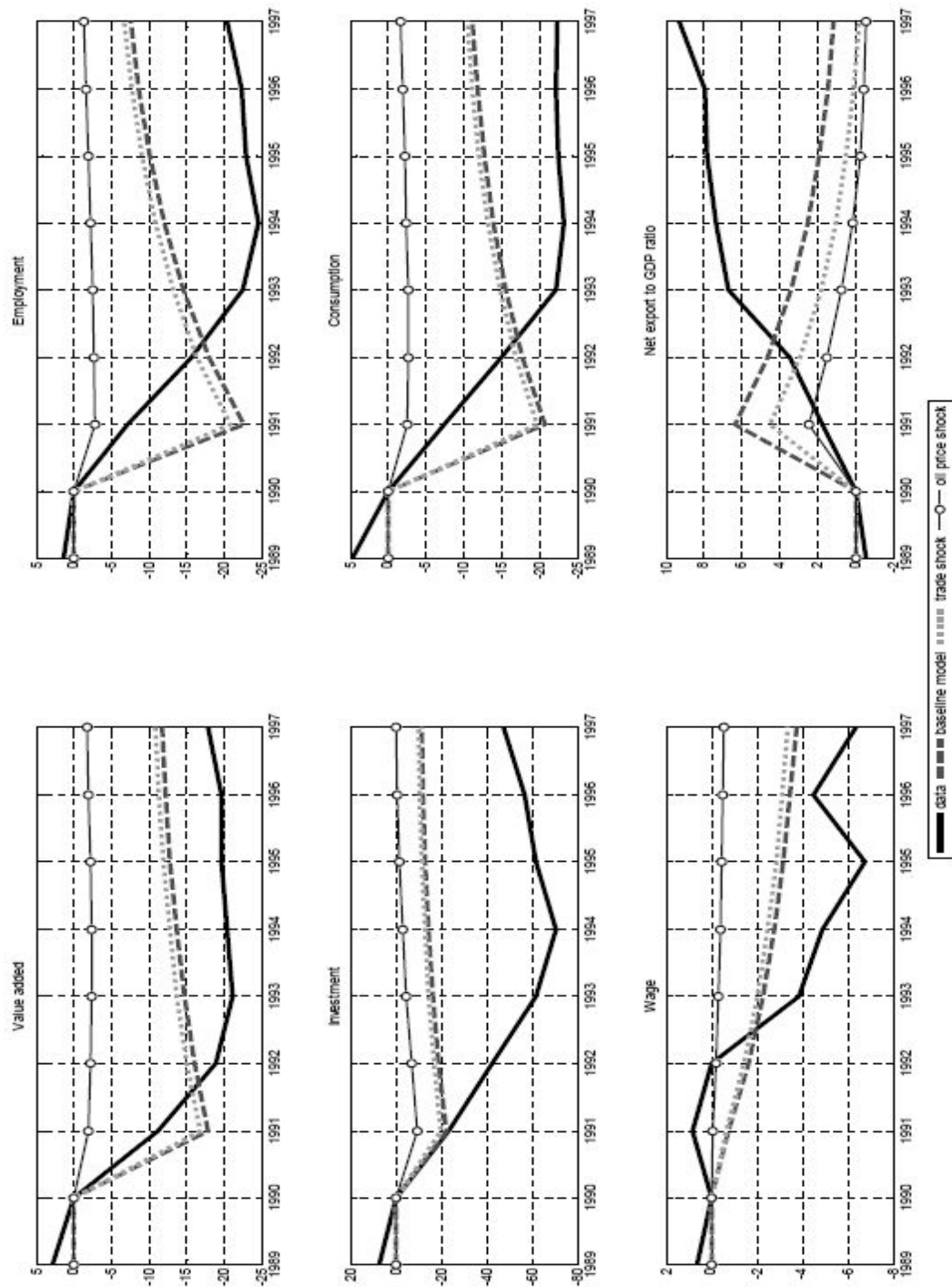
<sup>15</sup> Definition taken by the Deardorffs' Glossary of International Economics, <http://www-personal.umich.edu/~alandear/glossary/s.html>.

major exports markets and the Finnish firms' impossibility to redirect trade to other countries because of the high degree of specialization with the USSR. This implied that exports to the USSR vanished. At the same time, it was registered a permanent drop in Soviet oil imports to zero for all  $t$ . Hence, the second shock was the end of the USSR's provision of subsidized energy for Finland. In particular, this subsidy was at least 10% of the world oil price. Therefore, the Soviet trade collapse ended in a substantial increase in the oil price.

As it can be observed in figure 1.5, it can be argued that the model presented by Gorodnichenko *et al.* foresaw an output decline of 20% nearly identical to that observed in the data, even though the lowest point is reached in 1991, differently from the 1992 of the data. Similarly, both consumption and employment showed a downward trend about as much as in the data (about 24%), but both reached their troughs a year earlier than in the reality. As far as the dynamics of wages are concerned, it can be applied the same argument. On the contrary, although the model is in line in predicting a protracted dip in consumption, it expects a recovery that in the data it is not perceived. In addition, the example shows a stronger recovery in employment than what is effectively observed. The authors predicted a 26% drop in investment during the 1991 – 1993 period and a recovery to about 12% below the long-run trend, as well. In contrast, not only the investments fell by 65% below the trend, but, although it recovered a little by 1997, it remained 40% below the level arranged. Furthermore, as far as the three sectors taken into consideration are concerned, the model foresees permanent declines in value added, employment, investment and wages in the Soviet sector, underestimating though the drop in value added in the early years of the transition and overestimating the declines in employment, investment and wages. In the services sector, in the same way, the model matched the initial declines of all four macro indexes, but it did not reach the effective level observed in the data. In the non-Soviet sector as well, the model lessened the declines in value added, employment, investment and wages.

To sum up, the pattern succeeded in matching aggregate dynamics, but it was not so capable to explain some sectoral ones.

**Figure 1.5** *Macroeconomic aggregates: simulated response to oil and trade shocks, percent deviation from trend. Baseline calibration.*



However, it is important to pay more attention on the principal thesis supported by Gorodnichenko *et al.* Indeed, their model's key prediction is that the collapse of the Soviet trade, which accounted for only about 5 % of total employment and valued added in Finland, produced a significant contraction of output at the aggregate level (almost

<sup>16</sup> Gorodnichenko, Y., Mendoza, E. G., Tesar, L., *The Finnish Great Depression: From Russia with Love*, Cambridge, National Bureau of Economic Research, 2009.

20% in 1991)<sup>17</sup>. They found the possible logic of this amplification effect in the mixed effect of wage rigidity and the role of nontradables. Referring to the latter concept, in a two-sector model economy, the collapse of trade with USSR would have meant investing on factors to shift from the Soviet to non-Soviet sector. This would have been due primarily to the fall of the relative price of the Soviet-goods and secondly to the Finland's energy need to be financed now by exports of the non-Soviet goods. When factors can adjust, the decline in output will be smaller. On the contrary, if there are nontraded goods in the economy, the trade collapse increases production costs of both non-Soviet and nontraded good sectors. This consequence combined with the income's reduction and consequently the fall of the demand for all other goods caused by the collapse of demand in the Soviet sector, led to a massive decline in the relative price of nontraded goods and output. Indeed, between 1990 and 1995, the relative prices of Soviet and non-tradable goods fell by 17.4% and 13.3% respectively below the trend. As consumers purchases fewer goods, enterprises demand less labor, furthering contraction of demand again and the spiral continues. The mechanism triggered is then amplified by the wages' rigidity which contracted the demand even more in the short run. In summary, higher costs of producing goods associated to a fall in demand increased by rigid wages led to a succession of short-run effects on the initial shocks.

According to the model's creators, that experienced in the 1990s by Finland can be defined as a trade shock which seemed to be definitely different from an oil shock. Indeed, referring to the Finnish experience of the late 1970s and early 1980s, the economy's response to the oil price shock was much smaller, favoring an expansion of the Soviet sector. In fact, larger exports to the Soviet Union could increase the amount of oil that could be imported, partly offsetting the effect of the higher price of energy. On the contrary, as we have seen before, the trade shock led to an expansion in the non-Soviet sector. Gorodnichenko *et al.* tried to test the truthfulness of the model assessing its capacity to track the effects and the macroeconomic dynamics triggered by the 1974 oil price shock. As the collapse of the Soviet trade, the oil shock produced a large increase in energy costs for Finland, but without causing a major dislocation of its economic structure and sectoral factor allocations. During the 1970s, Finland did not stop to import subsidized energy from the USSR in exchange for specialized exports.

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<sup>17</sup> Ivi, p. 17.

So, although most economies experienced the oil shock early in the first quarter of 1974, the dramatic impact to the Finnish economy delayed because the oil price in Finnish-Soviet trade was a moving average of the world price, hitting the Nordic economy in the last quarter of the same year. In the new calculation, the Professors kept the model as in the previous assessment, only modifying the speed of wage adjustment (Finland was less unionized in the early 1970s than in the early 1990s) and the energy intensity, setting it a 25% higher than before. Comparing the results obtained by the model to the effective data concerning output, consumption and investment<sup>18</sup>, it can be stated that the model broadly matched the response of the Finnish economy.

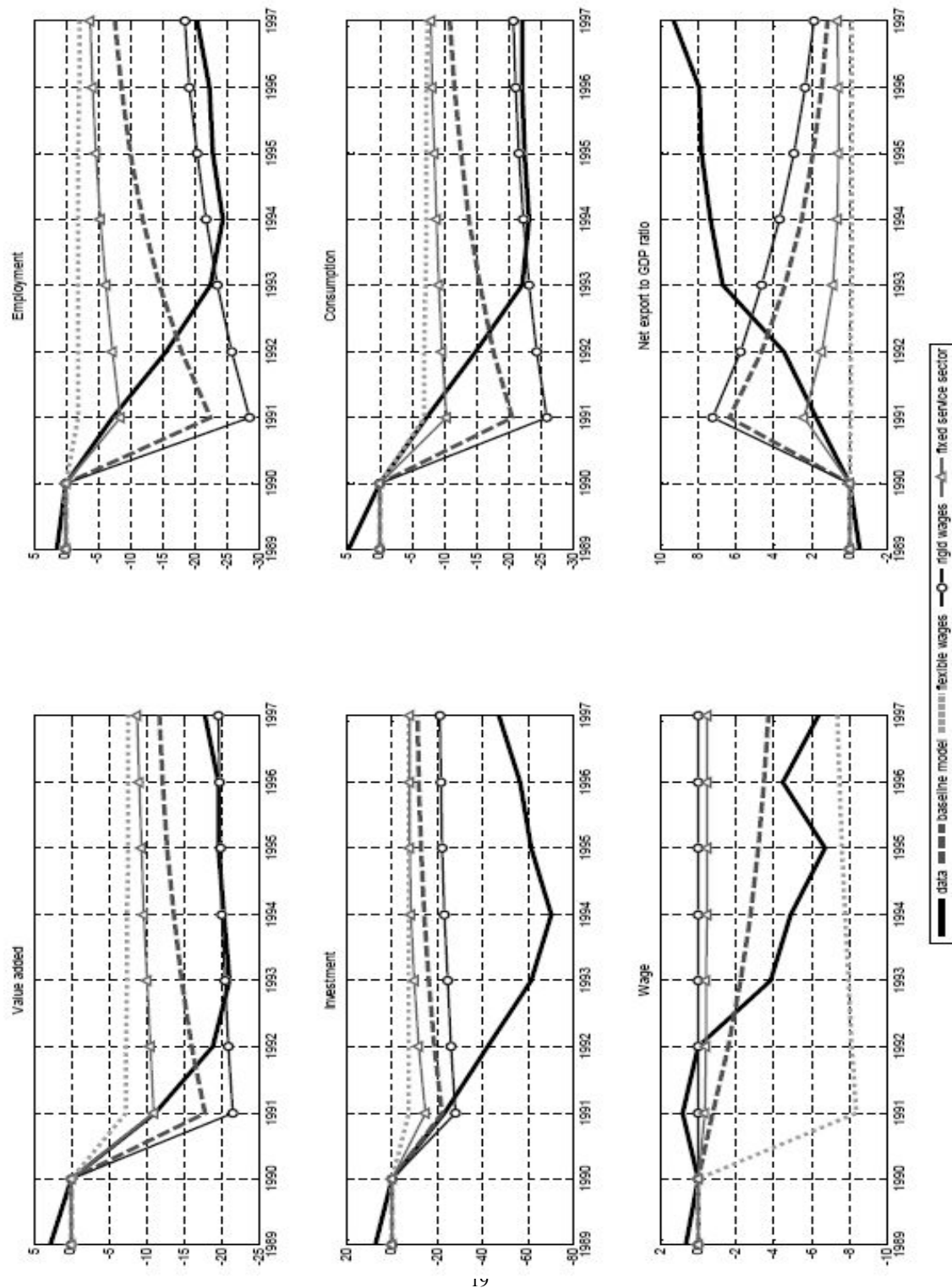
Focusing on the nature of the Finnish labour market in 1974, I mentioned how it essentially was characterized by a lower degree of unionization compared to the labor market of the 1990s. This information allowed us to affirm that the wage stickiness effectively played an important role in deepening the crisis of the 1990s. More specifically, as it can be noted in the figure 1.6, the key indicator governing the response of the macroeconomic variables to the collapse of the Soviet-Finnish trade is the persistence of real wages. Generally, in the case that considers the presence of fully flexible wages, a recession appears short and superficial, letting output, consumption, employment and investment to fall only by 2.5%. On the contrary, the real macroeconomic aggregates' response showed appear much bigger. Furthermore, according to the data, wages decline steadily, while the model with fully flexible wages expected an immediate 7.5% decline. In addition, at the sectoral level, fully flexible wages failed to capture the contraction across sectors: resources are lightly shifted from the Soviet sector to the more productive non-Soviet one. On the contrary, with wages' rigidity the oil shock reduces the marginal product of labor and firms, and the adjustment occurs via quantities, so that the model can capture ample drops in output, consumption, labour and investment. The conclusion that can be shared with the authors is that the depression is markedly deeper when wages are inflexible.

**Figure 1.6** *Macroeconomic aggregates, percent deviations from trend: Effects of wage rigidity and service sector*

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<sup>18</sup> Ivi, Figure 5, p.39.





A different way used by Gorodnichenko *et al.* in order to avail their thesis that attests the absolute importance of the collapse of the Soviet-Finnish trade in determining the Finnish depression of the 1990s, is comparing the economic dynamics experienced by

<sup>19</sup> Ivi, p.40.

Sweden and Finland. Indeed, both of them are characterized by similar institutions (such as regulated labour markets with high downward wage rigidity) and experienced a similar and almost concurring sequence of dramatic events (including financial crises) and policy responses applied at the end of the 1980s and at the beginning of the 1990s. The only difference precisely concerns the variable taken so far into consideration: Sweden did not undertake a so well-routed trade relation with USSR. At the trough of the recession, the Finnish output drop was about 22% from trend, while for Sweden it was about 8% below the trend. Hence, the creators of the model argued that the observed difference between the two paths experienced by the Nordic countries is consistent with the argument that the most significant economic downturn in peace time in Finland was mainly due to and can be explained by the collapse of the Soviet-Finnish trade relation.

The authors identified as a competing explanation of the Finnish Great Depression the so called “financial view”, which attributes the depression to the deepest Finnish financial crisis of 1992. According to this theory, the financial liberalization which took place during the 1980s produced an over-expansion of credit, an over-valued stock market, inflated real estate values and a large stock of debt<sup>20</sup>. According to the authors, these factors clearly played a role but they have to be interpreted as a byproduct of the financial-sector effects of the Soviet trade collapse that first caused a severe crash of the real economy. This theory focused on the fact that the disorders that characterized the Finnish financial sector seem to have been consecutive to the collapse of the Soviet trade rather than precedent. The supporters consider the severe cutting in consumption and investment due to the collapse of the Soviet trade as the main responsible for the proportional drop in demand for real balances which, under a fixed or managed exchange rate, had been large enough to trigger a currency crash.

However, this is only one of the possible explanations of the Great Depression of the 1990s and, according to the other part of the literature, it is also the less exhaustive. In order to understand the fragilities of the Soviet-led theory, it is appropriate and worth going deeper in the analysis of the “financial view”, investigating better the specific dynamics that led to the major financial crisis experienced in Finland.

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<sup>20</sup> Ivi, p. 21.

### 1.3 The “Financial View”: liberalization and financial crisis.

As I have previously explained, the literature essentially presents two different interpretations of the 1990s Great Depression. So far, we have focused on the collapse of trade with the disintegrating Soviet Union in the first months of 1991 as the main cause of the severe Finnish economic downturn. Indeed, at that time, the USSR, as well as Sweden, represented the major trading partner of Finland and the trade shock experienced in the early 1990s resulted in higher production input costs, deepened by sectoral and wage rigidities. On the other hand, the second explanation associates the economic crisis to the financial liberalization that took place in the 1980s, leading to a sharp credit expansion and to the blast of house and stock prices. The financial and banking crises that followed the asset bubble burst produced large amount of debt which made more difficult for the Nordic economy to recover. According to Gulan, Haavio and Kilponen<sup>21</sup>, although the collapse of Finnish-Soviet trade played a substantial role in aggravating the crisis, it can only account for no more than a half of the GDP's drop. Finland's annual current account deficits were 2.1%, 3%, 6.2% and 6.7% of the GDP in the years 1987 – 1990 respectively. The total dip of Russian trade over the two years 1991 – 1992 totaled less than 2 per cent of the GDP and visibly recovered thereafter, reaching its pre-crisis level in 1996. Hence, it was as low as the smallest of the annual current account deficits during the four years preceding the crisis. Declines in export demand of a larger magnitude had been handled in the past without difficulties when the Finnish economy was in a normal condition. Furthermore, it occurred in 1991, when the economic crisis had already showed up, bringing Finnish economy completely out of equilibrium. Indeed, in that year, the growth rate of Finland's real output dropped from 5.4% to zero, the Consumer Price Index (CPI) increased by 6.1%, wage inflation in manufacturing was 9.1% and unit labour cost in manufacturing increased by 4% to 16% above that of the OECD. Real GDP dropped in real terms about 14% from the peak in 1990 to its lowest point in 1993, while the rate of unemployment rose from 3% in 1990 to a peak of 20% in the beginning of 1994. In addition, the index of the market share of Finnish exports out of the imports of the OECD countries declined by one percentage

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<sup>21</sup> Gulan, A., Haavio, M., Kilponen, J., *Kiss me deadly: from Finnish Great Depression to great recession*, Bank of Finland Research Discussion Papers, 2014.

point to 86% (10 points below the value registered four years earlier) and the current account deficit widened to 6.7% of the GDP<sup>22</sup>. The data described an economic situation clearly unsustainable. In short, the developments of the years 1986 – 1990 cannot be ignored: without the disintegration of the domestic financial system, the impact of the end of the commercial relation between the two countries on Finnish GDP would have been much smaller. As the authors wrote, “it was the eponymous ‘deadly kiss’ of the financial sector that turned the Finnish economy into a true film noir in the early 1990s”<sup>23</sup>.

The first necessary step aimed at examining the financial interpretation consists in analyzing the liberalization that, during the second half of the 1980s, provoked a major asset price and a lending boom, triggering vast capital inflows and, consequently, stock and housing market bubbles. In order to clearly understand the policy reactions during the years 1985 – 2000, it is worth drawing attention on the institutions and economic policies that evolved in Finland after the Second World War. In 1948, Finland signed the Bretton Woods’ articles of agreement, pegging its exchange rate to the US dollar and paying its share to the International Monetary Fund in June 1951. In particular, the exchange rate was set at 231 markka to the dollar. Capital account controls, namely foreign exchange regulation, were at the basis of post-war stabilization policies, isolating Finland and allowing, at the domestic level, pervasive interventionist and selective monetary and fiscal policies. As it is well explained by Jonung, Kiander and Vartia<sup>24</sup>, these controls operated as a wall behind which the central banks fixed the interest rate and the distribution and size of credit flows. Capital market was relatively small and the money market virtually non-existent. Monetary policy was merely used to subsidize those economic sectors that the Government could support with low rates of interest and a big supply of credits. In the economy, banks were at the center of credit creation. Loan expansion was strictly tied to the inflow of deposits and, more important, the banks were not allowed to borrow from abroad. The economic situation was then aggravated by the quantitative lending restrictions and by international capital flows strictly controlled by means of licensing. Since interest, deposit and lending rates were

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<sup>22</sup> Ahtiala, P., Junttila, J., *The collapse of Soviet trade and Finland’s great depression of the 1990s: a re-examination*, University of Tampere and University of Jyväskylä, 2015.

<sup>23</sup> Ivi, p. 3.

<sup>24</sup> Jonung, L., Kiander, J., Vartia, P., *The great financial crisis in Finland and Sweden: the dynamics of boom, bust and recovery, 1985-2000*, EUROPEAN ECONOMY Economic Papers 350, December 2008.

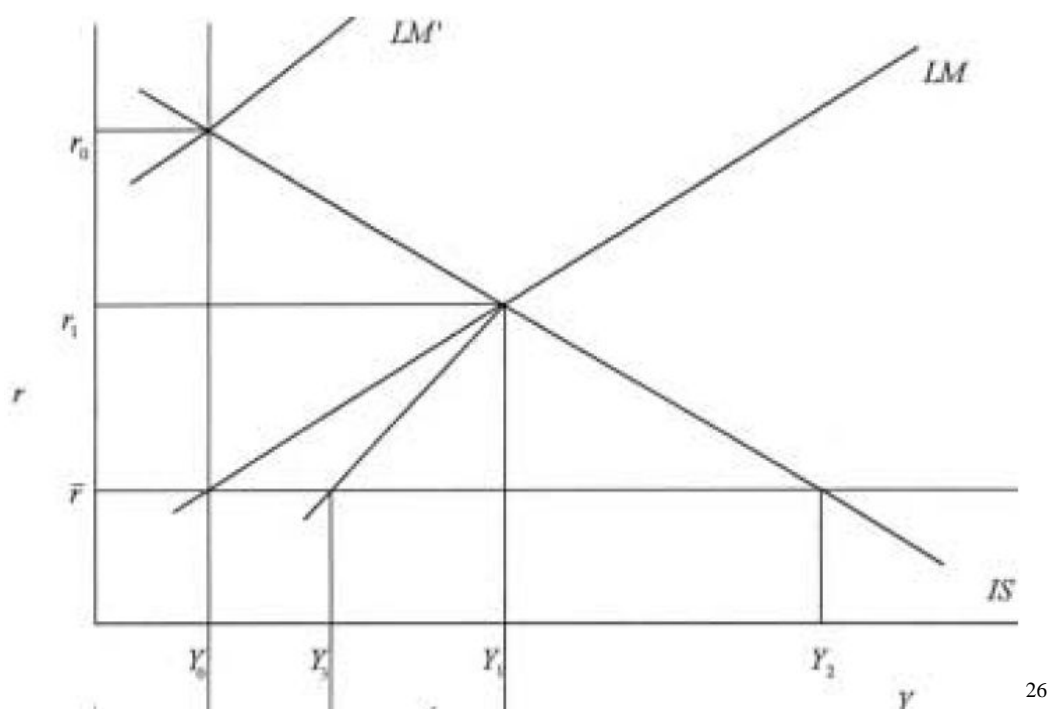
very low, due to the tight regulations and to the tax system deductions provided for the payment of interest rates on loans, the private sector demand for credit was always greater than the available supply. The overall result was a shortage of credit and credit rationing. Hence, interest rates were kept low and stable by central bank regulation and this, combined with the liberal deductibility of interest expenses and high marginal income tax rates, implied sharply negative real after-tax interest rates. Moreover, lack of price competition generated a costly and inefficient banking sector structure characterized by low profitability. Even after the breakdown of the Bretton Woods system in 1971, due to the expansion of the financial market integration, capital account controls persisted in Finland for a long time. During the 1970s the most important policy goal was ensuring full employment. Indeed, the Finnish labour unions enjoyed a strong political position, with the largest shares of unionized workers in the OECD countries. The pressure to achieve full employment contributed to partial expansionary and monetary policies, leading to low rates of unemployment, high rates of inflation and several devaluations over the years 1976 – 1978. In addition, the discretionary exchange rate flexibility created the required adjustment of real wages, needed to maintain full employment and external balance. However, the macroeconomic policy regime of Finland, as well as that of Sweden, remained based on a system characterized by strong capital account regulations, which isolated the two countries from the rest of the world.

Professor Ahtiala<sup>25</sup> tried to represent the behavior of the system with an extended Mundell-Fleming model (EMF). The latter, also known as the IS-LM-BP model, is an extension of the IS-LM Model. While the IS-LM Model usually deals with closed economies or economies under autarky, the IS-LM-BP Model describes a small open economy. Furthermore, the Bank of Finland, like most central banks, adopts it in projecting an empirically satisfactorily performing model. As it can be seen from figure 1.7, the economic dynamics are clearly illustrated. In the diagram total output (Y) is depicted on the horizontal, and the interest rate I on the vertical axis

**Figure 1.7** *The Behavior of the economy before and after Financial Market Liberalization.*

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<sup>25</sup> Ahtiala, P., *Lessons from Finland's Depression of the 1990s: what went wrong in financial reform?*, The Journal of Policy Reform, 9:1, 25-54, University of Tampere, 2007.



26

The declining curve is the IS curve which shows the locus of equilibrium points on the goods market. Instead, the rising one is the LM curve, which depicts the locus of equilibrium points on the money market. In a situation characterized by the absence of interest rate ceilings, the equilibrium point would be at the intersection point of the IS-LM curves, coinciding at output  $Y_1$  and interest rate  $r_1$ . Differently, under the effective general interest rate ceiling  $\bar{r}$ , typical of a regulated system, the equilibrium would be at the intersection of the horizontal  $\bar{r}$  curve with the IS curve at  $Y_2$ . Effective demand and output are at the intersection of the  $\bar{r}$  curve with the LM curve at  $Y_0$ , the amount  $Y_2 - Y_0$  being eliminated by credit rationing by banks, resulted from the fact that the interest rate is rationed below its equilibrium level. In the regime under a general interest rate ceiling, a possible fiscal expansion (or an increase in the trade balance, including exports to Russia) would shift the IS curve outward, leading to an increase of the notional demand<sup>27</sup> to the intersection of the new IS curve and the  $\bar{r}$  curve, whereas effective demand remains unchanged. On the other hand, monetary expansion would shift the LM curve outward, expanding the effective demand to the intersection of the new LM curve and the  $\bar{r}$  curve. When the interest rate is removed,  $r$  is a free price so that the new equilibrium lies at the intersection of the IS and LM curves. In this regime

<sup>26</sup> Ivi, p. 30.

<sup>27</sup> Aggregate quantity of goods and services that would be demanded if all markets were in equilibrium (Business Dictionary, <http://www.businessdictionary.com/definition/notional-demand.html>)

the effects of fiscal and monetary expansion are standard: the interest rate rises into fiscal expansion, and it declines in response to monetary expansion. It is quite evident how the economic dynamics change dramatically when the general rate ceiling is removed and even more when international capital movements are liberalized as in the case of Finland.

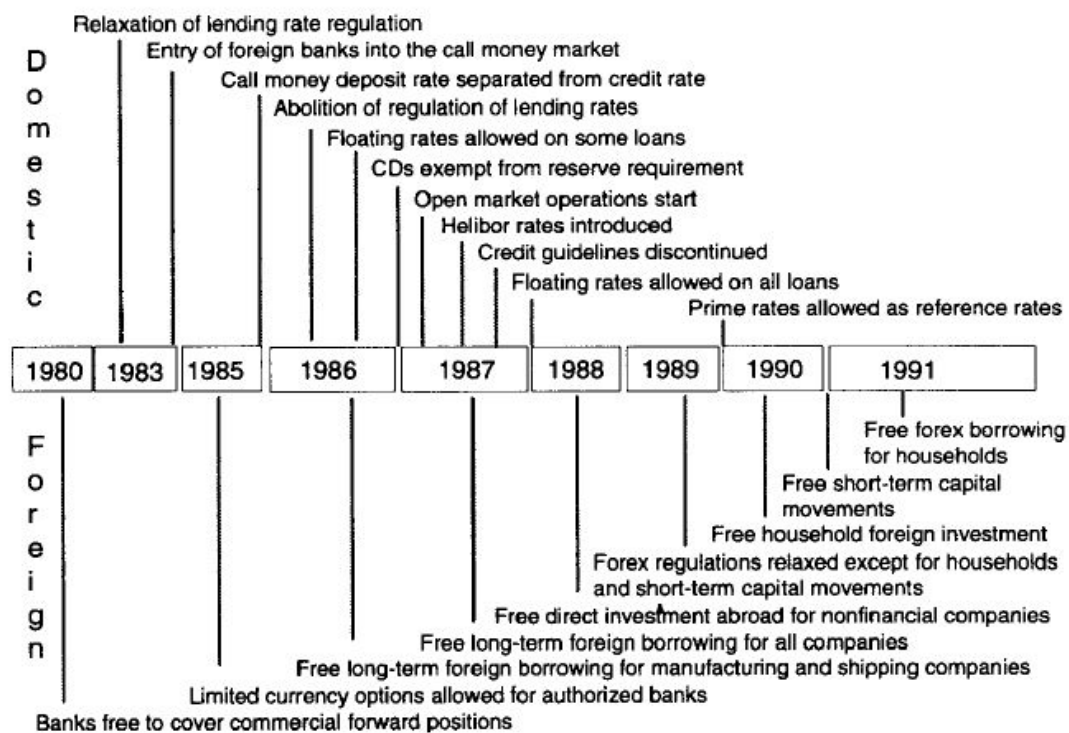
Since the mid-1980s, in particular between 1985 and 1987, the existing system started to be gradually transformed. According to Honkapohja and Koskela<sup>28</sup>, there are essentially three factors behind this change. The first is constituted by a sharp increase in the terms of trade, resulting from the fall in energy prices and the rise in world market prices of forest products; the second is linked to the not sufficiently restricted economic policies: fiscal policy did not appear to counteract the fast growth, while public consumption and investment absolutely contributed to GDP growth; the last is the financial market deregulation, which included the abolition of regulation of domestic bank lending rates and the lifting of restrictions on private borrowing from abroad, leading to an explosion of bank credit and large capital inflows. The strict link that existed before between deposits and loans was totally broken, and the rules concerning lending rates, as well as the general interest rate ceiling, were officially abolished. The result was the creation of a natural liquid money market, in which certificates of deposits issued by banks served as instruments of open market operations for the central bank. In addition, few months later, the Bank of Finland provided for the liberalization of international capital movement, making the latter an endogenous variable and letting foreign banks to gain access to the market as well. International interest rates were of the same order of magnitude as the abolished loan rate ceiling of 7%. The Finnish shadow interest rate ( $r_0$ ) was much higher than the repealed ceiling rate, provoking the increasing of capital inflow. It is clear that it should have been lined up with international rate, for example by means of a change in the fiscal-monetary policy mix before the liberalization of capital movements. Consequently, although domestic banks remained the main supplier of credit in the economy, firms and households were both

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<sup>28</sup> Honkapohja, S., Koskela, E., The Economic Crisis of the 1990s in Finland, In: Kalela, J., Kiander, J., Kivikuru, U., Loikkanen, H. A., Simpura, J., N.B. (eds.) *Down from the heavens, up from the ashes: the Finnish economic crisis of the 1990s in the light of economic and social research*, Helsinki, Government Institute for Economic Research.2001.

allowed to borrow abroad. This enables banks to raise short-term funding on the interbank market, allowing for much more vigorous credit creation. Figure 1.8 clearly shows the timing of the deregulation steps during 1980 – 1991 in both domestic and international dimensions.

**Figure 1.8** *Deregulation of financial markets in Finland*



29

However, at the same time, the banking system was still based on antiquated risk management practices, and the arrangement was not designed for dealing with systemic risk. The result was the so called “crazy years”<sup>30</sup>, during which housing and stock prices nearly doubled and general inflation accelerated, leading to an explosion of credit and to a serious erosion of price competitiveness. Moreover, the credit boom was highly facilitated by the tax-deductibility of the interest rates on loans. Bank loans, namely the only source of credit available to the public and most firms, increased from 55% of the

<sup>29</sup> Vihriälä, V., *Banks and the Finnish Credit Cycle 1986 – 1995*, Bank of Finland Studies E:7, Helsinki, 1997.

<sup>30</sup> Ahtiala, P., Junttila, J., *The collapse of Soviet trade and Finland’s great depression of the 1990s: a re-examination*, University of Tampere and University of Jyväskylä, 2015, p. 8.



GD in 1985 to 98% of the GDP in 1990. Figure 1.9 attempts to capture the credit expansion dynamics referring to the value of new loans issued between 1981 and 2000. Analyzing in details the pattern of the variable taken into consideration, it can be observed a steady rise of loans issued until 1985 – 1986. Since then, the new bank loans issued started to increase significantly, reaching a peak between 1988 and 1989. After that, the new bank loans issued started to decline significantly, reaching a trough between 1990 and 1991. Since then, the new bank loans issued started to increase significantly, reaching a peak between 1998 and 1999. After that, the new bank loans issued started to decline significantly, reaching a trough between 2000 and 2001.

**Figure 1.9** *New bank loans issued, 1981 – 2000*



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Then new credit declined again in 1990 – 1991, before reaching a prolonged trough characterized by a slight fluctuation between 1992 and 1998. As I have outlined before, easy access to bank lending was soon reflected in house and stock prices, as banks started to actively invest in the non-financial corporate sector and to increase mortgage lending. This, as a result, generated an asset price boom. Although the latter was rather short-lived, house prices exploded between 1987 and 1988, leading to a dramatic rise of the stock prices in 1986 (figure 1.10). The higher asset prices increased the real net

<sup>31</sup> Gulan, A., Haavio, M., Kilponen, J., *Kiss me deadly: from Finnish Great Depression to great recession*, Bank of Finland Research Discussion Papers, 2014, p. 6.

worth of the private sector, which shifted the IS curve outward, further boosting expenditures and encouraging expansion, when financing was no longer a problem.

**Figure 1.10** *Stock and houses prices, 1985 – 1994*



32

The price increases led to expectations of further price rises, which reduced the real user cost of capital leading to a further acceleration of the expansion. During the second half of the 1980s, unemployment decreased from 5.1% to 3.5%, wage inflation grew from 7.4% to 9.6% per annum and unit labor cost, compared to the OECD average, increased by 18%. This reduced the market share of Finnish exports out of the imports of the OECD countries by 9%<sup>33</sup>. In 1989, it was realized that the current account was out of control, raising the policy makers' concerns. Instead of coordinating tightening fiscal and monetary policies, the Bank of Finland focused firstly on the contraction of monetary policy. It tightened this sharply and revalued the currency by 4%. Consequently, interest rates rose deeply, more than if fiscal and exchange rate policies had been used adequately. Indeed, there was an increase of six percentage points to 16%

<sup>32</sup> Ivi, p. 7.

<sup>33</sup> Ahtiala, P., Junttila, J., *The collapse of Soviet trade and Finland's great depression of the 1990s: a re-examination*, University of Tampere and University of Jyväskylä, 2015, p. 13.

in three quarters, the rise during the last quarter alone being four point. They skyrocketed again in late 1991 before the devaluation and in late 1992 before the peg was finally abandoned. This abrupt tightening revealed itself as particularly harmful because of the condition of the economic period: the preceding “crazy years” had left the banks and their customers really exposed with stretched balance sheets. The interest rate shock was also suffered by bank customers, who had borrowed heavily and had a vulnerable financial structure, not only in terms of the quantity of the debt, but of its uncovered interest rate and exchange rate exposure. Consequently, many firms and households faced a financial crisis, making forced sales of collateral and bankruptcies the normal consequence of this situation (in 1990 the 21% of the total collapsed). The massive sales depressed market prices: housing and stock prices collapsed to half of their 1989 level or to a level preceding the crazy years. Households were not prepared at all. The gross interest payments increased from 5.5% of disposable income in 1987 to almost 10% in 1992 and the house prices’ collapse exacerbated their problems. Until that moment, houses had been safe investments whose prices had moved mainly upwards, and a new house was bought before selling the old one. During the liberalization’s period, with large amount of financing available, houses had been purchased with highly leveraged financing in the expectation of a future growth of the collateral’s value. When the housing market collapsed, many households experienced the two-house trap, with loans almost exceeding the joint market value of the houses. The decline of the assets’ prices meant a considerable decline in household real net worth, and 23% of households ran into delinquencies<sup>34</sup>. As a consequence, they started to reduce consumption, which further boosted the downward spiral: the more loans they repaid the more they owed. At this point there was a deep decline of GDP which decrease by 14% or 20% below its potential level and remained at a depressed level during the next two years. Moreover, unemployment increased rapidly, reaching a peak of 18.4% in 1994. Government finances deteriorated as tax revenues declined, unemployment benefits increased and, later, the cost of bank support evaluated at 10% of the GDP. When the economy was already in a “free fall”, policy makers decided to intervene on fiscal policy too. A tax reform which included broader and higher taxes for capital gains was introduced and other indirect taxes were also raised in 1990. The

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<sup>34</sup> Ahtiala, P., *Lessons from Finland’s Depression of the 1990s: what went wrong in financial reform?*, The Journal of Policy Reform, 9:1, 25-54, University of Tampere, 2007, p.38.

depression that resulted made the subsequent recovery slower, because organizations experienced bankruptcies and new capacity had to be built with normal growth subject to financial and new kinds of constraints. By contrast, a recession is characterized only by the decline of the capacity utilization rate, but production can then be increased much faster. As Ahtiala affirms, the Great Depression of the 1990s followed the classical pattern: rise in interest rates, decline in asset values, deterioration of banks' balance sheets, increase in uncertainty, increasing moral hazard and adverse selection problems, balance of payments crisis, the decline in GDP, which worsened the above problems leading to its further decline<sup>35</sup>. However, even though the growth of new credit diminished due to the new policy actions, the stock of loans continued to grow.

In addition, the economic climate did not ease the recover. First of all, the collapse of Soviet trade in 1991 and 1992 played a role in worsening the economic crisis. Even if accounted for less than 2% of the GDP, there are no doubts that it caused an additional burden. Moreover, over the course of 1989, Finland experienced a bankruptcy of the major shipbuilding company Wärtsilä Marine and the suicides of the CEOs of Nokia and SKOP, the umbrella institution of the savings banks group. In 1992, a total bank panic was averted when the authorities decided to give oral guarantees. The government transferred funds for capital injections and it founded a new institution, the Government Guarantee Fund (GGF) aimed at stabilizing the banking sector, injecting capital resources into banks in the form of subordinated loans. This move comforted the all banks and finally, in February 1993, the Parliament passed a resolution guaranteeing bank deposits "under all circumstances". This would have been enough to avoid a bank panic, reassuring the depositors that deposits were safe. However, no other measures were taken in the financial system which allowed the undisturbed continuation of activities motivated by moral hazard. Many savings banks were merged into the Savings Bank of Finland (SBF). However, the whole sector shrank, and both the number of branches and the employees contracted by half compared to the boom years. A policy lesson can be drawn from these circumstances: in the case of a deep systematic financial crisis, the government and not the central bank must serve as the supporter-of-last-resort of failing financial institutions. Only the government can offer guarantees and capital

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<sup>35</sup> Ivi, p. 39.

injections necessary to stabilize the financial sector. The rescue of the banking system must be financed, through fiscal measures, by the taxpayers.

Generally, the normal consequence of the financial crisis is debt deflation if, after the asset prices' decline, a deep drop of the price level takes place. A price level decline increases the real interest rate and leads agents to reduce their consumption and investments in order to repay their debt, especially given the fact that the market value of their net worth had declined. This, obviously, led to an additional depression of the economic activity, perpetuating the vicious circle. The authorities attributed the main responsibility of the crisis to the collapse of the Soviet Union: Finnish exports, that were declining since 1982, continued during the "crazy years" and deepened at the beginning of the 1990s. Also the "Western recession" had been considered a crucial determiner of the depression. However, the rate of growth in industrial production in Finland's Western export partners that was zero or slightly below zero for two years, after the devaluation grew rapidly. This led to the statement that Finland would not have had difficulties to manage disturbances of this magnitude in normal conditions. The excessive exposure of banks and their customers to interest rate and credit risks played a key role in determining the financial crisis. To say it better, according to Ahtiala, expectations represented the main reason of the exposure: given the agents' expectations of relatively stable nominal interest rates, stable growth and rising housing prices, the suddenness and size of the interest rate rise must be considered as the two fundamental causes in causing the economic depression.

Concurrently, also Sweden experienced a boom-bust cycle characterized by financial liberalization, credit boom, a subsequent banking crisis and a prolonged recession. However, despite many similarities, the depression in Sweden was not as deep as the Finnish one. As I previously pointed out, Gorodnichenko *et al.* emphasized this difference between the two Nordic countries to corroborate their Soviet-led crisis theory. In particular, they stated that Sweden had not the same trade relation with USSR and, consequently, it was not subjected to the two different shocks due to the collapse of this commercial relations. However, according to Gulan *et al.*<sup>36</sup>, there were other many distinctions between the two countries and their financial systems. The first one

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<sup>36</sup> Gulan, A., Haavio, M., Kilponen, J., *Kiss me deadly: from Finnish Great Depression to great recession*, Bank of Finland Research Discussion Papers, 2014, p.8.

concerned the bank equity buffers: the book value of equity-to-asset ratios were around 2-2.5% in Finland compared to 3.5-4.5% in Sweden. Secondly, while in Finland the capital adequacy ratios were defined relative to liabilities, in Sweden they were measured relative to the asset side, allowing the introduction of risk-weighting. Finally, Swedish banks had, compared to Finland, large loan loss reserves, possibly because of their tax-deductibility.

At the end of 1991, the bank of Finland still maintained the parity to which the currency had been revalued in 1989. After the parliamentary election of March 1991, the new Centre Right government led by the Prime minister Esko Aho found himself facing the worst crisis of the post-war period. The first possible solution seemed to be that to support the policy of the pegged exchange rate: better said, the Bank of Finland supported this policy and the government was forced to back it. Moreover, the decision taken by Sweden to unilaterally peg the krona to the European Currency Unit (ECU) in May 1991 further influenced the Finnish decision. Indeed, shortly thereafter, the Bank of Finland called upon the government to unilaterally peg the Finnish markka to the ECU as well. The Government could effectively have forced the central bank to accept devaluation, but it was not cohesive on the issue. Prime minister Aho, the majority of the members of the government and President Mauno Koivisto (in office 1982 – 1994) supported a mini-devaluation. On the contrary, the minister of finance Iiro Viinanen was totally against any devaluation, while the minister of foreign affairs Paavo Väyrynen supported a big devaluation. However, despite the internal lack of cohesion, when the central bank pushed to keep the exchange rate unchanged, the whole government decided to be in line with its recommendation. The decision to peg the markka to the ECU, albeit approved almost unanimously by the parliament, did not help so much the Finnish economy. The exchange rate was still overvalued, interest rates remained high and GDP and unemployment continued to fall. Without devaluation at its disposal, the government relied to income policy measures. The discussions between the latter, unions and employers began in August and continued till November 1991. At the beginning, trade unions demanded that real wages must not be reduced. In November, when the unemployment situation strongly deteriorated, they talked only of nominal wages. At the end of the month, an attempt was made aimed at effecting an “internal devaluation” by a negotiated settlement where nominal wages were to be cut

by 5%. The heads of the central trade union organization approved an agreement which would have lowered nominal wages by 3% and shifted 4% of pension contribution from employers to employees, cutting the employers labor cost by 5%. However, after two weeks of intensive negotiations, the package was set aside because the most powerful trade unions (paper and metal industry workers) did not accept it, strongly believing that an “internal devaluation” could not be the best alternative for the export industry. In addition, it was not so certain that the measures negotiated would have improved the economic situation. It is rather likely that it would have increased competitiveness, slowed inflation, lowered interest rates, curbed purchasing power and, as a consequence, improved the current account, but only for a while. In addition, it would have pushed the country into a deeper debt deflation. When it became apparent that there would be no reduction of nominal wages, the credibility of pegged exchange rate collapsed. In order to avoid the currency outflow, the Bank of Finland tried to support the exchange rate by raising the interest rate to 50% but it was not so high enough to stop the run to the Bank’s reserves. Losing credibility, the market forces obliged the central bank to float the currency and the markka was devalued by 14% on November 15<sup>th</sup>, 1991. Without devaluation, the combination of an overvalued currency and high interest rates would most likely have inflicted serious additional damage. During the European currency crisis in September 1992, the capital outflow from Finland increased and the central bank substantially lost reserves. At this stage, Finland left the ECU-peg and opted for a new floating of the same order of magnitude. The markka value fell by about 10% that month and depreciated by a further 20% in subsequent months. Then, the Bank of Finland kept the interest rate at almost 18%, arguing that this would have led to further currency’s depreciation in the future. This would happen only if capital flows were perfectly elastic to the interest rate and the expected depreciation of the markka had remained unaffected by the previous one<sup>37</sup>. Consequently, it quickly relaxed monetary policy. These devaluations caused several problems to the borrowers. As Ahtiala reported, half of corporate borrowing from Finnish banks in the late 1980s was denominated in foreign currency, and the banks financed this using foreign borrowing. After the devaluation, facing declining credit ratings, the banks encountered several difficulties to refinance their foreign debt and had to resort to ever-shorter

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<sup>37</sup> Ahtiala, P., *Lessons from Finland’s Depression of the 1990s: what went wrong in financial reform?*, The Journal of Policy Reform, 9:1, 25-54, University of Tampere, 2007, p.38.

maturities. In 1993, the banks forced their customers to convert their foreign currency-linked loans into domestic currency loans during the worst period after the second devaluation. This resulted in increasing costs for the borrowers. Moreover, it would have taken a few quarters before that the newly won competitiveness showed its effects in foreign trade, output and employment. Net exports were the first component of GDP to recover, improving already at the darkest moment of the recession in 1991 and exceeding the pre-crisis level in 1999. In the meantime, policy makers would have had to minimize the losses caused by bankruptcies, stimulating the depressed economy within the limits determined by the financial possibilities. On the contrary, their choices worsened the situation even more. Discretionary fiscal policy tightened significantly during and after 1991, remaining relatively tight from that time forward. The strategy adopted became reducing fiscal deficit by fiscal contraction, fomenting the downward spiral. As the deficit increase due to the negative business conditions, the government increased taxes and reduced expenditure, deteriorating the economy, increasing unemployment and unemployment benefits and triggering bankruptcies. The government opted for several reforms and timed them in a no-efficient way. They ended up to deep the depression. To give an example, the tax deductibility of interest expenses on housing loans was restricted considerably, reducing the demand for housing and, as a result, depressing the housing prices. Or, for instance, the worsening of the pension benefits led all those who had a choice to retire from work before the benefits were cut. Furthermore, it can be argued that during the depression the tax increase led to a worsening of the fiscal deficit, strengthening the damage already caused by the depression. As far as monetary policy is concerned, it remained tight until late 1995. Until 1993, the tightness could be defended in view of the current account situation, but thereafter it seemed indefensible<sup>38</sup>. In fact, interest rates were increased during the fall of 1995, when they were at 6%. The tightening appeared partly responsible for the successive downtrend of the economic growth. The Bank of Finland justified its moves by saying that it was mainly interested in reducing inflation. However, even if inflation is clearly an important target especially in terms of price competitiveness, price stability is only a means to reach stable output growth. If tight monetary policy can be an investment in the central bank's credibility serving as an inflation-fighter, it can also be costly in not profitable situations. Indeed, in 1996 interest rates were cut again to the 3%

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<sup>38</sup> Ivi, p. 43.



level and no acceleration of inflation followed. The central bank opted for that decision arguing that lowering interest rates would have caused the long rates to rise. However, the link between the rates is arbitrage, which generally corrects both of them. A condition necessary to make monetary relaxation able to lead to a rise in long rates is that the rise in expected inflation dominates the downward effect due to arbitrage. This condition happens rarely under a high level of unemployment.

#### **1.4 Errors of financial liberalization**

It is not sufficient to have a working system in equilibrium before and after the reform. What is fundamental in order to ensure a persistent stability is that the system works during the transition phase. Contrary to the common view a boom, and later a bust, are not inevitable consequences of financial market reform. Several prerequisites need to be met for the efficient working of the economy. For instance, firms should impose transparent accounting and auditing standards in order to let that market participants, who initially do not have access to much information, are more on par with insiders. In addition, as far as financial institutions are concerned, an adequate framework of supervision and regulation is needed to deal with various aspects of moral hazard and adverse selection. Financial liberalization in Finland was not conveniently implemented and it was not accompanied by the parallel introduction of modern safety measures in the financial sector. During the 1980s the country did not implement any regulation able to require banks to keep more equity. Despite the fact that in 1986 an institutional working group made some proposals debating new rules, in 1987 the Basel Committee on Banking Supervision (BCBS) established its own tougher recommendations, superseding the parliamentary activity. As a result, no law was passed until the financial crisis exploded. In general, players in an economy need time to adjust to changes of market regime. A too fast liberalization would bring about resource reallocation via bankruptcies rather than an orderly restructuring in the declining sectors<sup>39</sup>. This would lead to destruction of organizational and informational capital, putting banks under pressure.

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<sup>39</sup> Ahtiala, P., *Lessons from Finland's Depression of the 1990s: what went wrong in financial reform?*, The Journal of Policy Reform, 9:1, 25-54, University of Tampere, 2007, p. 33.

One of the principal deadly errors reported by Professor Ahtiala<sup>40</sup> was the simultaneous liberalization of domestic financial market and international capital flows, when the international interest rates were significantly below the domestic shadow rates. This totally wrong move led to a substantial capital inflow, which doubled the monetary base in three years, causing an uncontrolled credit expansion. Generally, the normal path would require the economy to adjust to the liberalization of the financial system before proceeding to the liberalization of capital flows. Assuming that the initial output level  $Y_0$  was optimal, one first liberalizes the domestic credit market, neutralizing its effect on output by fiscal, monetary and exchange rate policies so as to remain at  $Y_0$ . Then, it is necessary to allow the economy to adjust. Indeed, enterprises need time to adjust their portfolios of stocks and flows. Interest rates should not rise much faster than the “norms” to which agents have been accustomed. Indeed, nominal interest rates had normally moved only by one percentage point up or down, leaving the real rate negative much of the time, at least on an after-tax basis. In particular, banks that were used to the old ceiling rate of 7% found their deposit and open markets rates suddenly rising to a much higher level. It is possible to liberalize both markets simultaneously only when the economy is in a situation of equilibrium with no excess demand for credit and the equilibrium interest rate approximately equal to the foreign rate plus the expected depreciation in the exchange rate. Otherwise, when these conditions are not fulfilled the penalty could be severe.

The second error was done when the liberalization had been already implemented. During the “crazy years”, when housing and stock prices doubled and general inflation accelerated, leading the current account out of control, contractionary economic policies were needed. However, instead of coordinating tight fiscal and monetary policies, the Bank of Finland applied only strict monetary policy causing a substantial increase of the rate of interest and making fiscal policy completely ineffective. Indeed, the parliamentary elections of 1989 made politicians unwilling to tighten fiscal policy. Then the only solution remained opting for monetary policy, tightening money sharply and revalued the currency by 4%. However, increasing interest rates more than the norm can be risky. Generally, as I explained above, nominal interest rates had moved up or down by only one percentage point and individuals have been used to this norm. In addition,

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<sup>40</sup> Ivi, p. 27, p. 35.

banks which had much of their lending at the old ceiling rate of 7%, suddenly found their deposit and open market rates rising to a much higher level. This policy makers' decision caused a net increase in the monetary aggregates, asset prices, output and general price level. In a regime distinguished by highly mobile capital, monetary policy was ineffective while fiscal policy could have a straight multiplier effect on output.

In general, as it is argued by Lars Jonung<sup>41</sup>, if knowledge about the processes provoked by financial liberalization is lacking, the policy response before, during and after financial liberalization can unlikely be the most appropriate. When financial deregulation started in Finland, policy makers did not know anything about phenomena like financially driven booms, busts and crises. They had only experienced a financially closed and strongly regulated economy, characterized by exceptionally limited financial risks. A detailed understanding of financial markets is crucial in order to make financial liberalization and subsequent integration successful. Moreover, policy makers do not have to become prisoners of backward-looking learning by considering the present crisis as identical to the previous one: if they do, they risk to base their actions on a erroneous interpretation of the historical record. Indeed, during the Nordic boom-bust cycle, the monetary and fiscal policies were procyclical, destabilizing the economy. Focusing on the former, it can be said that maintaining and defending the pegged exchange rate of its currency, Finland contributed to the recession. In fact, when the cycle started to turn downwards, the defense of the pegged exchange rate resulted in a rise of the domestic rates, fostering the economic depression. A more flexible exchange rate policy would have reduced the amplitude of the boom-bust cycle. Differently, as far as fiscal policy is concerned, it was procyclical both during the boom and during the bust phase. Indeed, during the overheating, fiscal authorities believed that fiscal policy was countercyclical as the budget was in surplus. However, the surpluses was too small to end the boom and, consequently, fiscal policy should have been tighter than it actually was. At the same time, during the bust phase, budget deficits expanded extremely rapidly and this pushed the government to raise taxes, provoking a procyclical effect during the bust as well. Moreover, it is important to underline that the Nordic financial crisis had its roots in the extensive financial repression that took place

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<sup>41</sup> Jonung, L., *Lessons from the Nordic Financial Crisis*, report based on chapter 12 In Jonung, L., Kiander, J., Vartia, P., N.B. (eds.) *The Great Financial Crisis in Finland and Sweden. The Nordic Experience of Financial Liberalization*, Edward Elgar, 2009.

during the Second World War. The transition from a highly regulated system to an open was not so simple, proving to be very risky for Finland. The regulations created huge imbalances and the behaviour showed by banks and by the public contributed to the boom-bust cycle once the financial liberalization was put in place. As Jonung stated, “if financial repression is avoided, there will be no call for financial liberalization”<sup>42</sup>. The better choice would be staying away from financial repression. However, it is difficult to understand what type of regulations are needed to keep the financial system stable and market based, maintaining an equilibrium path. Nonetheless, the Danish case demonstrates that financial liberalization may be carried out without leading to a financial collapse, as in the case of Finland. The winning strategy would be following a proper sequence of actions, supported by appropriate monetary and fiscal policies aimed at ensuring financial stability. This means that financial liberalization can be implemented without triggering a financial crisis. However, even if a crisis emerged, what is essential is its rapid and resolute management. If in Finland, far reaching steps were taken to avoid the total crash of the banking system, in Sweden, the government offered blanket insurance for claims on Swedish commercial banks, nationalized the two clearly insolvent banks and set up asset management corporations to take over bad assets of the remaining commercial banks<sup>43</sup>. The policy lessons is that fast, transparent and steady governmental actions can reduce the impact of a financial crisis.

To be honest, the Finnish economic situation was deeply exacerbated by the collapse of exports to the Soviet Union/Russia in 1991 and 1992, even if, actually, it seemed that the latter had had a positive effect in the Finnish GDP. This apparently confusing statistical finding is supported by the presence of a more positive trend path in exports to Russia after 1992<sup>44</sup>. Therefore, the data gives strong support to the theory according to which the financial variables, in particular the real domestic credit expansion and housing market wealth, had a big impact on the real Finnish economic activity even more than the negative effects provoked by the collapse of the Finland-USSR trade relation. It can be argued that the trade activity between the two countries was

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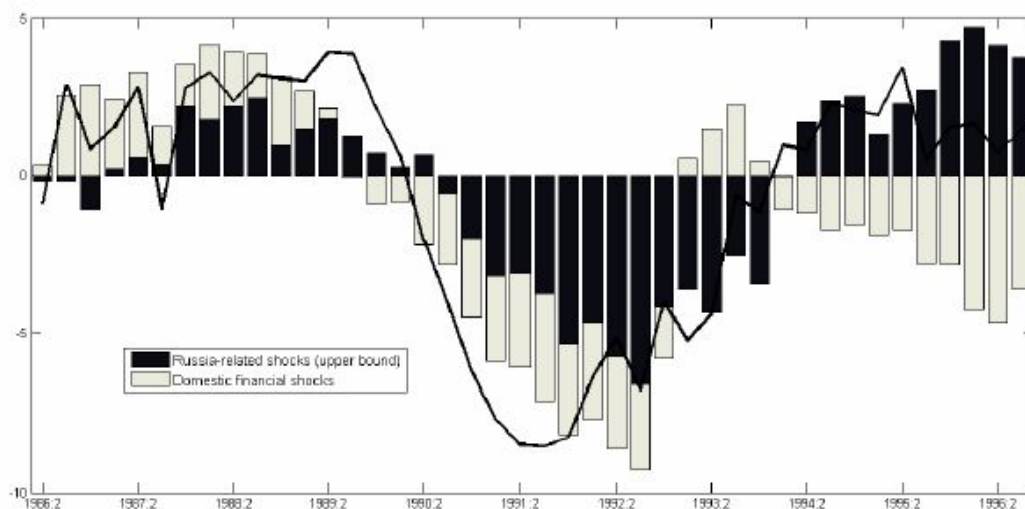
<sup>42</sup> Jonung, L., *Lessons from the Nordic Financial Crisis*, report based on chapter 12 In Jonung, L., Kiander, J., Vartia, P., N.B. (eds.) *The Great Financial Crisis in Finland and Sweden. The Nordic Experience of Financial Liberalization*, Edward Elgar, 2009.

<sup>43</sup> Ivi, p.13.

<sup>44</sup> Ahtiala, P., Junttila, J., *The collapse of Soviet trade and Finland's great depression of the 1990s: a re-examination*, University of Tampere and University of Jyväskylä, 2015, p. 24.

contractionary during the “crazy years”, and expansionary from 1993 on. From the previous analysis, it can be stated that the crisis that upset the Finnish economic equilibrium in the early 1990s was determined by domestic and external shocks. It is not a case that Honkapohja and Koskela defined the episode as a “tale of bad luck and bad policies”<sup>45</sup>

**Figure 1.11** *USSR-related versus financial shocks during the Finnish Great Depression*



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The role played by real external shocks might be attributed essentially to two factors. The first one is the nature of the Finnish economy. Finland can be defined as a small open economy and therefore its exports constitute a rather large share of GDP. The second one is due to the fact that the country had been characterized by a fixed exchange rate regime, without counting on a flexible exchange rate as a shock absorber. How much did the Soviet trade contribute to the decline in Finnish GDP? Figure 1.11 provides information in order to answer to this question.

The drop in demand from the USSR is, in the first place, attributed to innovations in external trade and terms of trade. These factors played a positive role during the overheating phase, but then contributed negatively to the crisis, especially after 1991. The terms of trade boom of the late 1980s was wiped out in the early 1990s, partly due

<sup>45</sup> Honkapohja, S., Koskela, E., *The economic crisis of the 1990s in Finland*, Economic Policy, 1999, pp 399-436.

<sup>46</sup> Ahtiala, P., Junttila, J., *The collapse of Soviet trade and Finland's great depression of the 1990s: a re-examination*, University of Tampere and University of Jyväskylä, 2015, p. 28.

to the rise of the global energy prices and partly because Finland lost the implicit energy subsidy from the USSR. In addition, a large part of the sectors exporting eastwards became obsolete after the collapse of the Soviet Union. Some industries, like the shipbuilding one, were able to reconsider their production profiles. Unfortunately, many small and medium size production plants ceased to operate, generating structural unemployment. Indeed, the majority of the goods directed toward the east were characterized by low quality and, with the end of the Finnish-Soviet trade relation, did not find other markets and stopped to be produced. Therefore, it can be argued that the collapse of eastern trade had a negative effect also in the domestic capital shock. Another international shock that can be considered partly responsible for the worsening of the economic downturn was caused by the German unification, which raised the interest rates in Europe as a result of loose fiscal and tight monetary policies in Germany.

On the contrary, in order to precisely identified the domestic shocks, Gulan *et al.*<sup>47</sup> decomposed the dynamics of Finnish GDP into a series of orthogonal, structural economic shocks. In order to do that, they estimated a partially identified VAR model of a small open economy and selected 9 variable: three variables associated to the “foreign block”, world trade volume, Finnish terms of trade and a measure of global financial stress, and six associated to a “domestic block”, the real output, inflation, interest rate measure, asset prices, new bank loans to the private sector and bank loan losses. The six domestic variables allowed the identification of four principal domestic shocks: *the aggregate demand shock*, which increases the price level, the demand for credit and the interest rate spread, *the aggregate supply shock*, which decrease asset prices reflecting higher competitiveness, *the asset price shock*, that reflects market exuberance or bubbles, and the *loan supply shock*, which captures changes in effective lending standards or regulatory environment.

A large part of the economic decomposition is then due to domestic financial factors, including the asset price shock and the loan supply shock. In particular, loan supply shocks contributed negatively to the crisis in 1990 and continued to play a prevalent role around 1994 – 1995, during the recovery phase. This was due to the effect of loan

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<sup>47</sup> Gulan, A., Haavio, M., Kilponen, J., *Kiss me deadly: from Finnish Great Depression to great recession*, Bank of Finland Research Discussion Papers, 2014, p. 12.

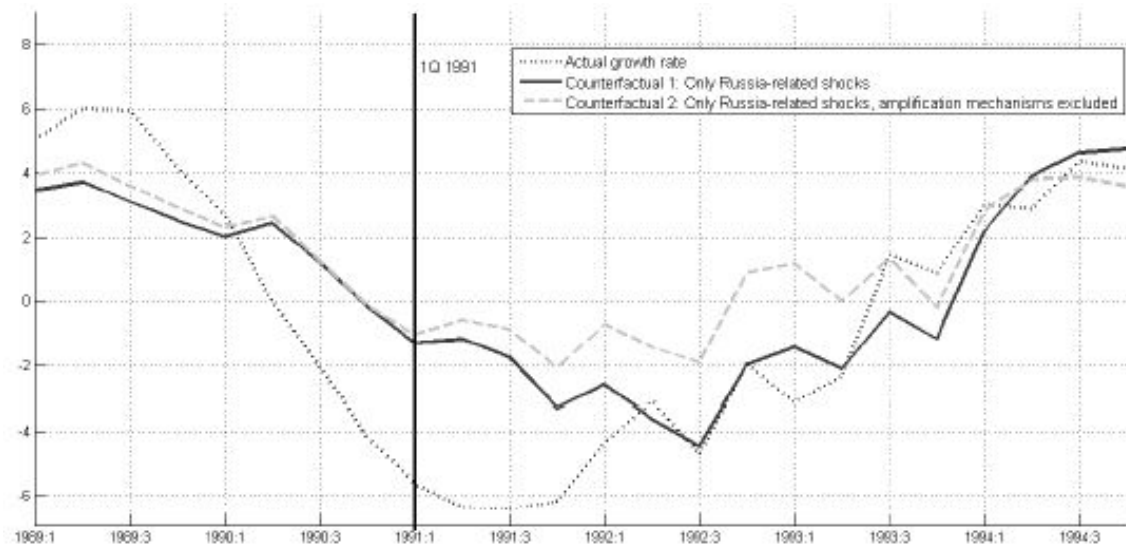
losses and to the fact that lending activity remained depressed also after the recession officially ended, picking up again only in 1998. Among the domestic impulses that propagated negative economic mechanisms, the restrictive monetary policy had a prominent position. A tight monetary policy was applied in early 1989, after the revaluation of the Finnish market. Defending the markka against speculative attacks meant keeping nominal and real interest rates high. They deeply rose from the beginning of 1990 to the end of 1992. When the fixed exchange rate/hard currency policy turned out to have problems of credibility, it was abandoned and the Finnish currency depreciated in November 1991 and September 1992. The exchange and interest rate shocks undoubtedly influenced both consumption and investment behavior, considered the high levels of indebtedness of firms and households and the fact that a significant part of their borrowing was from abroad. Moreover, the collapse of asset prices led to the emergence of a banking crisis.

As it can be observed in the figure 1.11, external (including Soviet trade collapse) as well as domestic factors played both a great role in determining the Great Depression of the 1990s. Examining the graph, Gulan *et al.*<sup>48</sup> described the negative contributions of USSR-related shocks as the 52.7% of all negative shocks between the peak in 4Q 1989 to the trough in 1Q 1993. However, the domestic shocks played a considerable role as well. Even if their share in that period was 41.7%, they played an important positive key role during the run-up to the crisis and were the principal obstacle to the recovery. As I explained in the previous section, according to Gorodnichenko *et al.*, the financial crisis can be considered a mere consequence of the collapse of the Soviet trade. In order to verify the statement, Gulan *et al.* performed two counterfactual simulations of GDP. As you can see from the figure below, in Counterfactual 1, represented by the continued black line, they only turned on the USSR-related shocks. On the contrary, in Counterfactual 2, depicted by the dashed line, they took out the feedback from the domestic financial variables, namely asset prices, spread, new loans and loan losses, to the rest of the economy. Hence, the difference between the two patterns can be treated as the endogenous amplification of USSR-related shocks due to the domestic financial sector.

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<sup>48</sup> Gulan, A., Haaviom M., Kilponen, J., *Kiss me deadly: from Finnish Great Depression to great recession*, Bank of Finland Research Discussion Papers, 2014, p. 27.

**Figure 1.12** *USSR-related shocks and their amplifiers during the Finnish Great Depression*



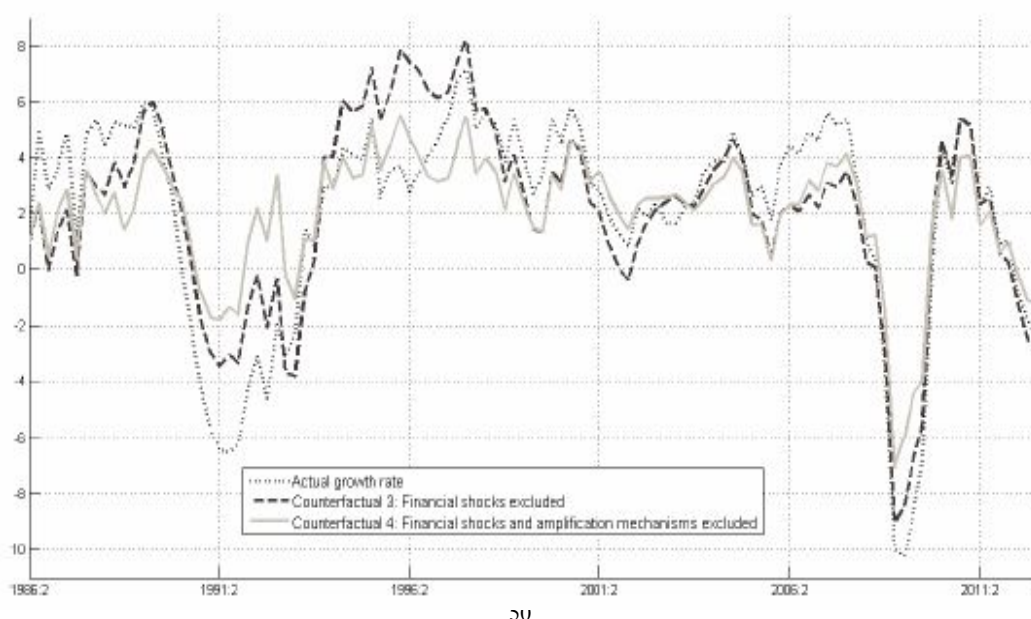
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The figure actually shows that the amplification really existed. However, it became evident around 1992 and disappeared at the beginning of 1994. The endogenous exacerbation of the financial crisis due to the Soviet trade shock would be too weak and would come too late to explain the huge depth of the financial crisis, in particular during the early years of the 1990s. Therefore, it can be drawn the conclusion that the Soviet shocks cannot be considered the only responsible of the depression. Similarly, in order to go deeper in the analysis of the actual role of financial factors during the economic crisis, and in order to understand to what extent the domestic financial system was the actual source of shocks and to what extent it was instead only an amplifying mechanism for other shocks hitting the economy, the same authors built two additional counterfactual scenarios.

**Figure 1.13** *Contributions of different financial factors to the Finnish GDP growth rate*

<sup>49</sup> Gulan, A., Haavio, M., Kilponen, J., *Kiss me deadly: from Finnish Great Depression to great recession*, Bank of Finland Research Discussion Papers, 2014.





As it is shown in figure 1.13, the dashed black line represents Counterfactual 2, namely the hypothetical GDP growth rate that would be obtained if domestic financial shocks (the asset price and loan supply shocks) are cut off. The result is that the negative GDP growth rate during the trough of the depression is almost halved. The same would happen in 1992 and 1993, and this led to affirm that without the financial shocks taken into consideration, the economy would have experienced only a recession. The result of this accurate study can be considered a further evidence of the fact that financial factors actually played a dominant role in deepening the Finnish Great Depression. As I write before, they had a role during the overheating phase as well. By contrast, they can be absolutely ignored in investigating the causes of the 2008 economic downturn.

## 1.5 The Nordic welfare model after the Great Depression

The financial crisis that hit the Finnish economy over the period 1990 – 1994, causing rising deficits and a deep recession, had a strong impact on employment and social policies. Mass long-term and repeated unemployment caused by the recession led the welfare state into financial difficulties. In 1990, it directly concerned the 14% of the

<sup>50</sup>Ivi, p. 28.

labour force, while the worst year was 1994, when it reached the 33%. However, in 1998 it steadily decreased back to the level only a little higher than in 1990. Considering the great importance that the work ethic assumed for Finns, in the ideology of the Finnish welfare state, the pursuit towards full employment has always been ranked high. For instance, the employment law of 1971 forced the state to promote the demand for labour and implement labour market policy measures aimed at helping the demand and supply of labour to balance. Moreover, in 1972 the Finnish constitution was amended to outline the state's duty to provide for the citizens an opportunity to work. In addition, the employment law of 1987 defined full employment as the principal goal of the state, contributing to the creation of a kind of universal social right to employment. However, during the early 1990s, the principles of the labour market policies were reviewed. With the increasing long-term unemployment, it became impossible to fulfill the job guarantee and it was abolished in 1993. One year later, the unemployment compensation system was reformed by introducing the so call "labour market support", a new form of benefit for those not fulfilling the employment condition for unemployment insurance. In 1996, the Government implement a series of small reforms in order to make employment always profitable in comparison with living on social security. Moreover, since 1990s, unemployed at the age of 60 have given the right to retirement with unemployment pension, even if this opportunity was tightened after the recession. However, the extensive subsidized employment and labour market training have no doubt decreased open unemployment, but, at the same time, it has not promoted later employment on the labour market. During the recession, the commitment to provide an opportunity for employment to all citizens was replaced by a pursuit to improve the functioning of the labour market, radically changing the welfare state qualitatively. Indeed, the central government, in order to respond to the serious economic situation, had to raise taxes and cut expenditures in social policies and social benefits. They concerned unemployment security, medical care insurance, pension security, financial aid to students, child allowances, social assistance, sickness insurance and so on and so forth. In particular, the recession ended or at least stopped the welfare state's growth period, weakening the social security provided until that moment and causing much worrying about the sustainability of Nordic welfare state model. It seemed that the Finnish social security had been "europeanised" along with the cuts. In particular, in Finland as well as elsewhere in Europe, access to benefits has been made

more difficult, attaching additional conditions and tightening regulations; income transfers have been targeted more carefully, increasing the use of means-testing and earnings-relatedness; privatization as well as the financial responsibilities of individuals and family members have been increased and people's participation in the labour market encouraged<sup>51</sup>.

The welfare state has been one of the most important political invention in Western Europe after the Second World War. In particular, the Nordic welfare model has always referred to an ideal based on universal basic services and redistributive social security benefits, ensured thanks to relatively high and progressive taxation<sup>52</sup>. This idea started to be implemented in the Nordic countries during the post-war decades, reaching its peak in the 1980s. At the same time, the Nordic welfare model inevitably started to face the new international economic order of free capital movements, post industrialization, European regional integration and global competition. According to Kantola and Kananen, in Finland the ideas of the Nordic welfare state started to be dismantled in Government policies from the 1990s, when the Schumpeterian competition state paradigm, based on the assumption that the state and the society have to be examined in terms of market efficiency and competitiveness, replaced the Keynesian one. Therefore, during the financial crisis, finding a justification in the profound economic crisis that was affecting the whole country, the political elites opted for a deep social change that led to a welfare's paradigm shift. It can be stated that quantitative changes have also led to a qualitative change in the Finnish welfare state. The latter was not only determined by the recession and the cuts in social security. By contrast, also the changes in the operation environment of the welfare state had a key role in affecting the social transformation in action. In particular with "changes in operation environment" Lehtonen *et al.* refer to "the incapability of the labour markets to achieve full employment, the increase in the instability of families that weakens the operating capability of the welfare state, ageing that burdens the dependency ratio between the so called active and passive populations, the globalizing of the economy that weakens nation-states' capability to steer social policy and related European economic policy

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<sup>51</sup> Daly, M., Welfare States under Pressure: Cash Benefits in European Welfare States over the Last Ten Years, *Journal of European Social Policy*, 7 (2),129-149, 1997.

<sup>52</sup> Kantola, A., Kananen, J., *Seize the Moment: Financial Crisis and the Making of the Finnish Competition State*, New Political Economy, 18:6, 811-826, Helsinki, 2013.

that narrows the leeway of national economic policy”<sup>53</sup>. Given the consensual nature of the Finnish system of governance, the exercise of political power had to be legitimized by ideas acceptable to all parties involved in the governmental coalition. The Schumpeterian national competitiveness offered the common rationality needed as the base of the broad coalition building.

More closely, Kantola and Kananen<sup>54</sup> analyzed in depth the Finnish paradigm shift, identifying four crucial elements. Firstly, the “latent phase” during the which the ideas of the Schumpeterian competitiveness and efficiency started to filter into Finland in the 1980s. However, at the beginning, they were only technical ideas for reforming the state and the economy, with no real political discussion or implementation. Secondly, the phase distinguished by the banking crisis of the early 1990s, that became an important threshold because the political decision makers, after having abandoned Keynesian fiscal and social policies, adhered to strict monetary policies and began considering unemployment as a Schumpeterian creative destruction. Thirdly, the importance assumed by the Ministry of Finance, which gained a powerful position within a government that was in crisis. The latter’s position was enhanced by the multi-party coalition government that gave it a strong role in the co-ordination of budgetary policies. As a consequence, the Ministry of Finance taking the rein of the political and economic power started to build a new paradigm, placing the Schumpeterian competitiveness, market efficiency and innovation at the heart of the government’s agenda. Lastly, these ideas were slowly transferred to the core areas of the welfare state, namely in the market policies, slowly replacing the Nordic welfare state paradigm.

After the Second World War, the core of the Finnish welfare state was based on the traditional values of the Nordic welfare model: universalism, redistribution and a combination of efficiency and equity. It early became associated with universal social serviced provided by the municipalities, high income taxes, centralized wage setting and redistributive and relatively generous cash benefits, which worked as a form of insurance against sickness, unemployment, disability and old age. In addition, monetary

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<sup>53</sup> Lehtonen, H., Aho, S., Peltola, J., Renvall, M., *Did the Crisis Change the Welfare State in Finland?*, In: Kalela, J., Kiander, J., Kivikuru, U., Loikkanen, H. A., Simpura, J., N.B. (eds.) *Down from the heavens, up from the ashes: the Finnish economic crisis of the 1990s in the light of economic and social research*, Helsinki, Government Institute for Economic Research.

<sup>54</sup> Kantola, A., Kananen, J., *Seize the Moment: Financial Crisis and the Making of the Finnish Competition State*, *New Political Economy*, 18:6, 811-826, Helsinki, 2013.

policy aimed at ensuring export price competitiveness and stabilized economic growth. The maximum level of institutionalism reached its peak in Finland during the 1980s. However, in that period, neoclassical public choice theory, neoliberalism, entrepreneurship and technological innovations embraced markets as the most efficient way of organizing society. The authors located at the heart of these ideas the Joseph Schumpeter's concept of entrepreneurship and competition, which originated in the Austrian economic school during the early twentieth century. These ideas started to gain momentum in the 1970s, thanks to the oil prices and the emergence of new information technologies. In the 1980s, the technology-driven competitiveness played a central role in redefining the nation state's goals. Over the 1980s, the concept of competitiveness acquired influence in the political world as well, as a number of governments started to build their policies in the name of national competitiveness. Politically, new governments headed by Thatcher, Reagan and Kohl, began to emphasize privatization, market efficiency and technological innovation, putting them at the base of their programs. Analogous idea started to become popular in Finland as well. Collectivist models of organization were affected by the ideas of consumerism: administration had to be located near the customer and former state functions began to be privatized. Politically speaking, rapid post-war modernization challenged party ideology, because more and more voters started to identify themselves with the urban and white collar middle class. The consequence was the creation of the coalition of Conservatives and Social Democrats in 1987, emphasizing the urban middle class rather than the agricultural-industrial classes.

During the early 1990s, Finland experienced the most severe banking crisis since the Second World War. The pattern was traditional: easing credit regulation led to the increasing of lending and resulted in a banking crisis. The latter can be considered a fundamental threshold for the implementation of the new paradigm in the Finnish society. Policy makers and political elites started to refer to the economic downturn as a "healthy lesson for society"<sup>55</sup>, an opportunity to change. Their interpretation was based on the assumption according to which markets had given the right verdict of an efficient economy, introducing for the first time the Schumpeterian idea of creative destruction. Finland started to approach to international competition and a world regulated by

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<sup>55</sup> Ivi, p. 815.

market efficiency: those who were not able to get through deserved to succumb. If in the Nordic welfare state paradigm unemployment was considered as a waste of resources and a completely negative condition, according to the new paradigm it could be interpreted as a positive lesson for the country and a sign of increasing efficiency.

As I have previously outlined, the Ministry of Finance took a crucial role in the shifting toward the new paradigm. It has traditionally had a strong active role in Finnish politics, but during the 1990s it became a policy entrepreneur and power broker in the coalition government. In the midst of the banking crisis it assumed the role to cut public expenditures and to formulate lists of cuts for budgetary policies. At the beginning of the 1990s the Ministry of Finance, helped by the Ministry of Trade, developed policies and strategy processes to support research and development, being in line with the Schumpeterian ideas of competitiveness. The latter were gradually introduced into Finnish politics through a deep analysis of the strengths and weaknesses of Finland's competitiveness. As I write before, its two main roles were budgetary allocations and cutting expenditures. On the one hand, looking more closely at the first role, it can be stated that the Ministry developed a strategy for budgetary allocations based on the idea of competitiveness and efficiency aimed at favoring export industries and at penalizing the public sector. This approach remained at the base of the main government agendas on fiscal and budgetary policies. It took the role of power broker in the coalition governments, becoming active in developing techniques of framework budgeting and establishing the allocations of budget funding among the various ministries. It is worth of attention the fact that the diminishing share of health and social services within the GDP did not raise any concerns regarding the future of the welfare state. On the contrary, the rising budget devolved to research and development activities was seen as a positive way in order to improve the competitiveness of the country. As a result, if in the 1980s research and development accounted for 1.2% of GDP, by 2006 they reached the 3.5%, one of the highest rates in the world.

On the other hand, focusing on the Ministry's dirty job of cutting expenditures, it was a convenient position for the political parties again. Indeed, it assumed the whole responsibility for the often unpopular cuts in the public sector: during the 1990s, most public sector institutions have been subjected to continuous cuts and efficiency programs implemented by the Ministry of Finance. This clearly had an effect on the

funding of the welfare state. In particular, between 2000 and 2011, the tax ratio including social security contributions was reduced by 4% as a share of GDP, and, more important, the health and social sectors, which constituted the core areas of the Nordic welfare model, have been kept under strict control. During the financial crisis, the GDP was reduced and the record high unemployment increased the social expenditures, reaching 30.7% of GDP in 1995. At the same time social benefits were cut. During the late 1990s, when employment increased, the GDP share of social sector expenditures fell under the average figure of the EU15 countries. It was in the years of the crisis that Finland took distance not only from Sweden and Denmark, but also from Germany and France, the GDP sharing of social expenditures in Finland becoming similar to those of Italy, Portugal and United Kingdom. From 1995 to 2002 the growth of social expenditures in real costs and the growth of social expenditure per head was the slowest in the EU15 countries<sup>56</sup> and the difference between Finland and the other Nordic countries was also reflected in the evidently reduced size of public sector: in the Nordic countries the public sector employees constituted the 30% of the workforce, while in Finland the figure was under the 25%.

Kantola and Kananen<sup>57</sup>, analyzing in details the Government Programmes of Finnish governments from 1980 to 2011, which summarize the policies of each Government and furnish the basis for government action, noticed that, since the 1990s, the notion of competitiveness was used in agricultural, environmental, cultural and social policies' documents. In the same period, policymakers started to rethink the entire system of the post-war domestic labour market, elaborating a new model in which applying the same ideas of efficiency and competitiveness. The post-war tax benefit system began to appear to their minds as the fundamental part of the crisis's problems instead of part of the solution. Progressive taxation and generous social benefits were no longer considered as mechanisms of redistribution, but as disincentives to work and as structural barriers to the unemployment's reduction. New ideas of incentives were elaborated, shifting the attention from the demand side of labour markets to the supply side. The priority became changing the behaviour of the job seekers. "In Finland, social policy was recalibrated towards workfare ideas. Conditions of unemployment insurance

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<sup>57</sup> Ivi p. 818

were tightened, beginning in 1993 and recipients of social security benefits had to fulfill new conditions to maintain their eligibility for cash benefits”<sup>58</sup>. The means-tested labour market support<sup>59</sup> was introduced in 1994 and it became the main form of unemployment insurance while, at the same time, in the income support system, non compliance with benefit administrators, free-riding and benefit abuse were strictly sanctioned. Tightening the conditions for receiving social security benefits became the strategy used in order to increase the labour supply and employment rates. More clearly, instead of constituting a form of support of the benefit system, they became tools in order to enhance job-seeking activities among the unemployed and those on the margins of the labor market. The reforms testified the Finnish adaptation of workfare ideas, and the latter was distinguished by strong compulsion and heavy sanctions. Consequently, competition state reforms, pursued ardently for 20 years, resulted in new hierarchies in the Finnish labour market, undermining the traditional Nordic ideas of solidarity and equality.

## **2. Post-crisis economic growth, the Euro membership and the spread of the ICT sector in Finland**

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<sup>58</sup> Ivi, p.819.

<sup>59</sup> Benefits that are available only to individuals whose income is below a certain level, Business Dictionary available at <http://www.businessdictionary.com/definition/means-tested-benefits.html>



## 2.1 The first years of recovery: an overview

After having described the most severe financial crisis that affected Finland during peace time, I am going to investigate the subsequent recovery phase, that lasted since 1994 until the first years of the 2000s. Indeed, it seemed like the long-run consequences of the Great Depression of the 1990s were all but negative. As Jonung<sup>60</sup> shows, the growth rate of Finland during the post-crisis period was higher than the EU average. The financial crisis and the following financial integration that took place contributed to a very great extent to the radical transformation of the Nordic economy, making it more reactive, totally increasing its growth prospect. The crisis “served as a window of opportunity for policy makers to carry out growth-enhancing structural reforms”<sup>61</sup> and the economic downturn undoubtedly affected in a positive way the growth potential of the economy.

As the first chapter stated, the excessive monetary tightening can be considered as the principal cause of the depression. As a result, it is logic affirming that the loosening monetary policy and the devaluation of the early years of the 1990s represented the strong macroeconomic factors that brought Finland out of the catastrophe. Floating let the central bank cut short term interest rate by 10 percentage points in a couple of months: abolishing the fixed exchange rate system meant no need to defend the exchange rate anymore and rates started to fall. This have clearly an effect on the asset prices, stabilizing them and boosting private consumption and investment in 1994. After the depression of the 1990s house prices rose without major interruptions and fell only slightly in 2001. Moreover, the depreciation considerably enhanced the competitiveness of Finnish exports, leading to a great improvement for the small open economy. In particular, the devaluation of September 1992 allowed Finland to become ambitious in exports, achieving a rapid growth in this sector. The enduring competitiveness problem, that negatively affected Finnish exports over the three-year period 1989 – 1991 disappeared when the Finnish markka was allowed to float as many other EMS currencies in the autumn 1992. It was not a case the fact that the post-crisis output growth was export-led in Finland and that net exports had a strong role in the GDP's

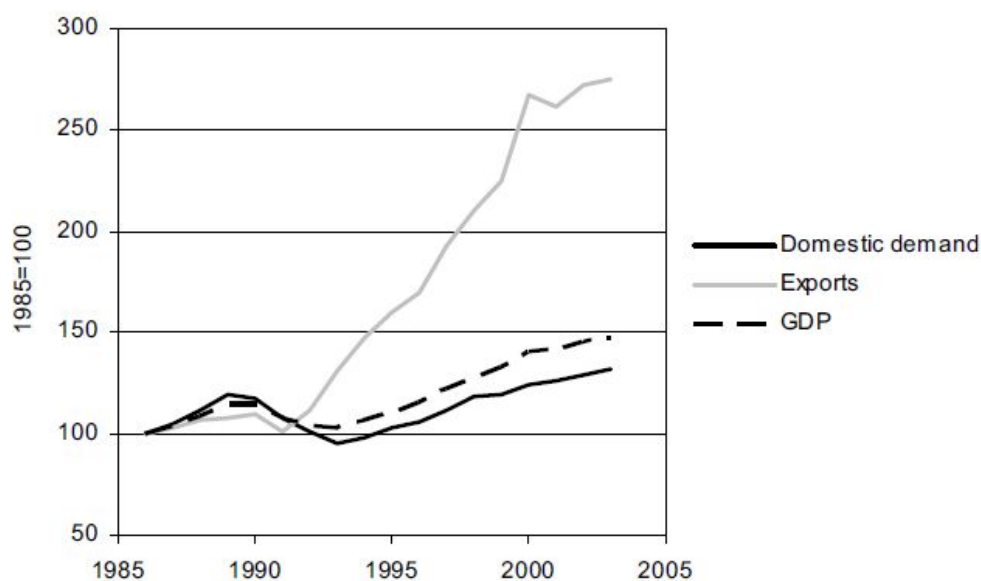
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<sup>60</sup> Jonung, L., *Lessons from the Nordic Financial Crisis*, report based on chapter 12 in Jonung, L., Kiander, J. and Vartia, P., NB (eds.) *The Great Financial Crisis in Finland and Sweden. The Nordic Experience of Financial Liberalization*, Edward Elgar, 2009, p. 17.

<sup>61</sup> Ivi.

growth during the years 1994 – 2000, being the first component of GDP to recover since the worst moment of the recession in 1991. Their average growth rate in 1992 – 2000 was about 10% per annum and in 1993 they already overcame the pre-crisis level. Looking more closely at the Finland case, it is intriguing focusing the attention on the Kiander's analysis<sup>62</sup> concerning the comparison between the development of the domestic demand and the external one. From an overall observation of figure 2.1, the key information that stands out is that while the export growth was considerable and fast, the development of the domestic demand was slow, without exceeding the 1990 level in real terms until in 1999.

**Figure 2.1** *GDP, domestic demand and export volumes*



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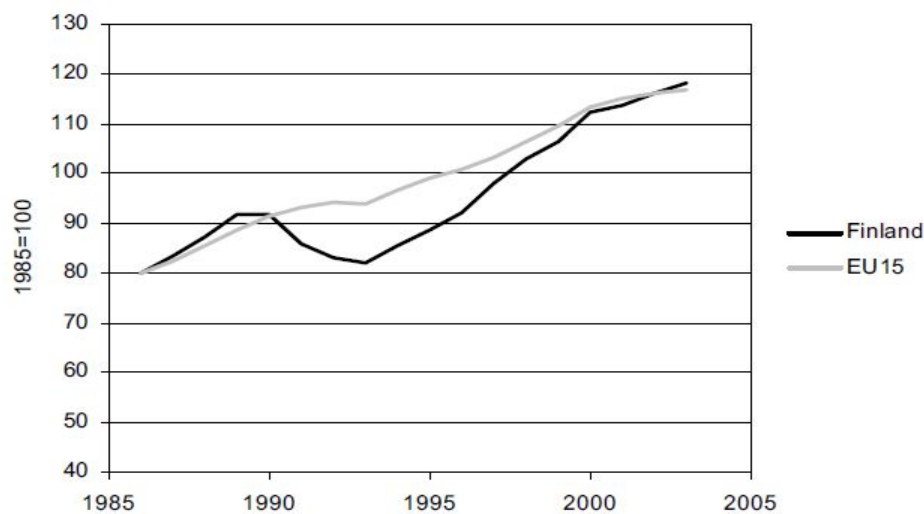
In this regard, Finland followed a different path from that of the other European countries. Indeed, they are usually characterized by a quite balanced equilibrium in the growth contributions of external and internal sources. On the contrary, in the Finnish case, rapid export expansion on the one hand and the depressed domestic demand on the other led to an unexpected strong increase in current account, which passed from a deficit of 5% of GDP to a surplus of 7% of GDP.

<sup>62</sup> Kiander, J., *The evolution of the Finnish model in the 1990s: from depression to high-tech boom*, Government Institute for Economic Research, Helsinki, 2004, p. 10.

<sup>63</sup> Ivi, p.11.

However, despite the 1990s depression of the domestic demand and investment, the growth record of GDP during the post-crisis years was terrific. Indeed, a nominal change in the exchange rate usually has only a temporary effect on the production, affecting only prices and not volumes in the long run. However, during the Finnish post-crisis phase, the depreciation's effects were maintained until the first years of the 21<sup>st</sup> century. The Finnish economy started to recover by the end of 1993 and, over the years 1994-2000, the average annual rate of economic growth was 4.5% while employment growth was 2.1%. From the last years of the 1990s to 2004, the Finnish GDP growth surpassed that of EU15 (figure 2.2), strictly combined with an increase in productivity and a decrease of the unemployment rate, which went from 17% in 1994 to 9% in 2001.

**Figure 2.2** *The evolution of GDP volume in Finland and EU15*



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Furthermore, total employment rose by 25%, the employment rate increased 11% points and in 2007 the aggregate employment exceeded the pre-crisis level. It has to be specified that although the employment enhancement was quite good, it was not sufficient to enable a return to the pre-crisis employment level. This can be explained by the fact that, until year 2000, the most important contributors to the Finnish economic growth were two sectors (exports and industrial production) less labour intensive than

<sup>64</sup> Ivi, 12.

many others, such as services and construction. Employment could have increased more quickly if the economic growth had been fostered by them.

According to Jonung, Kiander and Vartia<sup>65</sup>, this growth was not only due to the depreciation of the exchange rate but to the wage moderation and the strong productivity growth too. Indeed, the depreciation did not last forever and the Finnish currency appreciated again in 1995 – 1996, before being definitively anchored to the euro. It is a matter of fact that since 1995 wage moderation was achieved through economic agreements between the labour market parties and the government. It was also supported by a reduction of the income tax rate, which decreased of about 8 percentage points between 1996 and 2007. Finally, the recovery period was also characterized by a rapid rise of productivity growth. The Great Depression and the period that followed led to a definitive transformation of the Finnish economy, that began to embrace “Schumpeterian” values. Many inefficient establishment were closed and more efficient ones were open, also within existing industries and enterprises, shifting labour from less productive to more dynamic mills. Furthermore, the Finnish economy, initially dominated by resource-based heavy industries, started to be led by knowledge-based ICT industries. This radical change could be possible thanks to strong microeconomic forces and to the investment in machinery and equipment, private and public investment in Research and Development (R&D), training and education. Moreover, “the fresh memory of the crisis of the early 1990s kept the degree of risk aversion relatively high as compared to other European countries”<sup>66</sup>. As a result, the average Finnish labour productivity reached the productivity level of the United States, overtaking that of EU15 during the last years of the 1990s. Moreover, the growth of industrial production during the period 1992 – 2000 was the highest ever observed, achieving the average of 7% per annum and the annual rate of labour productivity in manufacturing was of 6%, being particularly rapid as well.

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<sup>65</sup> Jonung, L, Kiander, J., Vartia, P., *The great financial crisis in Finland and Sweden: the dynamics of boom, bust and recovery, 1985-2000*, EUROPEAN ECONOMY Economic Papers 350, December 2008, p. 31.

<sup>66</sup> Gulan, A., Haavio, M., Kilponen, J., *Kiss me deadly: from Finnish Great Depression to great recession*, Bank of Finland Research Discussion Papers, 2014, p. 9.

As Kiander underlined in his paper<sup>67</sup>, Finland, like other all European countries, went through minor reforms during the 1990s, remaining an example of the so called European social model, characterized by regulated labour market. Indeed, it did not seem that, at least at a first glance and in the first phase of the recovery, it undertook profound institutional transformations. It can be affirmed that the biggest change that took place in Finland was the approval and the subsequent not taken for granted acceptance of a policy of long term wage moderation. In fact, it represented the clear response to the problem of unemployment even in unionized labour markets, and the trade unions considered it an excellent solution if compared with the possible marginalization and exclusion from the decision making process. The political alternation that described those years had an impact on the realization of possible institutional reforms. In particular, during the years 1991 – 1995, the usually dominant Social Democrats were in opposition and the Esko Aho's Centre-Right coalition took control, expressing its intentions to lower the role of trade unions and to abolish the old corporatist wage bargaining system controlled by central organizations of trade unions and employers. Obviously, the reforms were seriously rejected by them which threatened twice to organize a general strike. This Center-Right initiative, combined with the deep economic crisis, the massive unemployment and the tight fiscal policy made the coalition unpopular, leading to a new victory of the Social Democrats, which regained power in the parliamentary election of 1995. A "Rainbow Coalition", led by the Social Democratic Party leader Paavo Lipponen and composed by Social Democrats, Conservatives, the Green Party and the Left Alliance, was formed and remained in power until 2003, trying to restore the close cooperation with trade unions, ensuring the maintenance of their strong position within Finnish economic and social policy. During the years 1994 – 1997 a tight fiscal policy was applied, aimed at improving public finances and supporting the economic recovery. Several changes in taxation took place. For instance, the corporate and capital income taxation was reformed in 1993, introducing a new system where profits, capital gains and capital income were taxed by a proportional 25% rate. In addition, the abolition of several deductions led to the widening of the tax base and to an increasing of the after-tax profits of firms and the incentives of entrepreneurs. Within seven years, 1994 – 2000,

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<sup>67</sup> Kiander, J., *The evolution of the Finnish model in the 1990s: from depression to high-tech boom*, Government Institute for Economic Research, Helsinki, 2004, p. 16.

the total public sector financial balance went from a deficit of 6% to a surplus of 7% of GDP. However, in order to fix unemployment, the work incentives were improved through a new earned-income tax deduction and severe reductions in the levels of welfare benefits. Other drastic cuts were made to child benefits, family support programs and health care subsidies, leading to a substantial reduction of the overall level of social spending (excluding the unemployment-related expenditures) which was about 10% lower than in the beginning of the decade, even if the number of pensioners had increased to a considerable extent. It is obvious saying that the budgetary cuts, justified by the government as necessary savings and as the only way in order to improve the work incentives of the unemployed, were unpopular; however, the majority of people accepted them and considering them as the only way to save at least the basic structures of the Finnish welfare state. Moreover, during the first period 1992 – 1994, the reduced public spending combined with a pro-cyclical fiscal policy increased unemployment, which, consequently, led to a higher than expected social spending and lower than expected tax revenues. On the contrary, in the latter half of the 1990s, the lower interest rates and previous budgetary savings allowed the policy makers to use the higher than expected tax revenues to finance tax cuts and increased public spending. As a consequence, in a climate of low interest rates, a growing employment expansionary fiscal policy did not threaten fiscal stability but improved fiscal balances during the five years of 1995 – 2000. There was an actual “fiscal miracle”, which Kiander affirmed “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 the erosion of the relative value of some transfer programs)”<sup>68</sup>.

## **2.2 The Finnish path towards European integration**

In investigating the period of economic prosperity that took place in Finland after the Great Depression of the 1990s, it is important analyzing in details the process of European integration started by Finland and how the shift towards the West impacted

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<sup>68</sup> Ivi, p. 19.

positively and negatively on the Finnish economic growth. In the next section, I am going to describe the geopolitical change undertaken by the Nordic country, the adhesion to the European currency and the benefits and the risks that derived from it.

The demise of the communist empire in Eastern Europe and the subsequent disintegration of the Soviet Union led to a radical change of Finland's radical position. It officially stopped to be a pluralist western democracy close to a communist superpower. From a geo-economic point of view, the collapse of the USSR meant the end of the Finnish-Soviet trade relations, leading the exporting country to find possible compensatory markets in western Europe. In that period the European Community was experiencing a great influence on the continent, assuming the major politico-economic power and slowly attracting the European Free Trade Association (EFTA) members in its irresistible vortex. In short, "disintegration in the east was offset by the prospect of still greater integration in the west"<sup>69</sup>. Indeed, in the meantime, the unification of Germany, the inclusion of the former German Democratic Republic in the Community and the approval of the Treaty on European Union by the EC leaders during the Maastricht summit in December 1991 fostered the widening of the EC members, predicting deep cooperation between the future member states. The events described above substantially modified Finland's durable position between Western Europe and USSR, obliging the Nordic country to pursue a new *Westpolitik* and to reconsider its position in relation to the western institutions, such as EFTA, the European Economic Area (EEA), the European Community and even NATO. As long as its eastern superpower neighbor survived, Finland made neutrality the only possible strategy of its security policy, strongly considering the economic crucial importance of the access to Western export markets, without underestimating the maintenance of good and friendly relations with the Kremlin. Nonetheless, the President Koivisto's reluctance to condemn Kremlin policy in the Baltics after the tragedy of Vilnius in January 1991, was considered by many Finns as totally unacceptable. Neutrality represented the clear rejection of the full membership offered by the European Community, which at the same time worked in order to reach a closer union of its peoples. Already during the "revolutionary autumn" of 1989, Gorbachev declared the neutrality of Finland,

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<sup>69</sup> Arter, D., *The EU Referendum in Finland on 16 October 1994: a vote for the West not for Maastricht*, Journal of Common Market Studies, Vol. 33, No 3, September 1995.

discouraging the country from approaching the Western alignment. However, until that moment Finland did not consider the costs of neutrality, being sure of the profits of the Finnish-Soviet trade. When the latter crumbled, it started to understand the necessity of securing free access to west European markets.

Therefore, Finland decided to slowly undertake its process of integration in Europe. The first step was the application to join the European Economic Space, known in the 1990s as the European Economic Area (EEA). The latter, ideated by the President of European Commission, Jacques Delors, aimed at merge the EC and the EFTA countries into a single internal market composed by 19 states and about 380 million people. The EEA represented a perfect compromise for the intentions of the EFTA members, resolute to maintain a certain degree of neutrality, without applying for the full membership. As a result, joining the European Economic Area meant for Finland opening a first window on Western Europe, avoiding at the same time those ties required by the full members. Hence, the new market did not include agriculture, defense and certain elements of regional policy, but at the same time it did not ensure the benefits and the privileges of a full membership. However, after having heard about the Swedish intentions of seeking full EC membership, and after having ascertained the final death of the USSR, the Finnish Center-Right government headed by Esko Aho followed the same path. In particular, the Swedish will to belong to the European Community was a clear surprise to the Finnish authorities, who, at the beginning, had no intentions to follow a similar path. However, “once the Swedish application had been made, any announcement by the Finnish government of not intending to apply for membership or postponing the decision to some indefinite date in the future would probably have hurt the economy, which was already in a fragile, if not critical condition”<sup>70</sup>. Hence, consequently, during a speech at the college of Europe in Bruges, President Koivisto indicated Finland’s readiness to totally accept the Maastricht Treaty on European Union. However, while Austria applied to become a member of the European Community in July 1989, followed by Malta and Cyprus in 1990, the Finnish Government did not apply until March 18, 1992. The negotiations on the Finnish accession started officially in February 1993 and, honestly speaking, they were short for all the four applicant countries,

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<sup>70</sup> Mayes, D. G., Suvanto, A., *Beyond the Fringe: Finland and the Choice of Currency*, Journal of Public Policy, Volume 22, issue 2, September 2002, pp 161-182.



Austria, Finland, Norway and Sweden, a lot of issues having been settled during the agreements on the European Economic Area. When in December 1993 Finland declared its commitment to the Common Foreign and Security Policy, seriously endorsing the 'defense dimension' of the treaty, even the plan of military non-alignment and the project of preserving a credible national protection system dissolved. This happened on the 21<sup>st</sup> of December 1993, when the Foreign Secretary, Heikki Haavisto, affirmed without any doubt that Finland was actually ready to take part in the EU's common foreign and security policy<sup>71</sup>. When the statement circulated, it was immediately shared by the leading opposition party, the Social Democrats, enjoying the widespread elite consensus. Hence, the 'core of neutrality' started to lose consent, even if Haavisto's statement implicitly defended the Finnish priority to work from within aimed at preventing any inadmissible development. However, it was early understood that security was a necessary step in order to obtain all the other benefits derived from EU membership. Indeed, there was the far-reaching conviction that the limited benefits would be derived from the acquisition of the membership status if the maximum security bonus had not been achieved. Another area that was object of protracted discussion was that related to the food sector. The negotiators tried to combine the distinctive and peculiar needs of Finnish agriculture with the rigid approach of the EU's Common Agricultural Policy (CAP). At the end, Finland failed to gain a transitional period for agriculture and it had to shift to EU producer prices directly on becoming a member. However, it would have received directly from the EU 2 billion Finn marks in connection with adjustments to the reformed CAP. By contrary, Finland did not raise any reservations to the provisions of the European Monetary Union, whose stage 2 entered into force at the beginning of 1994. In July, the four countries became observers of the EU Council, the Committees and the European Monetary Institute.

During the two years between the request to join the European Union in March 1992 and the referendum in October 1994, Finnish support for European membership was higher compared to those of Sweden and Norway. Although the high popularity of the European project, the percentage of Finnish people who knew what it precisely involved remained quite modest and in February 1992, on the threshold of the formal application, the narrowest majority of 51% of persons were in favor of joining the EU. More

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<sup>71</sup> Ivi, p. 373.

specifically, taking into account the distribution of preferences among parties in January 1992, only 16% of farmers favored the application (at that time the possibility of EU environmental support to agriculture was in the early stages of investigation), in the Centre (formerly Agrarians) 25% strongly opposed the membership and 29% thought ‘it was not a very good idea’, while “among supporters of the other main coalition party, the Conservatives, 82% thought the application was either ‘desirable’ or ‘very desirable’ and a clear majority in the main opposition party, the Social Democrats, were of a similar view”<sup>72</sup> (Table 2.1).

**Table 2.1** *Support for an Application for EU Membership by Party in January 1992*

<i>Party</i>	<i>Centre</i>	<i>SDP</i>	<i>Cons</i>	<i>LA</i>	<i>Greens</i>	<i>Total</i>
Very desirable	11	22	47	16	22	22
Quite desirable	22	34	35	18	43	29
Not very desirable	29	24	11	24	24	23
Not at all desirable	25	12	1	24	5	15
Don't know	13	8	6	17	7	12

*Source:* ‘Keskustan väki penseä EY:lle’ *Helsingin Sanomat* 4. 2.1992.

*Notes:* SDP = Social Democrats; Cons = Conservatives; LA = Leftist Alliance (formerly the Finnish People’s Democratic League, which incorporated the Communist Party).

Data for the smaller coalition parties, the Swedish People’s Party (generally pro-membership) and the Finnish Christian League (mostly anti-membership) are not available.

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However, after the rejection of the Danish referendum in June 1992, Finnish support for the EU membership started to drop to about 40% by the end of 1992. By November 1993, the opponents exceeded the number of supporters for the first time. More interestingly, according to the Centre for Business and Policy Studies, during the autumn 1993, 80% of Finns considered the preservation of neutrality as important. Going further, by January 1994 the opposition to membership had been replaced by growing uncertainty. In July there were 45% for, 32% against and 23% who do not know. Although the support for the EU continued to be constant at about 45% until September 1994, during the final days there was a significant surge of the ‘yes’ voters:

<sup>72</sup> Ivi, p.369.

<sup>73</sup> Ivi, p.370.

the exit poll based of the 5<sup>th</sup> October, the first day of actual postal voting, revealed 67.6% in favor and 32.4% against.

Finally, on 16 October 1994, the question “Should Finland join the EU on the basis of the negotiated settlement?” found an answer. Using a standard with ballot paper, 57% of Finns opted for a ‘yes’. More specifically, approximately 1.2 million of Finnish people voted through the postal system, while 1.5 million Finns voted in person on the main polling day. Among them, the 58.9% answered affirmatively and the residual 41.9 negatively. Support for membership was particularly strong in the towns, especially in the South and in Kauniainen, where it reached 87.8%. Moreover, in Helsinki the 73.6% and in Uusimaa the 68% voted in favor of the European Union virtually determining the whole result. The ‘yes’ option spread more among the better-educated and better-off, and, in the north, among young people, in particular men. Many Finns considered the referendum a simple question of identity, other were pushed by security concerns and some, in particular among the old generation, were positively influenced by the fear of Russia and isolation. Broadly speaking, Finland’s relationship with the European Community/Union, which had previously been examined only from the economic point of view, started to acquire a more explicit political aspect as well. Furthermore, focusing the attention on the ‘No to the EU’ campaign perspective, turnout in the predominantly rural eastern Finland was largely unsatisfactory, contributing to the final result. Indeed, there were relatively few polling stations in the forests and it snowed on the 16<sup>th</sup> October, the day of the referendum. As a result, the anti-EU campaign did not reach the 75% of Centre votes it was hoping for. In addition to the farmers, the ‘no’ alternative was preferred also by the less well off, and by those who were normally pessimistic about their economic position inside the European Union. Others were instead concerned about the possible loss of identity, a significant aspect in a relatively young state as Finland. To be honest, it cannot be underestimated the fact that Finland, answering ‘yes’, was deliberately abandoning its neutrality precisely when, after almost 50 years, there was the concrete possibility to mutate it in reality. “A new line of *adaptive neutrality* would have been viable and this would not have been synonymous with abstentionism and isolationism”<sup>74</sup>. In fact, Finland would not have loosed its membership status in the European Economic Area, maintaining its power of initiative

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<sup>74</sup> Ivi, p. 372.

on the global stage and strongly supporting all the structures and initiatives aimed at fostering and promoting peace and stability. On the contrary, another sentiment prevailed, the need of security being stronger than any other consideration. Indeed, what finally shift the result of the referendum was the 'strategic protection' that the EU would have offered to Finland. If Finland remained outside the EU and Russia successfully democratized itself being integrated to the West, their relation would have been more difficult. On the other hand, if democracy in Russia failed, the neutrality of Finland would have practically meant being aligned with an authoritarian power.

Looking more closely at the economic side of the membership, already during the 1993 accession negotiations, the fulfillment of the Maastricht Treaty's EMU convergence criteria was considered as a policy goal for Finland. However, at the beginning of 1995 when the Nordic country joined the Union, it was not yet concrete and it was even uncertain if it would have become a reality. Indeed, in 1995, most countries including Finland, were still far from meeting the entry criteria necessary for the implementation of the Stage 3 (introduction of the single currency) established by the Maastricht Treaty of 1992. The fact that the birth of EMU was not assured, and, more important, that Finland could not be among the first group of countries, led many decision makers and opinion leaders not to take a definitive position for or against EMU and to focus more on the fear of a few recession. However, the macroeconomic policies established in order to stabilize the Finnish economy after the depression helped the country to reach the Maastricht convergence criteria. First of all, price stability had been already achieved in 1994, before the target date, and was not put under pressure during the following years, ensuring the fulfillment of the inflation criterion. Secondly, the long-term interest rate criterion was met in 1994, when the confidence in the government finances were restored. It is noteworthy to remember that the sharp decline in revenues and the increase of social payment due to the high level of unemployment provoked drastic cuts on benefit rates and other sectors of public expenditures in order to achieve a sustainable balance. The general government debt-GDP ratio was comfortably below the 60% target; it has been estimated that the two governments that ruled Finland during the post-crisis period implemented spending cuts equal to 9% of GDP over the time-span 1993 – 1999. The two remaining targets were more difficult to achieve: the general government deficit was not supposed to reach the 3% of GDP maximum very soon and

the markka was not anchored to the European Exchange Rate Mechanism. In particular, the ERM membership was the most difficult goal to be achieved. Finally, in October 1996, when the possible date of examination of the criteria was less than two years ahead, Finland decided to join. The doubts were generally due to two main reasons. The first one concerned the possibility to devalue under the floating regime and the fact that the difficulties of the early 1990s due to the pegged exchange rate were hard to remove from the people's mind. The second regarded the conviction that the domestic combination of policies was already working, saving the economy of the country, and there was no need to satisfy another external requirement in order to ensure stability and growth. Meeting all the criteria would have allowed Finland to join EMU, but at the same time they would have given the needed protection for the possible situation of monetary and financial instability which would have followed the non realization of EMU. In 1997, the economy had recovered, the GDP grew more than the expectations and the government finances improved as well. "Suddenly it seemed that EMU could be round the corner and that Finland would be likely to meet all the criteria easily"<sup>75</sup>. When the probability of EMU to come true increased, taking a position on the desirability or not of the possible Finnish membership could not be avoided and the debate ranked high in the political agenda too. The 'Rainbow Coalition' led by Paavo Lipponen considered the TEU convergence criteria and participation in the EMU Third Stage as a serious policy goal in the coalition's political program. The prime minister often expressed his complete support for the European Union, strengthening the support of the coalition for the pro-integrationist policy. In short, when the EMU Third Stage was raised on the political agenda, Finnish participation in it became soon a reality. In one of its policy statements on EMU, the coalition affirmed:

*"EMU brings stability to financial markets and supports in this way national economic policy considerably and creates better conditions for the promotion of economic growth and improvement of employment also by national means. Finland's goal is a stable EMU in whose Third Stage as many member states as possible would participate from the beginning. In order to achieve stability it is important that the criteria established for the EMU's Third Stage are*

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<sup>75</sup> Mayes, D. G., Suvanto, A., *Beyond the Fringe: Finland and the Choice of Currency*, Journal of Public Policy, Volume 22, issue 2, September 2002, p 170.

*followed strictly. [...]. Finland strives at being able to attend the group of countries which first will move into the Third Stage of the EMU.*"<sup>76</sup>

Even the two most critical parties, the Greens and the Left Wing Alliance, started early to be committed to a pro-single currency policy. However, adapting to this policy line was not so easy for them. The Greens maintained a formal party position, giving their members the freedom to vote in the parliament as they wished. On the contrary, the Left Wing Alliance declared to be in favor, without considering that 80 % of its supporters strongly criticized Finland's participation. In contrast, the Centre Party and the Finnish Christian League, the parties of the opposition, were against Finnish Participation in the euro area without hesitation. During the final phase of decision making, Lipponen started a close interaction with the Finnish Parliament and in 1996 the Prime Minister commissioned an expert group, composed mainly by university professors, to examine in depth the pros and cons of EMU participation. The EMU commission, chaired by Dr Jukka Pekkarinen, Director of the Labour Institute of Economic Research, did not take a precise position on the issue, due to the existence of both positive and negative factors to be considered and many imponderables on how behavior might change after membership. Notwithstanding, the media interpreted its conclusions as positive and supportive.

When the official decision of Finnish participation in the euro-area was taken, the political atmosphere calmed down. Practical arrangements for the transition of the currency started to dominate the public debate and the support of the single currency increased steady to around 50% at the time of the official decisions of May 1998. The support was also demonstrated by the Rainbow Coalition's victory at the March 1999 general elections. In order to prepare Finnish people for one of the biggest change of their history, the government launched an information campaign in order to spread practical advises on the changeover through the media and directly to the citizens. For instance, a leaflet was distributed to Finnish households at the beginning of 2002. To a certain extent, the Lipponen government was pretty good at triggering the public enthusiasm, and when the transfer to the euro took place, as an account currency in 1999 and in all payment transactions in 2002, it could be described as a smooth

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<sup>76</sup> Ministerial Committee for EU Affairs, *The statement of thy Finnish Government concerning EMU*, 16 Jun 1995.

technical process rather than a political experience. Indeed, it can be affirmed that in Finland the issue of euro-area membership has not been politicized as in Sweden or Denmark. This was essentially due to the fact that the participation in the euro-zone was considered as an integral part of Finland's EU accession and a broad national consensus had been built around this decision. Even the opposition parties in the Parliament, the Centre Party and the Finnish Christian League, initially against the decision, revised their position. The Euro adoption was portrayed as a national political project, as an important and strategic part of European integration, and technical elites, political leaders and key advocacy groups tried to spread this concept, stimulating the support of the Finnish society. In addition, the then President Martti Ahtisaari, took a leading role in the pro-euro campaign. On the other hand, academic experts and key civil servants were more discreet in influencing public opinion and few economists appearing in the media took a radical position. Opposition to the euro membership was more linked to general criticisms of full EU membership and found its institutional voice in several minor political associations which did not enjoy a great political success. They mainly tried to focus the people's attention on the illegality of the EU decisions taken by the government, which did not involve the population at all. Despite this, the broad success of the Finnish EU policy weakened the credibility of EU critics' arguments, and the support for the Finnish participation in the EMU prevailed.

### **2.3 Is a single currency desirable? Pros and cons of a single currency area**

Does it make sense for a group of countries to abandon their national currencies? As Baldwin and Wyplosz<sup>77</sup> underlined, money is one of humanity's great inventions. Its main goal is to undertake barter, favoring commercial and financial transactions. In this sense, more people accept a currency, easier would be their economic relations. Namely, there would be no need to exchange money when travelling, exporting or importing. Taking in mind that the usefulness of a currency increases with the size of the area in which it is used, it is important to observe that its marginal benefit will be declining as the area expands, because the extra benefit derived from adding one more

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<sup>77</sup> Baldwin, R., Wyplosz, C., *The economics of European Integration*, McGraw-Hill Education, Fourth Edition, United Kingdom, 2012.

state to an already large currency zone will be smaller than when it was small. At the same time, as the currency area grows, it becomes more diverse, including, for instance, different standards of living. This will raise costs, and the marginal costs will increase with the area's size. It can be stated that, "the optimal currency area (OCA) corresponds to the situation where the marginal costs and benefits from sharing the same currency balance each other"<sup>78</sup>.

The reduction of the transaction costs is not the only benefit that can be derived from a monetary union. Another advantage is the elimination of exchange rate risk. Indeed, when exports are priced in the currency of the exporter, the importer does not know what it will be the precise exchange rate until the purchase will be settled. On the contrary, if the price is set in the importer's coin, it will be the exporter to face the risk. Moreover, with the end of exchange rate fluctuations all the risks of loss associated to the Foreign Direct Investments (FDI) will be reduced, triggering the transfers of technology, returns to scale and better production structures. Finally, the loss of national monetary policy autonomy which would result from the realization of a currency area, may bring several benefits. This happens mainly when the domestic bank is not sufficiently able to carry out its policies and if the collective central bank is more likely to do a better job. Moreover, the latter will probably take distance from governments pressure because each one will not want to see the central bank financing the others.

On the contrary, it seems obvious that bringing together different countries into a currency area raises difficulties too. Indeed, a common currency implies a single central bank and the latter is unable to react to each and every local singularity. Let's suppose that the world demand for a country's exports declines because tastes change or more convenient alternatives are available elsewhere. This led the country to make its exports cheaper in order to fix its balance of trade. In order to enhance competitiveness, one solution could be the decrease of prices and wages, but if they are sticky and if the country has its own currency, depreciation can be the next option. However, if the country is part of a monetary union, there is no alternative to lowering prices and this will lead to an economic downturn, deeply enough and long enough.

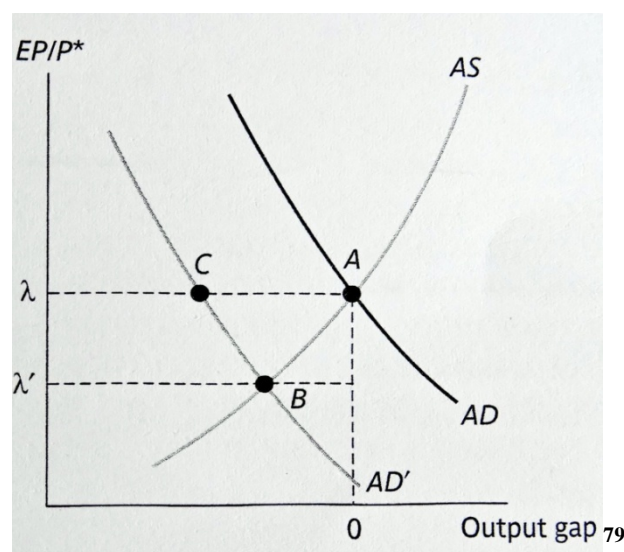
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<sup>78</sup> Ivi, p. 404.



In order to understand the situation, figure 2.3 clearly illustrates the standard aggregate demand- supply diagram. At the aggregate level, competitiveness can be assessed using the real exchange rate,  $EP/P^*$ , where  $E$  is the nominal exchange rate,  $P$  is the domestic price level and  $P^*$  is the foreign price level. This explains why the vertical axis represents the real exchange rate ( $\lambda$ ), rather than the domestic price level  $P$ , used for closed economies.

**Figure 2.3** *An adverse demand shock*



Starting from the equilibrium point A, a negative demand shock will shift the AD curve leftward, from AD to AD<sup>1</sup>. If the nominal exchange rate was allowed to depreciate, the short run effect of the shock would be a shift from point A to point B, and from the real exchange rate  $\lambda$  to real exchange rate  $\lambda^1$ . This would be a severe drop, but the outcome would be more painful if the exchange rate was fixed. In fact, in the last case, the economy would move to point C. “At the unchanged real exchange rate  $\lambda$ , domestic producers continue to supply the output corresponding to point A, but point C represents the new lower demand”<sup>80</sup>, with the distance AC representing the unsold goods. Domestic firms will not accumulate unsold goods for ever and production will fall, leading to a gradual prices’ cut and bringing the economy to point B through a painful and protracted process. Looking at the example, the most important information

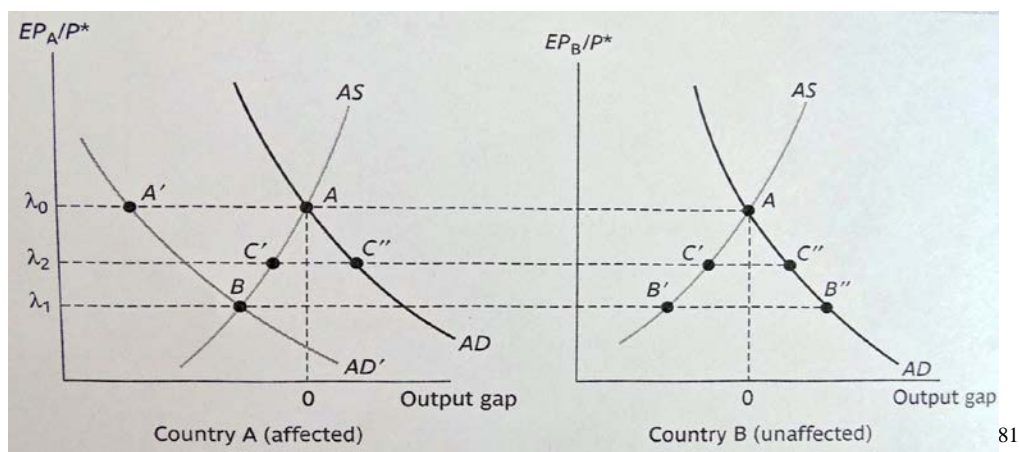
<sup>79</sup> Ivi, p. 406.

<sup>80</sup> Ivi, p. 407.

that stands out is that in a system characterized by rigid prices, an exchange rate fixity makes a bad situation worse. In a monetary union a real exchange rate adjustment can only be derived from changes in prices and wages, but, if they are sticky, the process could take time.

So far, we have considered the shock of one country in isolation, but diversity means that different countries experience different shocks. The simplest case is that of a currency area with two member states, country A and country B, country A being characterized by two exchange rates, one vis-à-vis country B and one vis-à-vis the rest of the world. If the two countries face the same adverse shock, we know from the previous example that they have to undergo a real depreciation vis-à-vis the world, but if they are similar there would be no need to change their bilateral exchange rate. They are in the same boat, facing the same difficulties. This means that in a monetary union the loss of the exchange rate has no consequences as long as all the members face the same shocks. In this case, the union will simply adjust its common exchange rate vis-à-vis the rest of the world. However, the situation deeply changes in the presence of asymmetric shocks, the most dreaded hypothesis by the member states. Let's consider figure 2.4

**Figure 2.4** *An asymmetric shock in a currency union*



Suppose that country A is hit by a negative demand shock, but not country B. The vertical axis represents each country's real exchange rate vis-à-vis the rest of the world:  $EP_A/P^*$  and  $EP_B/P^*$ , where  $P_A$  and  $P_B$  are the price indices in country A and in country

<sup>81</sup> Ivi, p. 408.

B respectively,  $P^*$  is the price level in the rest of the world and  $E$  is the common currency's exchange rate, initially equal to  $E_0$ . Points A, in both graphics, stands for the initially equilibrium points, with the same real exchange rate  $\lambda_0 = E_0 P_A / P^* = E_0 P_B / P^*$ . The adverse shock that affects country A is reflected in the AD curve shift from AD to  $AD^1$ . If the state is not part of a currency area, its best choice will be depreciating to  $E_1$ , reaching  $\lambda_1$ , which allows for a new equilibrium at point B, and country B, on the other hand, has no reason to change its nominal and real exchange rates which remain the same. Things change when A and B belong to a monetary union, because in this case they cannot have different nominal exchange rate as before. The common central bank has to make a choice between country A and B. If it prefers to care only about the former, it would depreciate the common exchange rate to  $E_1$ . With sticky prices, both countries should share the same real exchange rate  $\lambda_1$ , but this would not be good for country B, which after the depreciation carried out by the central bank, would face a situation of potentially inflationary excess demand (represented by the distance  $B^1 B^2$ ). By contrast, if the bank decided to favor country B, it would maintain the common exchange rate unchanged at  $\lambda_0$ . This would benefit country B, but it would mean excess supply for country A (represented by the distance  $A^1 A$ ). If the union's common external exchange rate floated freely, it would decline to an intermediate level as  $E_2$ , which corresponds to  $\lambda_2$ . The result would be a combination of excess supply in country A and excess demand in country B, leading the two countries in disequilibrium. The definitive exchange rate would be too strong for country A, but too weak for country B. However, this is the unavoidable cost of forming a monetary union. Looking at the example, the lesson is that in a sticky prices regime "if an asymmetric shock occurs, the common exchange rate cannot insulate all countries that belong to a monetary union"<sup>82</sup>. Baldwin and Wyplosz clarifies that the same situation applies also to the case of symmetric shocks that produce asymmetric effects. Indeed, two countries may react in different way to the same shock and this can be due to different economic structures, to the relative importance of industrial sectors, to the role of the financial and banking sectors, to the ability to strike agreements between firms, trade unions and the government and so on and so forth. For example, an oil shock caused by a sudden price's increase would hurt oil and gas importing countries, but would benefit oil producing ones.

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<sup>82</sup> Ivi, p. 409.

## 2.4 Finland and the euro area: benefits and risks

After having deeply analyzed the expert study's recommendations, the government summarized its comprehensive position on the EMU issue in a white book, presenting it to the Parliament in May 1997. The Lipponen coalition considered the EMU membership as an economic and political issue. As far as the economic aspect is concerned, it believed that joining the EMU would have been a better alternative than the limited convergence of the EMU Second Stage and Exchange Rate Mechanism membership. Moreover, the possibility of a free floating currency was not considered at all, being in strong contrast with Finnish economic policy's goals. In addition, taking into account the political considerations, the government was strongly convinced that the participation to the euro area would have benefited the general goals of Finland's EU policy. Broadly speaking, there were few concerns about goal asymmetry and the government continued to state that "participation in the single currency did not question, and/or could be seen as compatible with, the key Finnish preference that the future development of the EU remains as essentially an association of sovereign states"<sup>83</sup>. The most important goal, achievable through the participation in the euro zone, was maximizing the country's political presence and influence in Europe, becoming part of the 'inner cycle' of European Union<sup>84</sup>. Therefore, a prominent pro-EMU argument in the Finnish political debate on the euro area was that the euro-entry would have safeguarded Finland's position in the 'EU core'. To a certain extent, this implies recognition of the existence of an integration asymmetry and the Finns' solution would be precisely being in the EU core through full EMU participation. The so called policy of 'being in the core' was the security policy's key goal of Finland which, as a small state with real security concerns, could not accept to be excluded from any of those official or unofficial forums where fundamental decisions about the Union's future are taken. It was the main guiding objective of the two Lipponen coalitions and when the new Centre-Social Democrat coalition replaced the Rainbow Coalition after the 2003 general elections it was strongly criticized for having set aside the key principle of the

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<sup>83</sup> Tiilikainen, T., *Finland: Any lessons for the euro-outsiders?*, Journal of European Integration, Volume 27, Issue 1, pp 25-42, Helsinki.

<sup>84</sup> Tarkka, J., *The effects of EMU on the Finnish Economy: Some Early Conjectures*, The Economic and Social Review, Vol. 33, N° 2, 2002, pp 167-177.

previous government. As a result, the new coalition had to restore the EU policy as the fundamental purpose of the Nordic country. Although it is all but smooth trying to assess whether Finland was able to have a role in the EU core, it has to be admitted that as a member of the euro area it had more possibilities to impact on its political structures. For instance, Finland succeeded in obtaining some important nomination in the field of economic and monetary policy, such as Sirkka Hämäläinen, the former governor of the Bank of Finland, who was nominated to the ECB's executive board for its first five years. In addition, the country was able to affect the practices of the Euro-Group and, consequently, to influence the Union's political system. This made possible safeguarding its position in the EU, notwithstanding the further development of *integration asymmetry*. "Franco-German opposition to Britain's Chris Patten being nominated Commission President because he was a national of a member state that is not in the euro-area and, informally, the EU core, was regarded in Finland as a further evidence of the wisdom of current Finnish EU policy"<sup>85</sup>. The asymmetrical relation between the EU's economic and political features was gradually accepted as a characteristic of the Union's *sui generis* nature and, in official documents, the launching of the EMU Third Stage was interpreted as an antidote to manage EMU *goal asymmetry*, making the European Union an association of foreign states. Similarly, the government did not intensely deal with the EMU's problem of *democratic asymmetry*, trying to avoid enhancing the arguments of the opposition. However, the arguments related to the *integration asymmetry* problem would have emerged in the future. The effective progressive revival of the Franco-German axis developed around the establishment of the euro-area, seemed aimed at hindering the eventual changes that an EU enlargement would have caused, definitively altering the balance of power among large and small member states. Despite this, the problem did not reopen the issue of the European Monetary Union's power structures and it did not foster controversial discussions among Finnish domestic actors. This was generally due to the positive assessment made by the domestic elite and public on the first period that followed the launch of EMU Third Stage in Finland. Key social and political actors saw the adoption of euro as beneficial, vehemently supporting the whole EMU project. A key role was undertaken by the three Finnish labour market organizations, which ensured the easy implementation of national adjustments to the labour market. This move highly reduced

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<sup>85</sup> Ivi, p. 31.

the Finnish concerns related to the so called EMU *polity asymmetry*, according to which the ECB's common monetary policy seemed incompatible with the traditional goals of Nordic welfare policies. The unions actively helped to reconcile any consequence arising from full EMU participation with the valid concerns of the Finnish workforce and Finnish society. The condition for ensuring their support of Finland's involvement in the euro area were that EMU would not have led to a breakdown of the collective agreement system and to a decrease in standard wage rates. From an overall perspective it can be affirmed that the Finnish labor market organizations assessed their country participation in the euro-zone as totally positive. For instance, the Central Organization of Finnish Trade Unions abandoned soon their concerns about incompatibilities between the EMU System principles and Nordic welfare nationalism. On the contrary, the association lobbied hard at the national and EU levels for the adoption of Nordic welfare society's key elements and the reinforcement of the labor market policy in the EU context. In addition, SAK supported the aims of the European Trade Union Confederation (ETUC), regarding the establishment of the rights of transnational collective bargaining, agreements and strikes at the EU level. Summing up, the workers organization perceived the necessary conditions for Finland's full membership accomplished and considered the European Central Bank as the main responsible for having reinforced the demands for centrally agreed wage solutions. Furthermore, the economic benefits cannot be underestimated. EMU membership was predicted to reduce transaction costs and increase competition, integrating Finland in the European single market, and giving households, firms and governments access to more efficient financial markets. This would have accelerated structural change in the production sector and high productivity growth. As expected, the economic consequences of Finnish participation in the euro-area satisfied the estimations of leading experts and political scientists. Full participation in the EU positively influenced patterns of Finnish trade, increasing its imports and exports since the mid-1980s. Moreover, it led to an enhancement of Finnish economic stability in terms of interest rates and inflation and to a decrease in the unemployment rate. EMU membership seems to have benefited Finland in short interest rates when compared to the EMU-outsiders Sweden, Denmark and the UK, causing significant positive influence in the economy in the long run. However, the full euro membership cannot be considered the only responsible for the Finnish economic growth. The achievement of the positive results was also made

possible by the general good performance of the Finnish economy at the beginning of the 21<sup>st</sup> century. Finland's leading position as one of the most competitive EU economies, cited in the Commissions 'follow-up' to the Lisbon Process, further testified the effectiveness of the Finnish policy-makers' economic policies.

On the other hand, "the government identified the key risks and challenges related to the EMU Third Stage from the Finnish perspective and called for further national adjustments and/or further studies of their consequences"<sup>86</sup>. Tiilikainen<sup>87</sup> described two potential risks concerning the effects of Finnish subordination to the European Central Bank's common monetary policy objectives on national economic policy. The first one regarded the possibility that the ECB's commitment to low inflation could constrain national labour market policy and the Finnish system of collective agreements. Fortunately, as I have already explained above, this problem did not materialize thanks to the strong power and determination exercised by the trade unions. The second risk was related with the fear that the ECB's common monetary policy could lead problems to several policy areas, such as the stability of regional development, sustainable growth, social equity and gender equality among women and men. Moreover, joining the euro would have meant giving up the option to devalue, and this was considered a great challenge for Finland that resorted to the 'D option' several times in the past. However, the most dangerous risk associated with the entrance in the euro area was perceived to be the possibility of potential 'asymmetric shocks'. The latter can be defined as economic traumas affecting Finland without affecting the rest of the member states. The concern was related to the consideration that, in case of inefficient currency area, common monetary policy could not be able to react to the shocks as effectively as national monetary policies could. Indeed, the latter and exchange rate movements facilitate adjustments to these kind of shock and a country might face more severe economic fluctuations if it gives up its national currency. Considering the structure of the small open economy, the Nordic country was viewed by many experts as more vulnerable to these kinds of episodes caused by domestic and international factors. The leading coalitions stressed the necessity for all economic actors to be prepared to these kind of shocks, taking into account the new demands and feature of the economy and

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<sup>86</sup> Ivi, p. 28.

<sup>87</sup> Ivi, p. 28.

making use of different necessary means to fix the eventual situations. Indeed, with the establishment of a common monetary policy, a balanced fiscal and monetary policy would have been more difficult to implement, raising the economic costs for Finland. Therefore, the adverse asymmetric shocks were frequent object of the debate of EMU in Finland. In 1997, the Chairman of the Swedish EMU Commission affirmed that EMU would have meant a significant risk mainly for Finland, because of the high concentration of exports and resource-based industries. The most influenced by the threat of adverse shocks were the trade unions. This is clearly understandable if we consider the negative experience of the 1990s depression. In that occasion, the workers organizations undoubtedly understood the negative relation between wage increases and unemployment, and during the EMU debate they took in mind the fact that under severe conditions employment “might need to be supported by declining real producer wages, which, in the absence of the possibility of exchange rate adjustment, might call for lower nominal wages”<sup>88</sup>. However, as I hinted above, the answer of the social partners were all but negative, showing a great will to collaborate albeit with firm requests. In May 1997, they issued a joint opinion about the EMU effects on the functioning of the labor markets, expressing their support for stability-oriented policies and emphasizing the importance of the continuation of the tripartite co-operation between them and the government. Furthermore, they declared that EMU would not have changed the minimum requirements and universal validity of collective agreements and would not have lowered nominal wages. The shocks would have been faced through fiscal policy, strong corporate balance sheets and diversifying the structure of the economy. In November 1997, an agreement was achieved among the unions and the government on the creation of two types of EMU-buffers: one was added to the mandatory but privately managed pension system, the other was a new unemployment insurance fund operative since the beginning of 1999. The most intriguing aspect is that in the previous Pay-As-You-Go system these contributions were raised in order to fight unemployment, while, in the new one, they should have stabilized the labour costs during the business cycle.

However, the Finnish case showed that many of the perceived risks expected in the political debates of the euro-outsiders did not come true, giving a testimony of the

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<sup>88</sup> Mayes, D. G., Suvanto, A., *Beyond the Fringe: Finland and the Choice of Currency*, Journal of Public Policy, Volume 22, issue 2, September 2002, p 174.

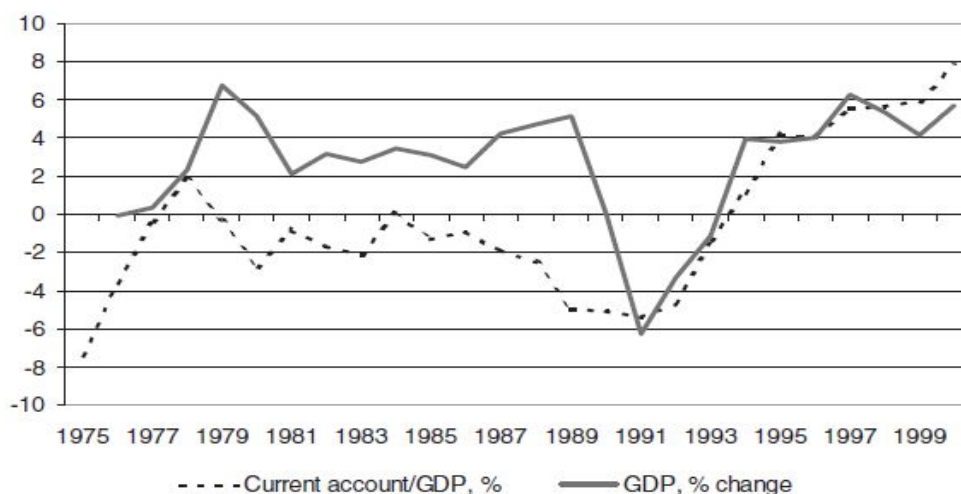


successful policy adjustments made by Finnish policy-makers. First of all, thanks to its participation in the euro zone, Finland, which had always suffered from lack of credibility causing frequent problems of balance of payments, was able to increase the credibility of its monetary policy. Lower and more stable long term interest rates increased investments, having a positive effect on economic growth. In addition, during the first years of the euro Finland did not experience any serious asymmetric shocks, the first concern of the experts group. By contrast, the country benefited from a favorable shock caused by the rapid growth in the ICT sector, particularly in mobile telecommunications. In fact, the IT boom was much stronger in Finland than in the Euro area on average, making the Finnish GDP growth higher than that of all its EMU partners. Over the years 1995 – 2000, it grew on average by 5% a year, and 2 percentage points were accounted for the ICT sector. The ICT boom could be considered a favorable asymmetric shock precisely because, as it is implied in the definition, the sector taking into account that benefited from the shock was far more important for Finland than for the EMU members on average. As a consequence, during the period in which the economic and monetary union started to work, the Nordic country observed an increase in the openness, experiencing a substantial rise in exports. It is striking how the Nokia multinational company's share of exports alone has increased from around 7% in 1995 to over 25% in 2000. In addition the change has been dramatic in the financial markets as well. "Capital account developments since the beginning of 1997 indicate very rapid internationalism on the Finnish capital markets"<sup>89</sup>. However, the latter cannot be directly due to Finland's EMU membership. Indeed, the majority of the foreign ownership of Finnish shares involved investors who did not belong to the Euro area and the foreign direct investments are, to a large extent, to non-EMU countries. Moreover, the EMU membership accomplishment in 1999, led to a rapid increase in outward and direct investments, thanks to the large current account surplus recorded since 1995. This was an extraordinary fact for Finland which had never had large current account surpluses since the markka became a convertible currency in 1958. It is unconvincing that the current account surplus showed in figure 2.5 could have been maintained in a regime of floating exchange rate.

**Figure 2.5** *Growth and the Current Account*

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<sup>89</sup> Ivi, p. 171.



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An interesting aspect was that, considering the very high growth rate and the low level of the real interest rates, the investment rate remained low. However, the indebtedness of enterprises decreased from about 300% to 100% by the latter half of the 1990s. This could be due to the fact that previous monetary policy regime caused moral hazard problems to industries: EMU alleviated them, increasing monetary policy's credibility.

Summing up, it can be argued that the EMU membership provided Finland the adequate protection against adverse asymmetric shocks, at least compared to an alternative prospect characterizes by old institutions, old currency and old behavioral pattern. Moreover, having a separate exchange rate could also lead to speculative attacks and this source of shocks would have been eliminated in EMU. Moreover, as I have just showed, it increased the already positive and large effects of favorable asymmetric shocks, ensuring a stable domestic demand's growth over the years. Sweden experienced a similar ICT-related asymmetric shock, during which the krona appreciated considerably in hand with Ericsson's share price. However, when the latter declined, the currency depreciated, impacting inflation as well as economic growth. This could drive us to the conclusion that the non-membership of Sweden had not brought positive economic effects on the economy, but, at the same time, this does not exclude for Finland the possibility to experience negative asymmetric shocks at all, as the economic crisis of 2008.

<sup>90</sup> Mayes, D. G., Suvanto, A., *Beyond the Fringe: Finland and the Choice of Currency*, Journal of Public Policy, Volume 22, issue 2, September 2002, p 177.

Although Finland's participation in the euro zone raised a broad national consensus, it fostered criticism too. Tiilikainen divided the critics in three different groups. The first one referred to the possibility that the change of the currency has led to a rise in retail prices. The latter was the most criticized consequence of the Finnish full membership. However, despite the public perceptions, several studies of 2002 and 2003 showed that the transfer to euro did not impact at all on retail prices. The second group collected the critics about the general premises at the base of the EMU economic policies in general. The last one, instead, focused on the Finland's EU membership, in particular concerning the critics addressed to the legality of the key decisions taken by the government in joining the EMU third stage.

## **2.5 European integration fosters Growth**

In the previous section I described the process of Finnish integration in the European Union, analyzing its political and economic effects. In this section, I am going to focus on the latter, trying to investigate the existing relation between integration and growth. Indeed, European leaders have long put the emphasis on the growth effect. It operates “changing the rate at which new factors of production – mainly capital – are accumulated, hence the name ‘accumulation effects’”<sup>91</sup>. EU rules allow free movement of capital, altering the amount of productive factors employed in any member state, and leading to an allocation-of-resources effect from the EU perspective but to an accumulation effect from the national one. It is well known that the output growth is determined by physical, human and capital accumulation and European integration influences growth considerably affecting the rate of investment in them. While the medium-term growth effect is the capital formation derived from the high rate of investment in productive factors, the long term growth effect concerns to the rate of accumulation of knowledge capital, namely the technological progress.

There are clear evidences of the connection between integration and growth. Taking into account the 1950 – 1973 period, it can be affirmed that the EEC6 countries, which from 1958 to 1968 integrated much faster than the EFTA members, recorded higher

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<sup>91</sup> Baldwin, R., Wyplosz, C., *The economics of European Integration*, McGraw-Hill Education, Fourth Edition, United Kingdom, 2012, p. 188.

rates of GDP per capita than the other countries (UK, Sweden, Switzerland, Finland, Norway, Austria, Portugal and Iceland)<sup>92</sup>. More specifically, Germany, France and Italy, official members of the European Economic Community, grew between 1.7 and 2.1 times faster than United Kingdom. Furthermore, comparing the before and after growth rates of nations that have joined the EU, it is evident how for some countries like Spain, Portugal, Austria, Sweden and Finland, they picked up after having acquired the membership<sup>93</sup>.

How integration might affect growth in the medium and long run? As far as the medium term growth is concerned, it is generated through ‘induced capital formation’, namely integration encouraged firms to increase the level of capital per worker employed. Focusing on the physical capital, it is important to determine the equilibrium capital/labour ratio, a concept already deeply explored by Robert Solow. When an enterprise provides its workers with more and better equipment, output will increase but not in proportion with capital. This means that “raising the capital/labour ratio in the economy increases output per hour worked, but the rate of increase diminishes as the level of the capital/labour ratio rises”<sup>94</sup>.

In the figure 2.6, this is clearly described by the GDP/L curve, which shows what output per worker would coincide for any K/L. The equilibrium K/L ratio depends on the inflow and outflow of new capital per worker. The inflow corresponds to industries’ investments in new structures, buying new machines and building new factories. By contrast, the outflow is depreciation: structures, machines and factories break down and must be replaced or repaired.

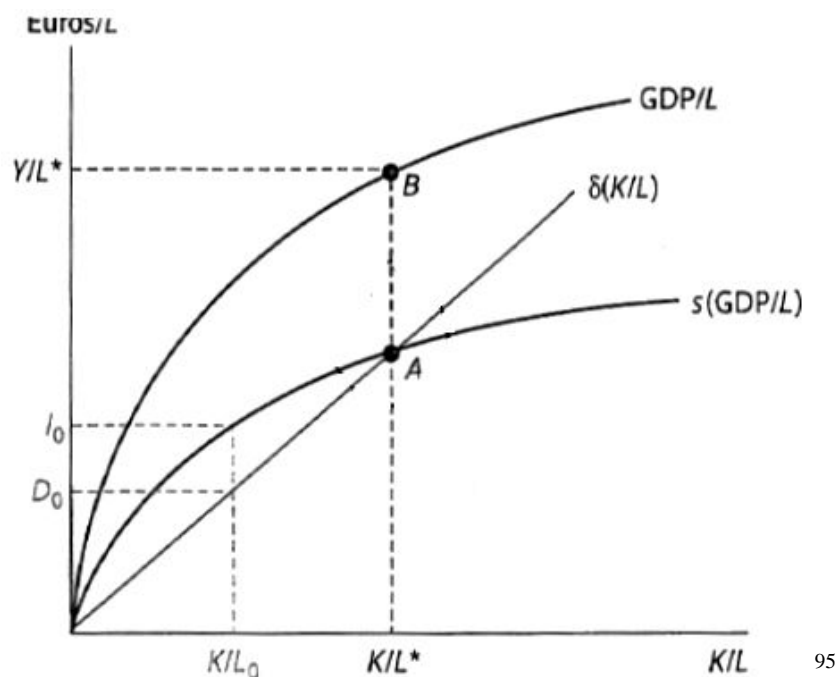
**Figure 2.6** *The Solow diagram: determining the equilibrium capital/labour ratio*

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<sup>92</sup> Crafts, N., Toniolo, G., *Economic Growth in Europe since 1945*, Cambridge University Press, Cambridge, 1996.

<sup>93</sup> Baldwin, R., Wyplosz, C., *The economics of European Integration*, McGraw-Hill Education, Fourth Edition, United Kingdom, 2012, p. 193.

<sup>94</sup> Ivi, p. 195



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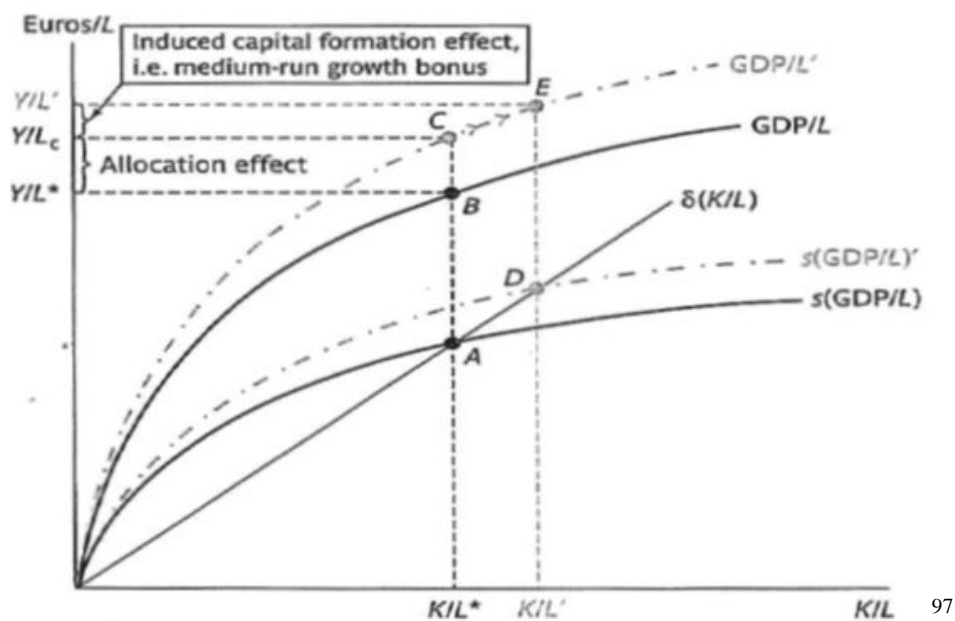
The equilibrium  $K/L$  is in the point A, where the inflow of new investment just balances depreciation of capital. Indeed, if the flow of savings outstrips the depreciation, then  $K/L$  rises; if, instead, depreciation exceeds investments,  $K/L$  declines. In the Solow diagram, the inflow of capital curve is called  $s$  and it is similar to the  $GDP/L$  curve but rotated clockwise because savings are a fraction of  $GDP/L$ . On the contrary, the part of the capital that depreciates each year is denoted with the Greek letter  $\delta$  and it is straight because the amount of depreciation per worker increases in proportion to the amount of capital per worker. At point A, which coincides at  $K/L^*$ , the inflow of new investment just balances the outflow. Below the  $K/L^*$  level investments exceeds depreciation, beyond the point of equilibrium depreciation surpasses investments. From an overall perspective, the key information that stands out from the Solow analysis is that the accumulation of capital cannot work as a source of growth in the long run. Capital will raise to reach its equilibrium, but then stops unless something changes. Hence, in order to explain the year-after-year growth of the modern world, Solow appealed to the technological progress, leading to an ever-rising output per worker and capital/labour ratio. “When we look at the growth effects of European integration, we shall be referring to growth that is higher than the growth that would have otherwise occurred due to technological progress”<sup>96</sup>. Integration encourages a more efficient allocation of

<sup>95</sup> Ivi, p.195

<sup>96</sup> Ivi, p. 196.

European resources, improving efficiency and making Europe a better place to invest. The extra investment provides more tools per worker, consequently increasing the output. Summing up, integration produces extra growth as the K/L ratio approaches its new equilibrium output. The figure 2.7 helps to practically understand this process.

**Figure 2.7** *Medium-run growth bonus from European integration*

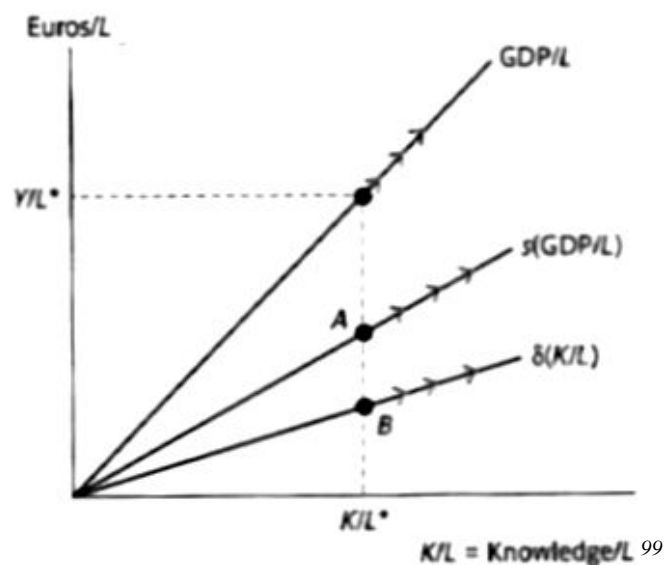


One of the effects of the European integration had been the so called ‘allocation effect’, namely it improved the effectiveness with which capital, labor and technology are combine to produce output. One of the result of the ‘allocation effect’ is the shift of the GDP/L curve to the higher dashed line  $GDP/L^1$ , because at any given capital/labor ratio the economy will be able to produce more output. Point C represents the new level of Y/L achieved thanks to the new resources’ allocation. However, the shift of the GDP/L curve provoked a shift of the investment curve as well. Indeed, the fixed investment rate now applies to higher output, causing a higher inflow of investment for any given capital/labour ratio. As a result, the equilibrium will not be more  $K/L^*$ , but  $K/L^1$  at point D, the new intersection of the inflow and outflow curves. The raise of capital/labor ratio from  $K/L^*$  to  $K/L^1$  led to an output increase from Y/L to  $Y/L^1$ , represented by the transition from point C to point E, which can take years to be realized. The same mechanism will take place if the growth effect operates by altering

<sup>97</sup> Ivi, p. 197.

costs and/or benefits of investing, namely by altering the investment rate without considering it as constant. Looking more closely at the long term growth, we have to focus on knowledge capital, i.e. technology. Although it provides output growth like machines, shifting in the same way the GDP/L curve up in the Solow diagram, the former is not subject to diminishing returns. The stock of knowledge had increased regularly since the Enlightenment in the 17<sup>th</sup> century and there is no tendency for the usefulness of more knowledge to decrease. “In short, we can think of technological progress as an allocative efficiency gain that comes every year, but instead of the gain being driven by European integration, it is driven by technology”<sup>98</sup>. The assumption is that, in principle, European integration can alter the rate of technological progress even if the evidence on long-term growth effects of integration is much harder to find. The figure 2.8 shows a Solow-like diagram in which it is represented the knowledge capital accumulation.

**Figure 2.8** A Solow-like diagram with long-term growth



As I stated before, the knowledge capital is not characterized by diminishing returns. Therefore, the GDP/L curve is represented by a straight line in relation to the knowledge-per-worker ratio, K/L. Each state invests a fixed portion of its GDP in the accumulation of its knowledge capital, measured in R&D. The curve that refers to the

<sup>98</sup> Ivi, p. 203.

<sup>99</sup> Ivi, p. 203.

investments appears in the diagram as  $s(\text{GDP}/L)$ , being a straight line like the  $\text{GDP}/L$  curve. As for the physical capital, the knowledge one annually depreciates, becoming obsolete and worthless every year. However, as you can observe in the figure, the investment rate exceeds the depreciation rate at all levels of knowledge/labor ratio. For instance, when the  $K/L$  ratio equals  $K/L^*$ , the investments in new knowledge capital is indicated by point A, while the amount of knowledge which becomes obsolete is given by point B. Since the inflow of new knowledge outstrips the outflow, the knowledge capital stock will continue to rise. As  $K/L$  will rise for ever, the output will rise for ever too, along with the amount of new knowledge created and the amount of new knowledge depreciated, showed by the arrows on the  $\text{GDP}/L$  line, the  $s(\text{GDP}/L)$  line and the  $\delta(K/L)$  line.

## 2.6 The spread of the Information and Communication Technology sector

In the previous section, I have focused on the growth effects of European integration. In the next one, I will focus on the development of the ICT sector, as the most productive sector of Finnish economy since the mid of the 1990s.

Before going deeper with the specific object of this paragraph, it is useful to remark that during the last 25 years the Finnish economy has experienced a radical change, moving from a socialist economy highly dependent on trade with the USSR to a dynamic market economy. At the beginning of the 1980s, the economy had its base in paper and metal industries, and Finnish banks and insurance groups exercised their control on the financial sector, without leaving any role to the market. “Cross-ownership, lack of transparency and collusion between industry, finance and government was the rule to preserve a consensus built and maintained at the expense of small shareholders and domestic savers”<sup>100</sup>. However, during this period, the performance of the Finnish economy was positive, measuring an average growth rate slightly above the OECD-European one. In addition, there were no indebtedness problems in the external dimension of the public sector and unemployment remained low. When, in the second half of the 1980s, capital movements were freed worldwide and financial markets

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<sup>100</sup> Daveri, F., Silva, O., *Not only Nokia: what Finland tells us about new economy growth*, Economic Policy, Great Britain, 2004, pp. 117-163.



opened to foreign competition, the Socialist era ended, opening the way to the recession period. Indeed, as I explained in the first part of my dissertation, initially, foreign borrowing led to a stock and house market boom. Private consumptions and investments increased and fiscal policy was not able to neutralize the fast growth. During the period of overheating, the inflation rate rose of about four percentage points, reaching the 7% in 1990 and unemployment declined from 4% in the first half of the decade to 2.5 at the end of 1989. However, when the crisis exploded in the early 1990s, Finland's credit cycle went bust. Economic activity, measured by the growth rate of real GDP, declined from +5.4% in 1989 to -6.5% in 1991. Exports dropped by 13% in dollar terms in 1991 and unemployment rose from 3.5 in 1990 to 17.9% in 1993. As always, the country resorted to the devaluation strategy: in November 1991 the markka was devalued by 12% and in September 1992 Finland was forced to float its currency. As a result, this triggered a wave of bankruptcies, leading to credit losses and forcing the government to provide public support for banks. In 1993, the economy lifted up again, but at the beginning, the recovery was mostly based on capital-intensive export industries while domestic sector remained depressed until 1995 – 1996. Since then, the country started to experience a stronger recovery, involving the domestic sectors of the economy as well. Unemployment rate dropped, inflation remained low and external competitiveness considerably increased. Interest rates came down, reaching about 6% at the end of 1997 and eliminating the differential with Germany. Finland reestablished stable parity to European Union member currencies by 1996. Hence, after the sharp 1990 – 1991 depression, the Nordic country inefficient usage of capital, the crisis and the shift to market discipline and investment flows, provided Finland with the adequate tools aimed at implementing more efficient production methods. As a result, during the period 1992 – 19994, the Finnish economy reflourished, maintaining a growth rate often two or three times bigger than the one achieved in the large EU countries. Furthermore, the productivity path was characterized by a 'capital shedding', namely a decrease in the capital-labor ratio.

The depression of the 1990s was one of the most severe crises never experienced by the Finnish economy. The dissolution of the Soviet Union meant the collapse of the most important market for Finnish exports and the German reunification led to an increase in real interest rates throughout Europe. At the end, the financial liberalization of the

second half of the 1980s, combined with these external shocks, put definitely the economy under pressure. Therefore, since 1993, tight macroeconomic policies were adopted and Finland started to revive. More specifically, the government expenditures were cut by nearly 10% of GDP, in order to achieve budget surpluses by the end of the 1990s. In addition, since 1995, the monetary policy adopted an inflation target of 2% and the interest rates became the main policy instrument. Finally, during the 1990s, the developments in the science and technology policies initiated in the preceding years accelerated, totally transforming the Finnish economy. Indeed, during the 1970s, the country's economy has always been based on the pulp and paper cluster, provided by the country's natural resource endowment. However, the growing impression that Finland was losing ground internationally that spread in the early 1980s led to several policy changes, resulting in a remarkable increase in R&D expenditures. "Public R&D spending was increased at an annual rate of about 10%, soon making Finland one of the leading OECD countries in public R&D spending relative to GDP"<sup>101</sup>. In 1983, the National Technology Agency (Tekes) was established, becoming the main implementer of technology policy, while in 1987 there was the launch of another research body, the Science and Technology Policy Council. The latter was headed by the Prime minister and included the Ministers of Finance, Education, Trade and Industry, four other Ministers and representatives from the main research organizations and the private sector. During the Great Depression, although many parts of the budget were severely cut, the government decided to further increase the investment in research and development. In 1990s, after the Science and Technology Policy Council's review of Finland's economic position, the Center of Expertise Program focused on "strengthening regional competitiveness by increasing innovation, renewing the regional production structure, and creating new jobs in selected expertise areas"<sup>102</sup>. One of the main objectives was developing the innovative capacity of industrial clusters by supporting cluster-specific R&D efforts. In order to do so, the government established several incubators in proximity to Finnish regional clusters to grant capital for start-up companies. The cluster approach became the object of a study directed by the Research Institute of the Finnish Economy (ETLA) in the early 1990s. The first conclusion of the

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<sup>101</sup> Sölvell, O., Porter, M. E., *Finland and Nokia: Creating the World's Most Competitive Economy*, Harvard Business School, 2011, pp 1-23.

<sup>102</sup> Ivi, p. 7.

research was that all government actions had implications for national competitiveness. Hence, policy makers had to consider economic and industrial policies from an extended perspective, trying to pass over the administrative boundaries of sectoral ministries. The cluster approach aimed precisely at realizing new forums for cooperation and coordination between ministries, public and private research units and companies. Summing up, as it can be concluded from a deep analysis of the table below, policies concerning education, technology and competition became the most important goal of the new Finnish industrial policy.

**Table 2.2** *Finnish Research and Development Expenditure, 1989-1999 (€ millions)*

	1989	1991	1993	1995	1997	1998	1999
Enterprises	€924.8	€975.1	€1,048.5	€1,373.4	€1,916.7	€2,252.8	€2,643.9
Public sector <sup>a</sup>	286.1	357.5	379.7	374.4	408.6	443.8	470.1
University sector <sup>b</sup>	290.2	378.0	367.5	424.6	579.5	657.9	764.8
Total	1,501.2	1,710.6	1,795.8	2,172.4	2,904.9	3,354.5	3,878.8
as % of GDP	1.8	2.0	2.2	2.3	2.7	2.9	3.2 <sup>c</sup>
Enterprises	61.6%	57.0%	58.4%	63.2%	66.0%	67.2%	68.2%
Public sector <sup>a</sup>	19.1	20.9	21.1	17.2	14.1	13.2	12.1
University sector <sup>b</sup>	19.3	22.1	20.5	19.6	20.0	19.6	19.7
Total	100	100	100	100	100	100	100

<sup>103</sup>

As a result, the increasing focus on Research and Development and technology-intensive activities boosted the request for skilled employees. Hence, the government expanded the capacity of higher education in the information and communication field and between 1993 and 1998, the total number of students nearly doubles, tripling in polytechnics. Moreover, the liberalization of the Finnish capital markets that started in the 1980s continued through the 1990s, and in 1993 constraints on foreign ownership of Finnish firms were definitely removed. Investors increased and successful business plans attracted amounts of venture capital, emerging as the first source of capital for start-ups. When, in 1995, Finland became a member of the European Union, the process of integration into the European Common Market accomplished, leading to the complete harmonization of laws and regulations with the other EU countries. As a consequence, the Finnish opening towards the west attracted significant amounts of inward foreign direct investments (FDI). “Large mergers between Swedish and Finnish

<sup>103</sup> Ivi, p.7.

firms in banking (Nordea), engineering (ABB), electronics (Nokia), and pulp and paper (Stora-Enso, UPM-Kymmene) created larger and more focused Finnish firms with global reach”<sup>104</sup>. To understand: while in 1985 the share of Finnish inward and outward foreign direct investment had been 1.3% and 1.8% respectively, in 1998 the percentages increased to 18.3% and 33.8%.

From the brief examination arranged so far, it is evident how Finland underwent a radical transformation of its economy. For centuries, Finland’s economic progress was based on the large forests covering 76% of the country’s total land area. During the 18<sup>th</sup> century, timber and wooden ships constituted the main products and since the late 19<sup>th</sup> century, pulp and paper have dominated the Finnish exports, undoubtedly contributing to the internationalization of several large forest-based corporations. Forest industries played a significant role in the evolution of Finland’s economy: until the late 1950s they provided the 90% of Finnish export income. Obviously, the sector included several branches, such as forestry, different mechanical and chemical forest industries, supplier and customer industries, creating country-wide clusters which exercised a strong influence on the society as well. “The forest sector also benefited from the belief, emerging since the nineteenth century, in technological modernism, which enabled the brightest young people to acquire an education in engineering and often a job in the forest industry”<sup>105</sup>. The turning point was in the 1980s, when, for the first time, the idea that Finland could modernize and become an ‘information society’ started to spread. Among the launchers of this innovation, a key role was covered by Kari Kairamo, the chief executive officer of Nokia, at that time one of the largest, diversified corporation with strong influence in paper and pulp production of Finland. Consequently, the forest companies started to invest in product development and modern machinery, trying to convince decision-makers that the paper industry was a science-based, high technology industry. According to Tainio and Lilja<sup>106</sup>, after the Great Depression of the 1930s, four major changes contributed to the rapid and radical qualitative transformation of the Finnish business tradition. The first factor was the collapse of the bank group-based coordination as a consequence of the crisis. This led to renewal of the corporate

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<sup>104</sup> Ivi, p. 8.

<sup>105</sup> Oinas, P., *Finland: A Success Story?*, European Planning Studies, Vol. 13., N° 8, December 2005.

<sup>106</sup> Tainio, R., Lilja, K., *The Finnish business system in transition: Outcomes, actors and their influence*, in Czarniawska, B. & Sevón, G., *The Northern Lights: Organization Theory in Scandinavia*, 2003, pp 69-87.

governance structures and financial system, basing them mostly on internationally operating financial markets. The second one was the replacement of different conglomerate types of business portfolios with focused global corporations. This was possible thanks to the high level of internationalization and mergers. Thirdly, the change of income distribution with respect to capital income versus wage and salary income absolutely influenced the future structure of the economy. However, the fourth and most important change that took place during the 1990s concerned the sectoral specialization of the economy with respect to international trade. Indeed, between 1992 and 1996 the modernization process already initiated in the 1980s was completed. In few years, the high-technology industries, in particular communication technologies, became the dominant sector of the Finnish economy, making Finland well-known internationally as well. Over the years, from a forest-driven economy Finland became an ICT power, specializing its exports in telecommunication devices more than any other industrialized country. These four innovations transformed Finland in a ‘new economy’, term used in order to signify “everything from the ‘death of the business cycle’ and the ‘weightless economy’ to a brand new mode of production as revolutionary as automation”<sup>107</sup>. In short, it refers to a permanent increase in economic growth due to the enhancement of aspects of information technology’s production.

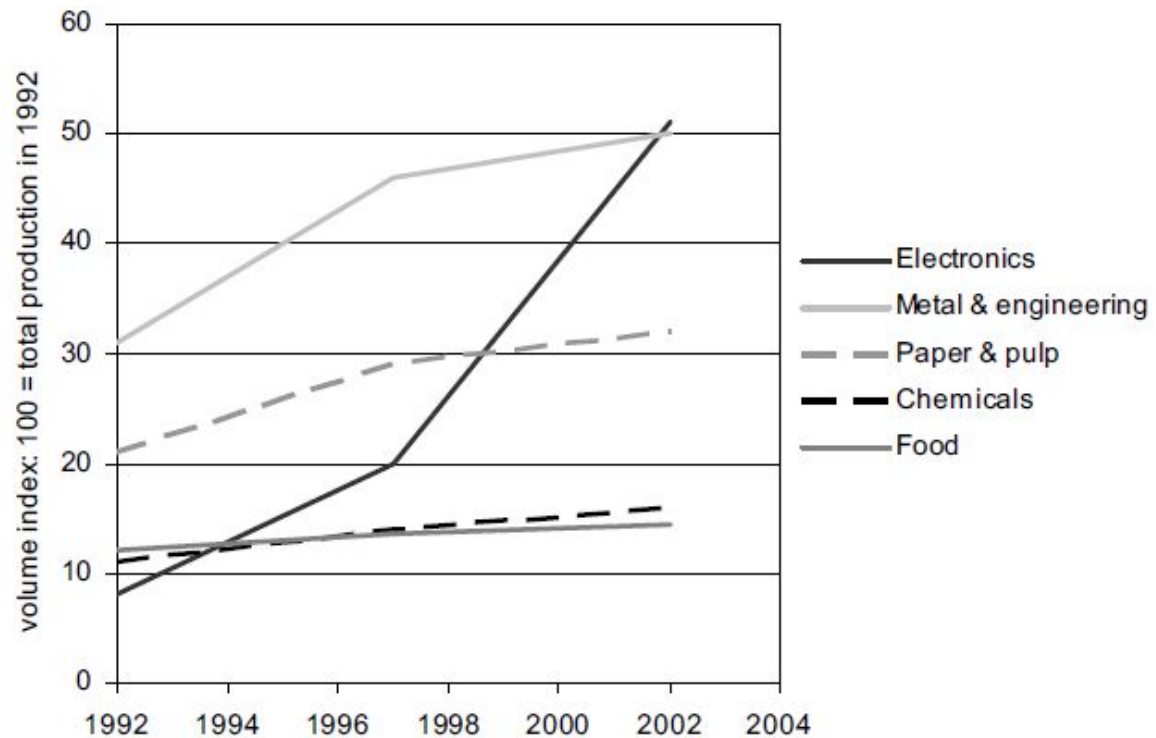
It can be affirmed that Finland made a qualitative leap from an economic structure led by resource-based heavy industries to one dominated by knowledge-based, mostly ICT sectors. Indeed, as it is shown in figure 2.9, if during the 1990s, Finnish industrial production and exports were monopolized by pulp, paper, machinery and metal products, by 2000 the electronics had become the leading sector of the economy. From 1992 to 2000 the electronics sector went from being smaller than the food, chemical, metal, paper and pulp industries to being the largest source of production of the country. Its output multiplied more than six fold, and its relative share increased passing from 8% to 27% of total industrial production. Undoubtedly, the stunning growth of the ICT industry was accelerated by the mobile communication revolution. In 2000, Finnish Nokia Group became the world’s biggest manufacturer of mobile phones and the Finnish production of telecommunications equipment had a global market share of 7%.

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<sup>107</sup> Daveri, F., Silva, O., *Not only Nokia: what Finland tells us about new economy growth*, Economic Policy, Great Britain, 2004, p. 119.

In addition, the structural change led to a productivity acceleration, increasing Finnish economy real competitiveness.

**Figure 2.9** *Industrial production: growth and main industries*

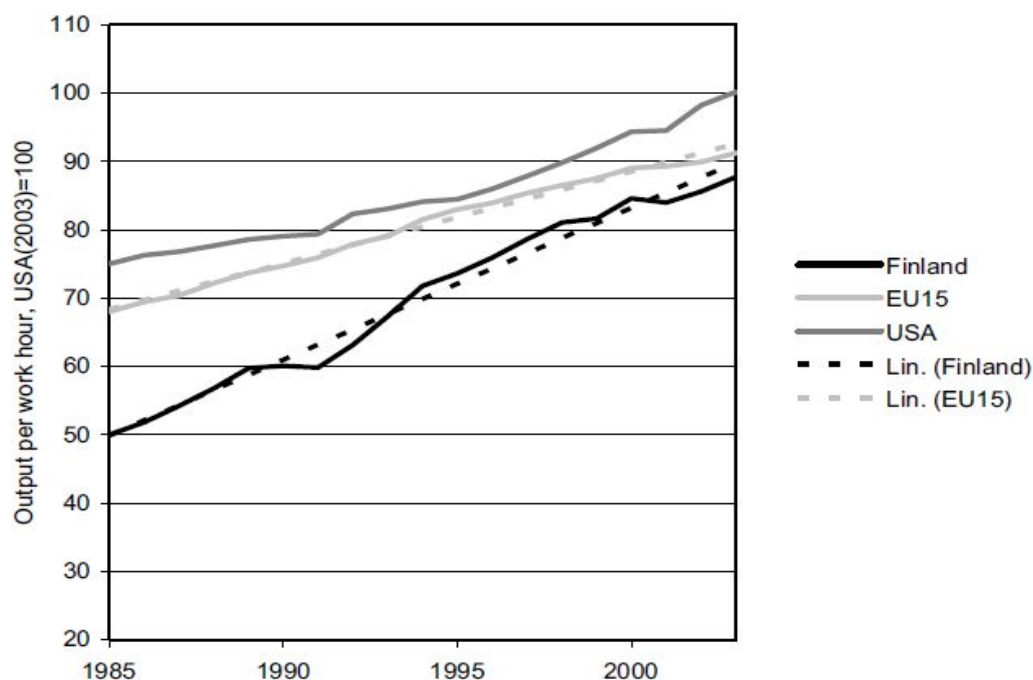


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As a result, the accelerated productivity growth after the crisis triggered a productivity catch-up process. The intriguing aspect is that although the currency appreciated in 1994 – 1996 and employment increased, the unit labour costs continued to decrease. At the same time, during the latter half of the 1990s, the average labour productivity in Finland almost achieved the productivity level of the USA and the EU15 (figure 2.10). What happened could be explained using the Schumpeterian concept of ‘creative destruction’: the industrial innovation has totally altered the economic structure, destroying the old system and creating a new one. The economic crisis led to a rapid, radical change and rationalization, causing a substantial improvement of the economic productivity.

**Figure 2.10** *Labour productivity in business sector*

<sup>108</sup> Kiander, J., *The evolution of the Finnish model in the 1990s: from depression to high-tech boom*, Government Institute for Economic Research, Helsinki, 2004, p. 13.



109

As Kiander stated, “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”<sup>110</sup>. By contrast, the remaining firms were the more productive, supported by a strong organizational restructuring and an efficient reallocation of resources. Moreover, the competitiveness allowed the survived firms to improve their exports. The annual rate of labour productivity growth in manufacturing was 6%, and the sector jumped into the group of countries with the highest productivity. However, as I affirmed above, the rise of wireless communication technology deeply influenced the productivity pattern. The Information Communication Technology sector growth significantly contributed to the Finnish GDP, exports and productivity growth, and producing a high share of business sector value added. Intangible inputs were the main factors of the rapid growth of electronics and electrotechnics industry: national technology policy, long-term approach in building national innovation system, and high investment in Research and Development were the first responsible of the process. The investments have been sustained by public support to higher and technical education. Summing up, the development of the Finnish ICT cluster crucially contributed to the productivity gains achieved in the 1990s, and the decreasing prices of machinery and

<sup>109</sup> Ivi, p. 15.

<sup>110</sup> Ivi, p.14.

semiconductors improved the profitability of many ICT firms, positively contributing to the measured total factor productivity.

These are two ways in which IT can contribute to productivity growth: looking at production inputs or output. Looking more closely at the inputs, it is interesting understanding how much of aggregate productivity growth derives from IT-related factor accumulation and technical change. Since Solow, this is called “growth accounting studies”, where labour productivity growth is decomposed in two categories: input accumulation, essentially capital, and efficiency gains, also known as ‘total factor productivity’ (TFP) growth because it reflects the output gain that is not due to the increases in capital and labour inputs. In the growth accounting studies, the contribution of capital per worker is subdivided in two components: the first one related to IT goods (communication equipment, hardware and software), the second one concerns the various categories of non-IT physical capital. “Estimates of the contribution of IT capital to per-worker productivity are based on the growth rate of IT capital alone and its share in total GDP”<sup>111</sup>. However, capital deepening is not the only way in which information technology can contribute to labour productivity growth. Indeed, IT can also enhance TFP, making economy more efficient. To give an example, as IT technology improves, the price of semiconductors decreases and there is a reduction of the production costs of computer and cellular phones. Furthermore, IT information technology can easily enable process and product innovation in different kind of industries like manufacturing, finance, wholesale trade, medical services and trucking transportation. Differently, the contribution of IT can also be measured focusing on the output side. For instance, “to compute the contribution to productivity growth of, say, manufacturers of IT goods and services, the growth rates of labour productivity in the various IT-producing industries are weighted by their respective shares in total GDP and then added up”<sup>112</sup>.

Without considering the well-studied US case, it is not so simple finding new-economy success stories. Figure 2.11 shows how, although the EU productivity growth has been lower than the US one since the 1990s, there are few but striking exceptions.

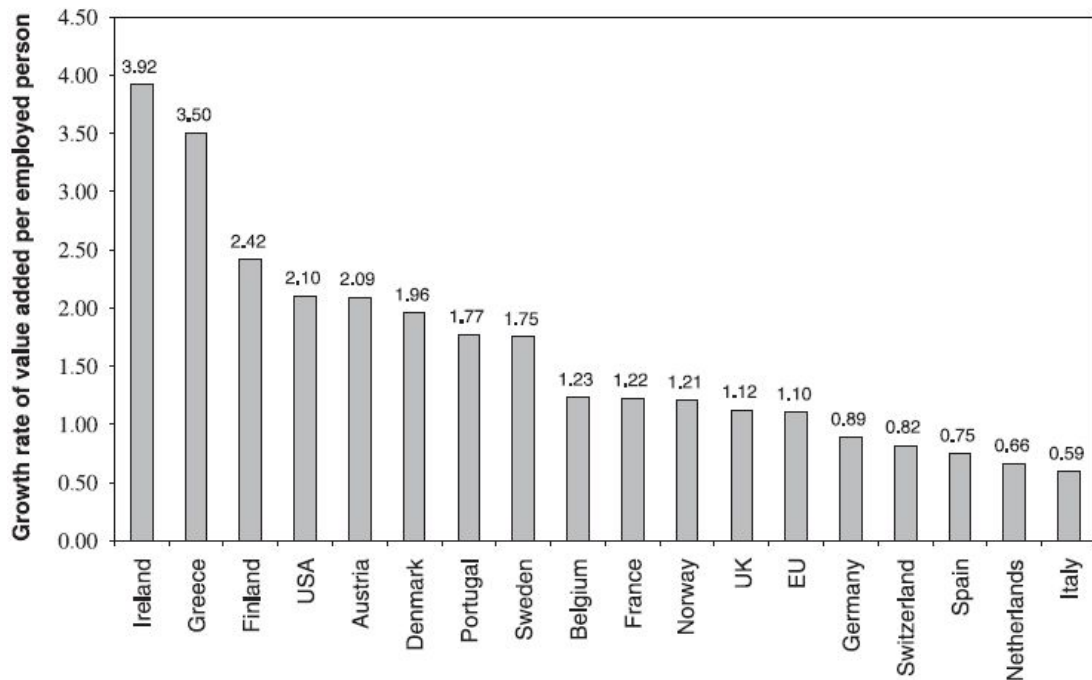
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<sup>111</sup> Daveri, F., Silva, O., *Not only Nokia: what Finland tells us about new economy growth*, Economic Policy, Great Britain, 2004, p. 120.

<sup>112</sup> Ivi, p. 121.



**Figure 2.11** *Labour productivity in the business sector, growth rates, 1995-2002*

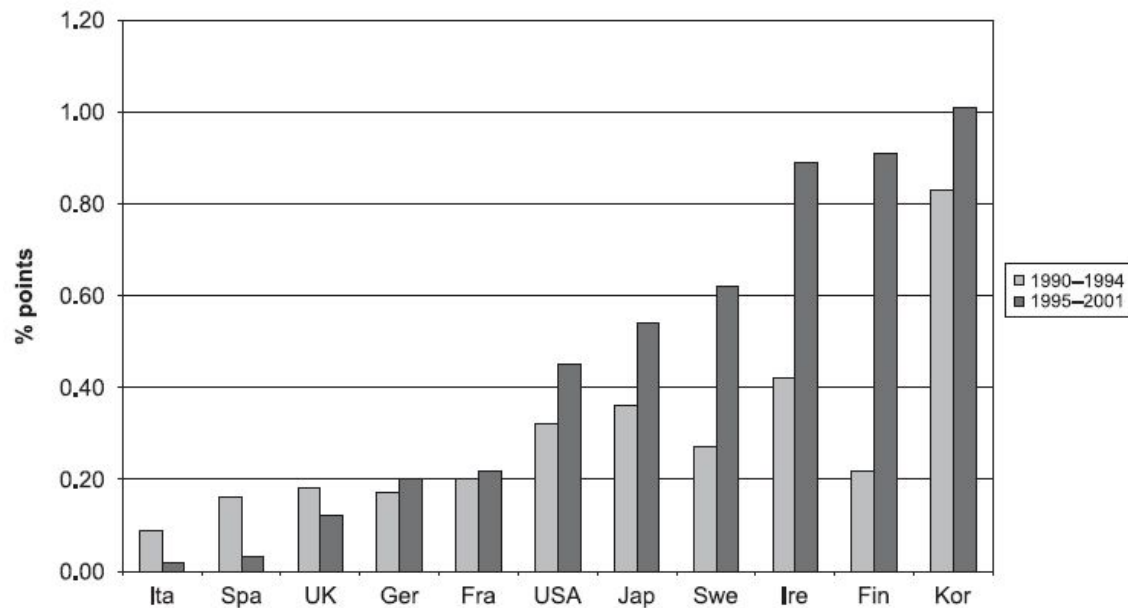


113

Indeed, Ireland, Greece and Finland's labour productivity has grown even more rapidly than that of the US since 1995. However, Greece did not experience the dramatic development in both IT production and diffusion typically associated with the new economy and Finland is a better case than Ireland because it is the only country in Europe for which it is possible to calculate the labour productivity and TFP growth for many industries in the market sector over a long period of time. Since the early 1990s, Finland has made the biggest progress in the world ranking of IT producers, having been one of the most dramatic example of leapfrogging compared to the rest of the OECD countries.

**Figure 2.12** *Contribution of ICT manufacturing to labour productivity growth*

<sup>113</sup> Ivi, p. 124.



114

Looking at the figure above the key information that stands out is that, over the period 1996 – 2001, IT manufacturing considerably contributed to labour productivity growth in Finland, South Korea and Ireland. Furthermore, the 1996 – 2001 Finnish data was about four fold than in 1990 – 1995. It is important to underline that ‘new economy’ activities do not concern only production. In fact, the IT production is more internationally concentrated than their adoption. This is the reason why in most countries, the new economy is the result of the diffusion of information technologies. Many scholars classified these countries as IT users, describing them as lucky economies in which the IT usage has enabled extensive firm-level reorganization, boosting workers’ productivity. According to their theory, the difference between US and Europe has to be found in this aspect: compared to the United States, Europe did not suffer from a technological gap, but only from a usage gap.

During the early years of the 21<sup>st</sup> century, international comparisons had placed Finland in the first position in the rank of business and technology environments<sup>115</sup>, and according to the OECD *Communications Outlook* 2001, in 1998, the Nordic country reported the largest per-capita surplus in the foreign trade of communication equipment

<sup>114</sup> Ivi, p. 127.

<sup>115</sup> *Finland boasts best growth prospects. Report says thriving tech sector puts country ahead of global rivals* (Wall Street Journal Europe, 18 October 2001, p.3), *Global Competitiveness Report* (Porter et al., 2001), the Economist Intelligence Unit (2001) and the International Institute for Management Development (2000).

(US\$ 1000) in the world. Moreover, Finland featured a communication equipment trade surplus in absolute terms of about US\$ 4.3 billion, which derived from the subtraction of US\$ 1 billion of imports from US\$ 5.3 billion of exports. As a result, the business world experienced the rapid transformation of the Finnish economy from a net importer into a net exporter of high-tech goods. IT production focused on the fabrication of IT goods, such as software, hardware and telecommunications equipment. Moreover, as it is shown in the table 2.3, the Finnish IT sector accounted for more than 15% of the value added of ‘market production’.

**Table 2.3** *IT industry shares in Finland*

	1975	1980	1985	1990	1995	2001
Percentage of market sector value added						
Total IT industries	3.7	4.2	5.3	5.8	8.0	15.3
Manufacturing	2.1	2.0	2.6	2.9	4.8	9.3
– of which: Radio, TV and Comm. equipment	0.5	0.4	0.8	1.0	2.7	7.4
Telecoms services	1.2	1.6	1.8	1.7	1.9	3.5
Computer and software services	0.4	0.6	0.9	1.2	1.3	2.4

116

Moreover, from 1980 to 1995 the value added share of Information Technology goods and services almost doubled, going from 4.2% to 8%. Differently, focusing the attention on the investments’ side, according to WITSA-IDC data, IT spending in Finland reached US\$ 10 billion in 2001. As you can see from table 2.4, this amount constituted the 8% of the Finnish GDP, corresponding to per-capita spending of about US\$ 2000 per year, the same as EU average and much less than Sweden and the US.

**Table 2.4** *IT spending and investment in Finland, Sweden, the EU and the US*

<sup>116</sup> Jalava, J., Pohjola, M., *Economic growth in the new economy: evidence from advanced economies*, Information Economics and Policy, 2002, 14(2), pp. 189-210.

	Finland	Sweden	EU	US
IT spending (US\$ billion), 2001	10.0	24.9	650.2	812.6
IT spending, per capita (US\$), 2001	1938	2804	1729	2924
IT spending (% GDP shares)				
2001	8.0	11.3	8.2	8.0
1999	6.4	9.0	6.3	8.2
1995	5.5	7.5	5.5	7.5
IT investment (% shares of total investment)				
2000	17.5	20.6	17.1	29.6
1995	14.2	15.5	14.1	25.6

Looking more closely at the share of IT investment, in 2000 it was about 17% of total non residential investment in Finland, up from 14% in 1995. It can be observed that Finnish data are identical to those evaluated for the EU and, instead, much smaller to those computed for the United States, both in 1995 and in 2000. Taking into account the figures of the table, it could be drawn the conclusion that IT usage is not so high in Finland. But this is not true. Indeed the data reported are in value terms. Consequently, “fewer resources sunk into the IT sector may either imply a smaller extent of adoption, or just lower costs in the access to the usage of information technologies”<sup>117</sup>. Daveri and Silva emphasized that, during the 1990s, Finland featured a relatively low price of internet access, data and digital mobile services and a high Internet penetration and mobile communications diffusion, enjoying, during the years 1995 – 2000, the second lowest Internet access price in the OECD. Moreover, in the same period, Internet penetration was higher in Finland than in any other OECD countries and, in 2000, the mobile penetration rate was over 65% higher than them.

Nokia is clearly considered Finland’s engine of IT production, innovation and exports. At the end of the 1990s, the Nokia sector IT contribution to aggregate value added was about 50%, with Nokia’s value added alone close to 3.3% of GDP<sup>118</sup>. It accounted for a fourth of Finnish total exports, 35% of total R&D, and 5% of total employment in the Finnish manufacturing sector. Nokia’s success was primarily due to its strategic and exceptional adaptability and evolution capacity. It was able to adjust to new circumstances, changing with the society in which it operated and if, on the one hand,

<sup>117</sup> Daveri, F., Silva, O., *Not only Nokia: what Finland tells us about new economy growth*, Economic Policy, Great Britain, 2004, p. 128.

<sup>118</sup> Ali-Yrkkö, J., *The role of Nokia in the Finnish economy*, The Finnish Economy and Society, ETLA (Research Institute for the Finnish Economy) and EVA (Centre for Finnish Business and Policy Studies).

its transformation was a story of the industry and struggles related to strategic decision making, on the other hand, it was the result of the national institutional environments and corporate strategies mutually shaping each other. Nokia started in 1865, as a mechanical pulpwood mill in the town of Tampere, progressively expanding to the nearby town of Nokia, from which the officially established firm took the name. When a paper mill was added in 1880, the corporation rapidly diversified into related business in the forestry sector, operating as such for almost 90 years. In 1967, the firm merged with Finnish Rubber Works and Finnish Cable Works, expanding further. In particular the latter had set up an electronics department in 1960, which became Nokia Electronics in 1967. Over the years, the importance of electronics in the company grew fast and in 1984 it became the largest business, providing two thirds of the company's turnover. Since 1970s, new advancements in telecommunications contributed to the growth of Nokia Electronics, but the firm remained a diversified corporation until the mid of the 1990s. In 1992, Jorma Olilla became the new Chief Executive Officer, and he started to develop the company's renewal winning strategy. In his mind Nokia had to become a focused global telecom company, betting everything on a new, unproved GSM (Global System for Mobile communication) technology. The idea sold to investors and in 1994 Nokia was listed on NYSE (New York Stock Exchange), raising the needed capital and adopting new corporate governance principles. "By 1995 all business lines related to forest, electricity distributions, rubber, cable operations and television business had been sold. Since then, the totality of the Nokia sales came from electronics manufacturing only, with cell phones being the dominant product line"<sup>119</sup>. About 4000 firms and 200 electronics manufacturing services companies constituted the so called 'IT cluster', and in 1999 its GDP share reached 6.9%. By 1996, Nokia became the world's largest mobile phone producer. It turned into a giant, becoming the country's biggest firm by turnover, the largest private sector employer and accounting for around one fifth of the country's exports. It produced in nine municipalities in Finland and during the early years of 2000s its foreign sales accounted for 99% of its total sales.

Nokia became one of the keys to Finland's transformation and its competitive success, the latter being the outcome of mutually dependent processes. The firm became a

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<sup>119</sup> Daveri, F., Silva, O., *Not only Nokia: what Finland tells us about new economy growth*, Economic Policy, Great Britain, 2004, p. 126.

flagship for Finland. It contributed to its innovation system, but, at the same time, this happened thanks to public investments in R&D, education, and telecommunication infrastructure. Moreover, the stimulating firm's environment played a key role in ensuring the extraordinary success of the company. Its organizational culture was non-hierarchical and supportive of hard work, individual learning and initiative and nationalism. In addition, the major share of the firm's employees in Finland was engaged in R&D: Nokia's research sector has been carried out by thousands of people, often exceeding the number of researchers in the Finnish university sector as a whole. In 2003, its research and development expenditures were about one-third of total domestic R&D spending and 50% of business-sector R&D. Indeed, since the 1970s, Finland opted for a policy line that focused on technical research, technical faculties, research institutes and firms rather than on science and university. During the 1980s this approach was strengthened, followed by the rapid developments in the ICT sector, confirming the country's belief about the role of technology in increasing welfare. Finally, in the 1990s, R&D investment rose beyond 3% of the GNP, growing more rapidly than any other OECD country and bringing Finland into the top group internationally. Although the EU policy undoubtedly contributed to the internationalization of Finnish R&D and to the strengthening of regional innovation policy and national network formation, their improvement depended mostly on the Tekes technology programs, the Academy of Finland research programs, knowledge centers and cluster programs.

Another factor that played a key role in the Finnish success were the country's social characteristics. Finland has a small population, characterized by many cross sectoral linkages and a high degree of cohesion. The free public school system, the summer cottage tradition, student life and, for males, the military service bring people from various social circles together, linking groups with different knowledge, skills and visions from various backgrounds. Furthermore, Finnish society was not only small, but young too. This can explain the high level of cultural and institutional flexibility and openness to external influences, necessary in order to embrace such a revolution. To sum up, "Finland's 'great transformation' thus involved a combination of continuity and change: radical change in the country's core economic subsystems and continuity in horizontal cross-sectoral coordination".

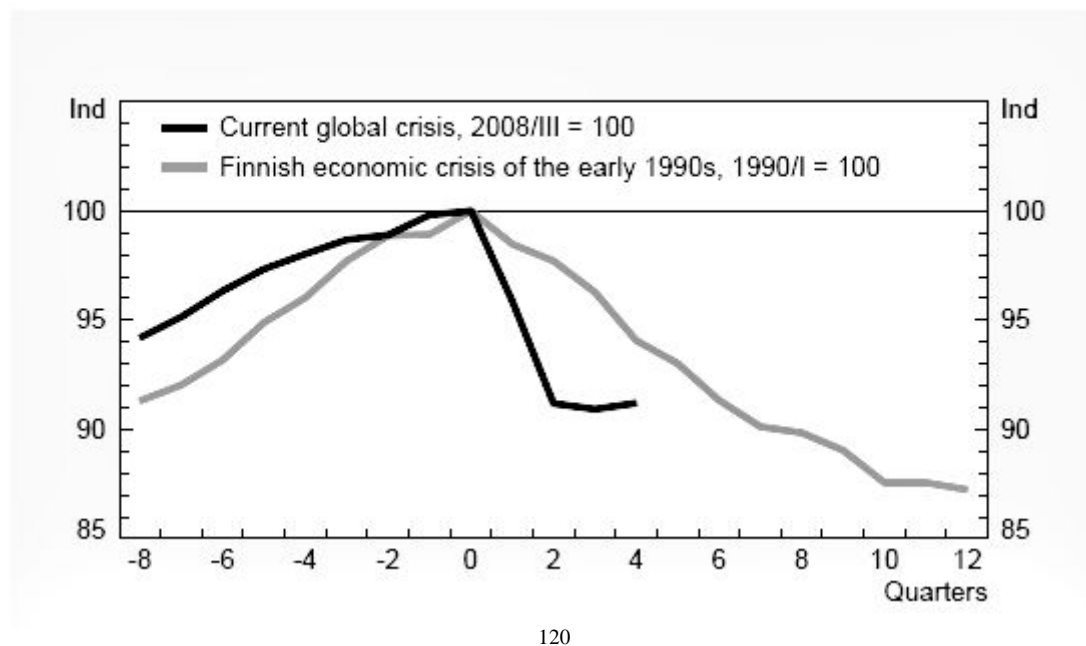


### 3. From Great Depression to Great Recession

#### 3.1 Differences between the two crises

Despite the strong performance occurred during a decade of durable output growth principally driven by the high-tech sector, Finland was not able to escape the global crisis that, since 2008, disturbed the international economic equilibrium. The last section of my dissertation aimed at identifying the principal features of the current economic crisis, delineating its principal features and effects on Finland's economy. Indeed, although the decline in GDP experienced during the recession was similar, if not worse, to that of the 1990s crisis, the causes that originated it were completely different.

**Figure 3.1** *Finland: seasonally adjusted quarterly GDP levels in the two crises*



As I previously examined in depth, the Finnish Great Depression of the early 1990s was essentially due to a lethal combination of mistreat financial liberalization and failure of macroeconomic policies. Even though the end of the trade relation with the Soviet

<sup>120</sup> Gylfason, T., Holmström, B., Korkman, S., Söderström, H. T., Vihriälä, V., *Nordics in Global Crisis. Vulnerability and resilience*, The Research Institute of the Finnish Economy (ETLA), Taloustieto Oy, 2010, p. 115.



Union was decisive in determining the collapse of the Nordic economy, the 1990s economic collapse was predominantly homemade. The contraction of the manufacturing sector was modest and temporary, while the decline in private services was deep and long. The depression was principally due to the high interest rates and it involved mainly the domestic market. Furthermore, the international economic recovery of that period boosted exports and lifted up the economy again. Differently, the current Finnish crisis was primarily due to the collapse of export demand, which clearly played a key role in a small open economy as Finland. Indeed, the weak development of the global economy and its restructuring affected services only slightly, while it had a significant repercussion on the manufacturing. In addition, other differences have to be underlined. As Gylfason *et al.*<sup>121</sup> emphasized, in the recent crisis the corporate and household sectors' balance sheets have proved to be much stronger than before, making them less vulnerable to temporary income losses. Moreover, the macroeconomic framework and the policies did not contribute in accelerating the downturn. Indeed, when the crisis erupted, Finland was part of the euro area, being characterized by lower interest rates. Hence, if, on the one hand, budget deficits increased rapidly, on the other hand, public sector indebtedness remained relatively low and the strength of the public finances helped to ensure that risk premia on government bonds remained small. In fact, in recent years, Finland has become one of the most competitive countries in the world, characterized by an high level of well being. It ranked seventh in the World Happiness Report in 2013 and its income inequality is among the lowest in the OECD. Moreover, social inclusiveness contributes to Finland's high level of subjective well being, jobs and earnings are close to the OECD average notwithstanding recent output weakness, and its natural resources offer a promising potential for green growth<sup>122</sup>. However, even if the domestic demand has not been subdued by domestic financial disturbances, the recent recession has had and still continues to have problematic consequences, raising difficult questions of policy. Foreign demand has decreased, weak household income growth and confidence impacted on private consumption and residential investments, and low capacity utilization delayed business investments. Summing up, "the crisis of 2008 – 2009 was an imported recession originating from global financial

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<sup>121</sup> Gylfason, T., Holmström, B., Korkman, S., Söderström, H. T., Vihriälä, V., *Nordics in Global Crisis. Vulnerability and resilience*, The Research Institute of the Finnish Economy (ETLA), Taloustieto Oy, 2010.

<sup>122</sup> OECD Economic Surveys Finland, Overview, February 2014.

markets and a slump in global demand, yet the feedback from the domestic financial sector to the real economy amplified the recession substantially, if to a lesser extent than in the early 1990s”<sup>123</sup>.

### 3.2 The current economic crisis

The global economic crisis, which erupted in 2008 after several years of post-war “Great Moderation”, has been interpreted by Gylfason *et al.* as a result of the destructive combination of global macroeconomic imbalances and the ineffective workings of the financial system. The roots of the recent world’s economic contraction have to be found in the process of globalization, which, during the last couple of decades, spread in a very rapid and asymmetrical way. Thanks to the interconnection of the international market, hundreds of millions of Asian workers, essentially from India and China, have entered the production, improving their position and contributing to the moderation of the global inflation. “While this process of globalization and productivity growth has increased the supply of goods and services in world markets, it has not, to the same extent, increased the global demand for goods and services”<sup>124</sup>. Although the investment rate in Asian countries has been high, it has been always lower than the saving rate, which is extremely high particularly in China (approximately half of GDP). Moreover, the Oriental financial market has never succeeded in offering attractive assets to households and companies with financial surpluses. Therefore, as the market’s internationalization materialized, the Asian financial world started to look for safe and liquid investment opportunities in countries characterized by a very low domestic saving rate and by dynamic financial markets, like, for instance, the United States. Indeed, the American sophisticated financial system was able to find new ways of channeling the surpluses into safe financial assets, but undertaking huge and serious risks. The mechanism triggered large financial flows looking for investment channels, keeping real interest rates low worldwide. Hence, it is important to stress that the large current account deficit which, consequently, will occur in the US and in other developed

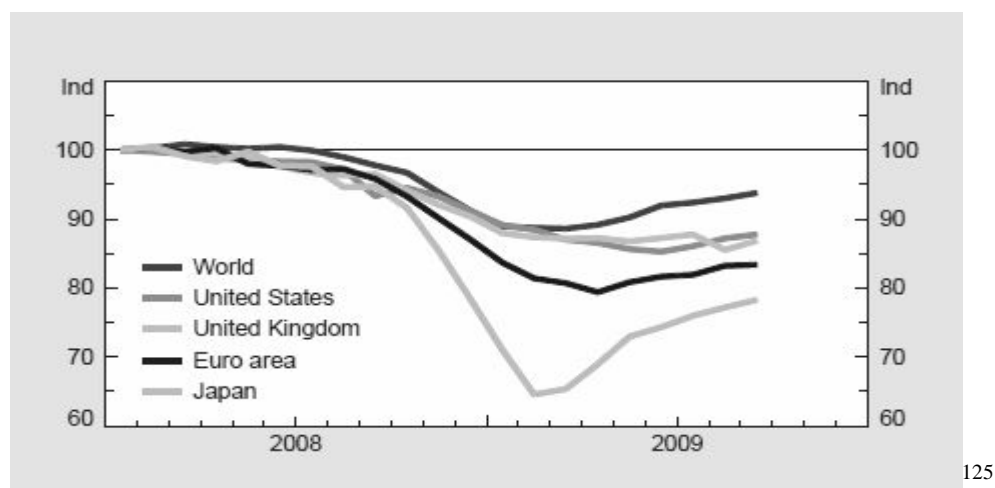
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<sup>123</sup> Bank of Finland, March 2014 Bulletin, Articles on Economy by Bank of Finland.

<sup>124</sup> Gylfason, T., Holmström, B., Korkman, S., Söderström, H. T., Vihriälä, V., *Nordics in Global Crisis. Vulnerability and resilience*, The Research Institute of the Finnish Economy (ETLA), Taloustieto Oy, 2010, p. 15.

countries, was not only caused by their lack of responsibility and low household saving, but also by the large Asian supply of financial saving. Undoubtedly, the fragile structure of the key countries' financial system had a role in determining its inevitable disruption. The financial modern instruments and the numerous way of intermediation made more attractive borrowing and investing in low-risk assets. The problems came up when it became clear that the borrowing activity and the asset price rises was coming to an end. At that point, problems like difficulties in write-downs, distress selling of assets, lack of liquidity and capital became inevitable and the global demand in the world economy started to shrink. During autumn 2008, panic spread so intensely that also strong companies were forced to cut spending due to the lack of short-term credit, leading to the collapse of the world economy. In particular, one date is considered as the beginning of the sharp and synchronized economic downturn: 15 September 2008, when the global financial services firm 'Lehman Brothers', after the exodus of its clients and drastic losses in its stock, filed for Chapter 11 of the Bankruptcy Code, formalizing its breakdown. The spreads in interbank lending rose markedly and within few weeks panic erupted in financial markets around much of the world, causing a decline in trade, industrial production and GDP.

**Figure 3.2** *World industrial production, 2008-2009, 2008/1=100*



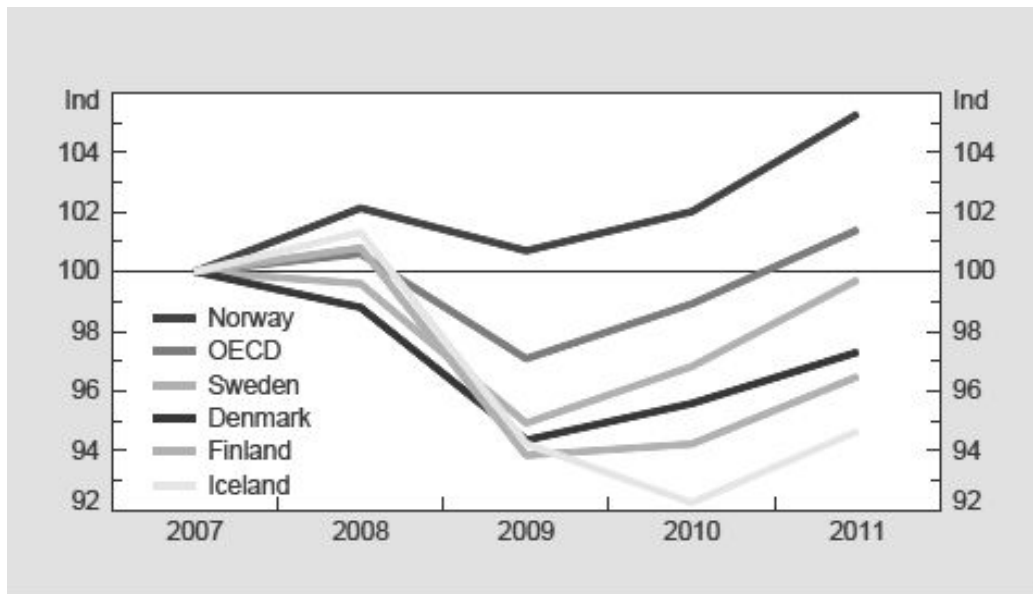
As a consequence, financial system's stress increased the cost of funding, raising the required rate of return and reducing investment. Moreover, the crisis led the banks to

<sup>125</sup> Ivi, p. 35.

tighten the lending standards and the rise in investors' risk had similar effects. Among the several factors that pushed the economy downwards, the decline in stock and real estate prices played a crucial role. Indeed, it reduced the net worth and, as a consequence, the fall in households' wealth increased their savings. However, if during the depression of the 1930s policies were passive and contractionary when they should have been expansionary, this time, starting from autumn 2008, policy activism became the first and primary goal of the governments. For instance, central banks reduced interest rates and, when short-term rates approached to zero, they increased the money supply through 'quantitative easing', namely purchasing government securities or other securities from the market. Moreover, authorities intervened in order to support the financial institutions, while the lack of automatic stabilizers was counterbalanced by large-scale discretionary fiscal stimulus in the US, China and many European countries. As a result, although a complete recovery has not yet been achieved, the 2008 crisis will not end in a second Great Depression, supporting the thesis according to which it is quite misleading to think that markets can always be left to regulate themselves. Although the crisis erupted in the United States, many countries were dragged in the destructive spiral that harshly hit their economies. The majority were small open economies which, by definition, were clearly vulnerable to global developments. However, it is important to remark that the economic shocks were not only externally provoked, but, to a certain extent, they were exacerbated by the mismanagement of the local authorities. Indeed, they cannot be completely absolved from responsibility, and domestic institutions and policies proved to be much more relevant than imagined. Summing up, if the decisive impulse could have come from overseas, it was evident how the bubbles were waiting to burst.

Considering its degree of openness and its dependence on exports of investment goods, Finland was one of those economies severely hit by the 2008 crisis. The decline of the global demand strongly affected exports, which has always represented the country's largest source of revenues and which led to a significant drop in GDP. In this context, it is not surprising that the Nordic countries (except Norway) were hit harder by the crisis than the other OECD countries on average (figure 3.3).

**Figure 3.3** *GDP in the Nordic area, 2007-2011, 2007=100*



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Indeed, globalization has always represented for them a successful strategy in order to raise productivity and income. However, on the other hand, as the current crisis has shown and continues to show, it also brings several uncertainties and problems which will continue to hit the world economy. The solution should be exploiting the benefits that a globalized world and sophisticated financial markets offer without underestimating the negative effects that they could have on the domestic economy. Moreover, policies may have a key role in reducing financial fragility and the unfavorable repercussions deriving from such vulnerability. For instance, strong balance sheets are helpful in diminishing the disastrous effects of falling cash flows, and a new efficient system of capital income taxation could influence firms and households to better manage them. Once strong finances are ensured, the government becomes able to undertake discretionary fiscal action in order to stimulate aggregate demand and to address specific problems that need to be solved. Moreover, strong public finances permit to safeguard the social contract, strengthening the public's confidence during hard times. Wage flexibility is also essential, in particular for countries that cannot take advantage of the exchange rate to improve their competitiveness. However, taking into consideration the strong role that the labour unions exercised in the Nordic countries, wage moderation is difficult to achieve without formal or informal coordination. Differently, the high level of investment in the human capital and a well educated

<sup>126</sup> Ivi, p. 28.

labour force, which constituted the biggest strength of the Nordic Model, can ease adjustment to changing circumstances, enhancing skills through additional training. It seems clear that the Nordic welfare state is not the source of the problems, but with the appropriate measures and the right implementation, it can be part of the solution, helping the Scandinavian countries to safeguard competitiveness and the sustainability of public finances. There is a lot that small economies can do to decrease their fragility and work on their flexibility. However, the weak link between nation states and the global arena is indisputable and the international coordination necessary to undertake the necessary steps toward the change cannot be sustained.

Nonetheless, a financial crisis was not a new experience for the Nordic economy, and, as a consequence, the mental shock caused by the recession was smaller than in many other countries. Although the depression of the 1990s was mainly homemade, it was a traumatic experience and the severe effects that Finland suffered left behind several lessons and instructions to be learned. As Gylfason *et al.* emphasized, Finland, and also Sweden, “became aware of the difficulties and the importance of safeguarding the process of financial intermediation, and they learned a lot about the ways in which a banking crisis can or should be handled”<sup>127</sup>. The first evident suggestion that was deduced from the 1990s depression was that it is fundamental not underestimating the first signs of financial fragility, and policy planning has to be based on a worst-case scenario. It became clear that a solid management framework is necessary in order to handle liquidity and solvency issues. In order to cover expected losses, it is indispensable that the government provides for new capital to be injected into undercapitalized financial institutions, always exerting power and control over them. Indeed, supervision has to focus on systemic issues, requiring a high level of coherence of action of authorities within a country and across national borders. Broadly speaking, the world needs a more robust financial system. The previous crisis emphasized the importance of regulation and supervision in reducing the risks of financial instability. Moreover, if more reforms are undoubtedly necessary, it is equally crucial that they are internationally harmonized and coordinated. In addition, the second key lesson that was drawn concerned the monetary policy. It became visible that a fixed but adjustable

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<sup>127</sup> Gylfason, T., Holmström, B., Korkman, S., Söderström, H. T., Vihriälä, V., *Nordics in Global Crisis. Vulnerability and resilience*, The Research Institute of the Finnish Economy (ETLA), Taloustieto Oy, 2010, p. 21.

exchange rate in a world characterized by free capital mobility is the first step for a disaster. This was the main reason that pushed Finland to enter in the Euro area in 1995. One of the most important macroeconomic policy decisions that a country takes and that decisively influences the outcome of a crisis management is the choice of monetary and exchange rate regime. In particular, Finland, as a Nordic country, made completely different choices regarding the European Union and its monetary policy compared to those made by the other Scandinavian states. Giving an example, while Sweden opted for a floating exchange rate with an independent central bank, Finland joined the European monetary union. During the first decade of the 2000s, in a period of general good economic conditions, the krona was as stable as the euro, but when the crisis erupted the former fell significantly relative to the latter. As a result, strengthening its price competitiveness, it should have been easier for Sweden coming through the crisis at less cost than Finland and the other euro area countries. Indeed, although a lower exchange rate reduces real income, weakening domestic demand, at the same time it should improve net exports, making Sweden able to capture market shares from its closest competitors. “The decline in exports and output in 2009 was indeed smaller in Sweden than in Finland, and output is forecast to recover somewhat faster, but the differences do not seem large”<sup>128</sup>. The manufacturing output showed little response to the change in competitiveness and even if the Swedish GDP has decreased less than the Finnish one, the unemployment trend was as much as in Finland. The conclusion drawn by Gylfason *et al.* is that “a depreciation of a floating currency has less effect on export and output volumes than a devaluation of a pegged currency used to have, because companies are reluctant to react to uncertain and maybe temporary variations in the exchange rate”<sup>129</sup>. It seems clear that, contrary to what is often asserted in the debates about EMU, the floating exchange rate is not able to completely protect an economy from the external shocks, reducing the differences between the two exchange rate regimes. However, this does not imply that in the euro area there are no problems. The most alarming is the persistent divergence between North and South: the southern countries continue to lose competitiveness, running large and constant deficits in public finances and current account. Although the euro has reduced the political pressure for the adoption of corrective policy action, partly protecting these countries from financial

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<sup>128</sup> Ivi, p. 24.

<sup>129</sup> Ivi.

repercussions, this has also led to stockpile similar problems. Consequently, bonds' interest rates of the countries characterized by fragile financial systems and weak economic prospects started to increase. For instance, the high risk premia on bonds issued by Greece and other countries in southern Europe remind the high level of uncertainty which is associated to them and to their capacity to achieve, in the near future, economic growth and improved public finances. There are several ways to restore public finances, fostering growth. As Gylfason *et al.* suggested, the first step could be the cut of public consumption and transfer payments or the composition of expenditure twisted in a growth-friendly direction. A developed communication infrastructure, an efficient education system and the advancement in research are all essential ingredients of the same recipe. Secondly, the tax base could be extended raising the employment rate by prolonging the length of working careers. People live longer, better and healthier and should stay in the workforce as much as they can. Finally, it could be appropriate reducing the share of taxes that fall on productive economic activity, like companies and labour, and raising those affecting consumption, real estates and natural resources. In this last step coordination would be fundamental: however, it does not seem yet a possible and realistic scenario.

Finally, the Nordic countries directly understood the importance of maintaining sustainable public finances in order not to be forced to resort to fiscal tightening during severe economic downturn, but being able to ensure expansionary fiscal action. It is worth highlighting that during economic crises this kind of action is quite uncommon. Indeed, the role of fiscal policy is quite controversial: while some believe that fiscal expansion could have a crucial role in supporting growth of demand and output, others consider it ineffective, in particular for small and open economies. However, expansionary fiscal policy could be a very useful instrument to alleviate problematic consequences as long-term or youth unemployment or when a flawed credit system reduces the effectiveness of monetary policy. In addition, fiscal stabilizers allow governments to avoid applying impulsive and risky actions under pressure. These teachings and the Finnish experience of banking crisis were not sufficient to avoid the devastating effects of the recent recession; however, they prepared Finland to better manage the second big world's economic collapse after the 1930s depression.

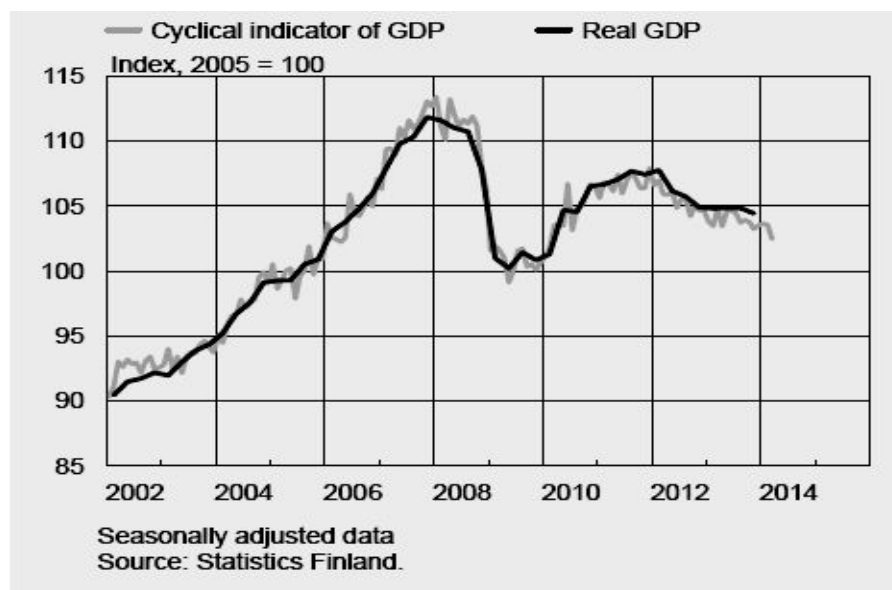


### 3.3 The 2008 crisis' impact on the Finnish Economy

As I have previously stressed, as a small open economy, Finland's suffered the effects of the economic crisis, undergoing its consequences until today. In this passage, I am going to analyze in details the effects that the recent economic collapse had and is still having on Finland's economy, exploring its repercussions on GDP, industrial production, exports and labour market.

According to the data published by Statistics Finland<sup>130</sup>, Finnish GDP growth in 2011 was 2.9%, basically fostered by private consumption. The average quarterly growth rate of the economy in the same year was much slower than in 2010, standing at 0.3%. In 2012, GDP was down by 0.2%, reflecting a contraction in domestic demand. Progressively, it further declined in 2013 by 1.4% and it continued to decrease in 2014.

**Figure 3.4** *Finnish GDP*



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Indeed, Finland's fiscal deficit proved deeper in 2014, due to the slow revenue growth and to the rapid increase in unemployment expenditure. The deficit rose above the 3% threshold established in the EU's Stability and Growth Pact, reaching the 3.2% and it will not be reduced without supplementary consolidation measures. In addition, the ratio

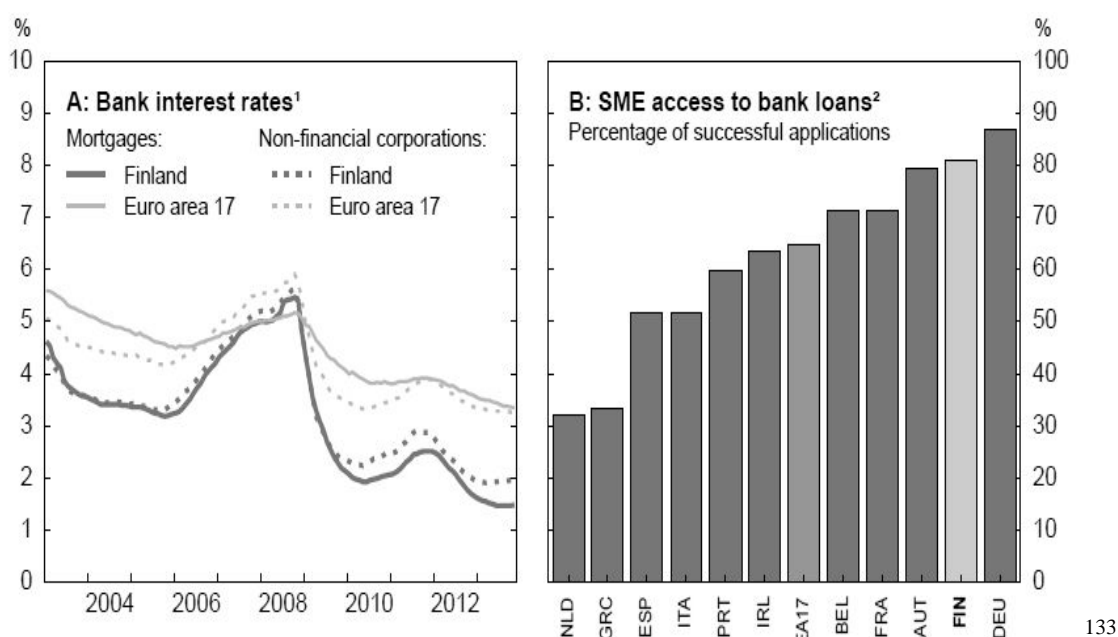
<sup>130</sup> Statistics Finland is the National statistics institution in Finland, established on 4 November 1865. [https://www.stat.fi/index\\_en.html](https://www.stat.fi/index_en.html)

<sup>131</sup> Bank of Finland, March 2014 Bulletin, Articles on Economy by Bank of Finland.

of public debt to GDP increased to 59.3%. According to the forecast, in 2017, it will climb as high as 67% of GDP, almost doubling the 2007 debt-to-GDP ratio and being accelerated by a large fiscal deficit, sluggish economic developments and a substantial increase in age-related spending<sup>132</sup>.

By contrast, although the economy has been characterized by a sluggish pace and the low level of interest eroded profitability, the Finnish financial system has remained quite stable throughout the debt crisis. It has proved to be resilient in the challenging environment, providing very supportive financing conditions. Interest rates on corporate loans and mortgages remained historically low and, despite credit standards have recently tightened, access to bank loans for small and medium-sized enterprises was easier in Finland than in most other euro countries (figure 3.5)

**Figure 3.5** *Financial conditions are supportive but credit growth is sluggish*

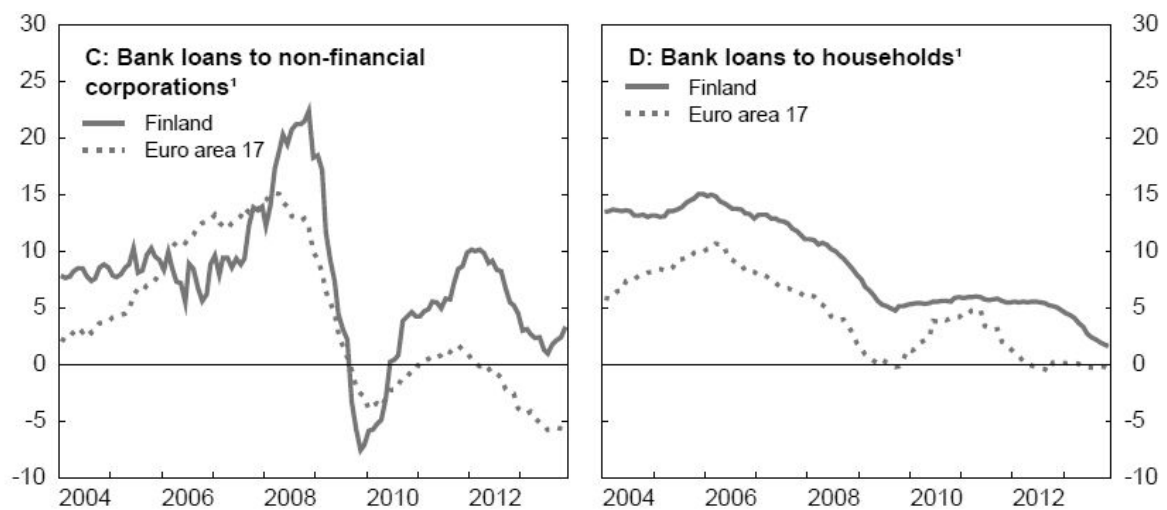


Nevertheless, weak investment and high uncertainty restrained corporate credit growth, limiting loans' demand and leading large firms to replace bank credit with bond issuance for long term financing. Moreover, over the years, credit to households decreased as well (figure 3.6).

<sup>132</sup> Bank of Finland, March 2015 Bulletin, Articles on Economy by Bank of Finland.

<sup>133</sup> OECD Economic Surveys Finland, Overview, February 2014, p. 14.

**Figure 3.6** *Financial conditions are supportive but credit growth is sluggish*



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Generally, the risk-bearing capacity of banks in Finland remained good, with Banks issuing large amounts of covered bonds. In addition, the situation was improved thanks to the growing interest margins on both corporate and household loans. However, despite the Finnish household debt is still moderate compared to other Nordic countries, it has increased over the past decade. “It is difficult to determine the risks associated with a specific level of debt, as they depend on a number of factors, in particular the volatility of the economy, the level and nature of assets, the sensitivity of debt servicing to interest rate and the distribution of debt across households”<sup>135</sup>. Finnish households are not characterized by very high financial wealth and the first-time buyers usually have little equity in their homes. As a consequence, they are exposed to risks in the case of a sharp increase in mortgages’ interest rates. This possibility becomes much stronger if we consider that Finland is a small open economy, naturally subjected to external shocks. For this reason, the supervisory authorities should have the power to use macro-prudential tools, like loan-to-value ratio limits, if debt accumulation starts to grow. The first and fundamental objective of the financial institutions in Finland calls for strict regulation and supervision, which has been set up during the depression of the 1990s and has allowed Finland to avoid the worst consequences during the recent crisis.

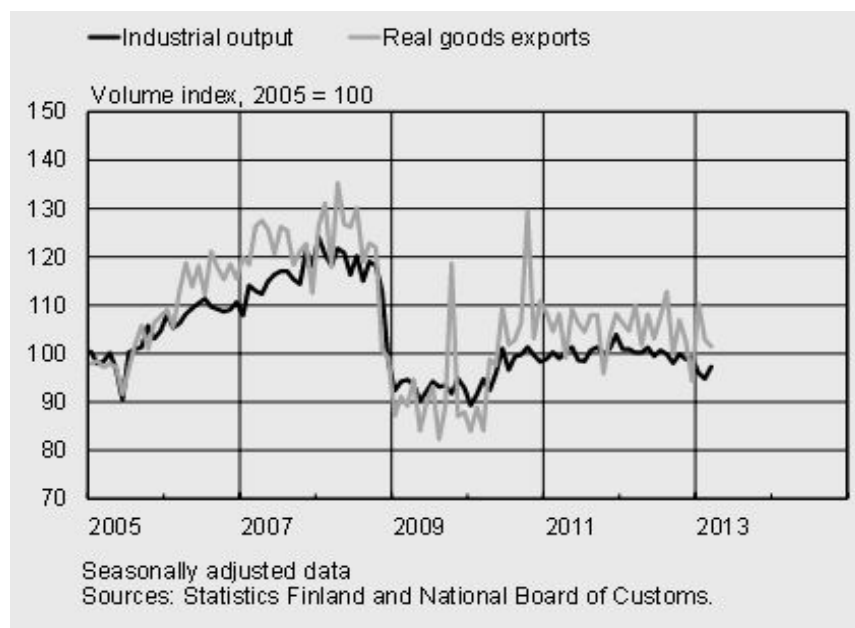
<sup>134</sup> Ivi.

<sup>135</sup> Ivi.

However, the regulation system still needs to adapt to the evolution of the financial and banking structures.

On the supply side, it can be affirmed that the weak economic developments affected the real industrial output, leading to a considerable contraction since 2011. Indeed, looking more closely at the key industrial sectors, during 2011, a marked reduction in output was witnessed in the forest industry while the output of electrical engineering and electronics declined only slightly. Since 2012, the decline started to be more pronounced in the metal (namely electrical engineering and electronics) and chemical industries, but the significant deterioration of the real industrial output was clearly visible at the turn of 2012 and at the beginning of 2013.

**Figure 3.7** *Industrial real output and exports*



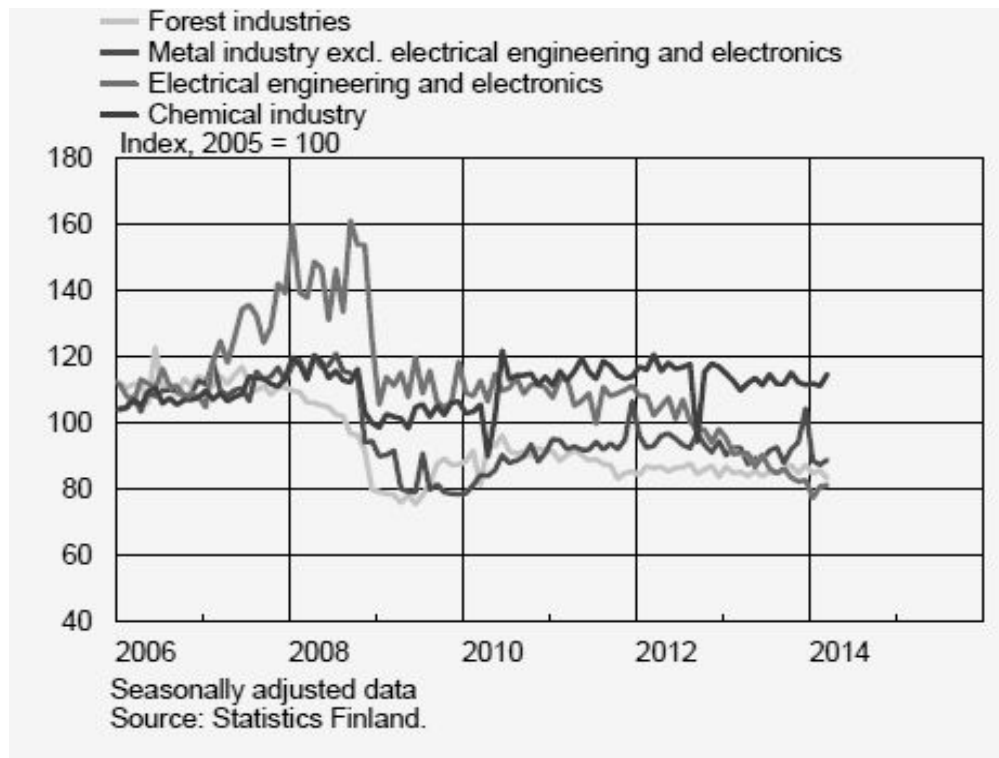
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During the last two years, cyclical conditions in industry remained weak. The decrease in real industrial output gained momentum towards the end of 2013 and, at the beginning of 2014, real output was much lower than the previous year. While the output in the chemical industry has remained generally unchanged from early 2013, the trend decline in the metal industry has continued, with the output in the electronics lowering

<sup>136</sup> Bank of Finland, March 2013 Bulletin, Articles on Economy by Bank of Finland.

in early 2014 more than a year earlier. Furthermore, output in the forest industries has edged down somewhat in January and February 2014 (figure 3.8).

**Figure 3.8** *Volume index of industrial output by sector*

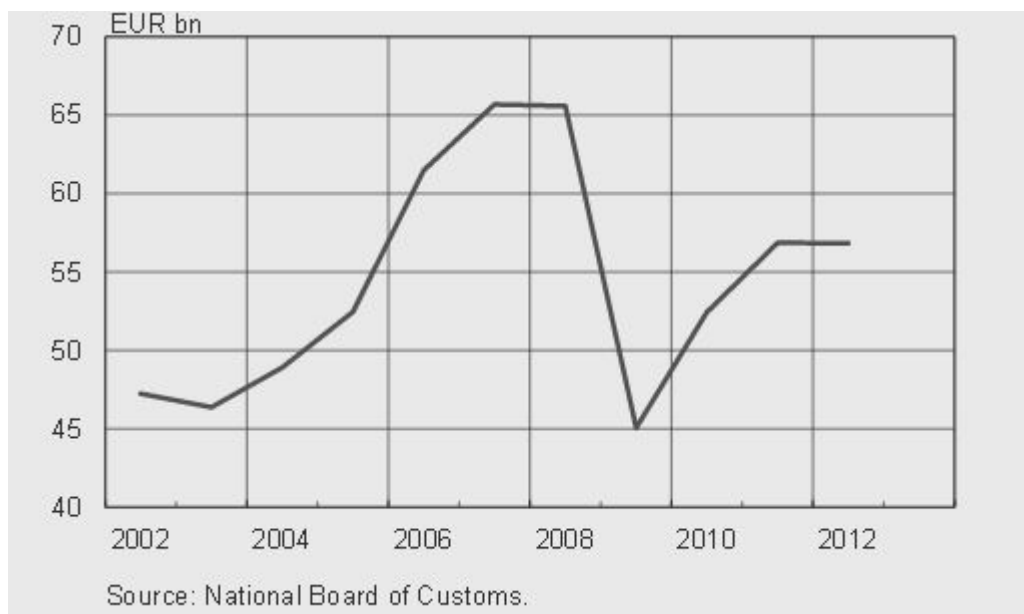


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Equivalently, exports have experienced a setback during these last years as well. The value of goods exports grew at a fast pace during the early years of the new millennium, with the rate of growth achieving more than 17% in 2006. Considering the period 2004 – 2008, Finland's goods exports were still closely following developments in world trade. The latter was growing rapidly and the value of goods exports from euro area countries was growing by an average 9% per annum. In Finland, the corresponding figure was 10%. Moreover, Finland's most important export markets – Sweden, Germany and Russia – experienced rapid economic growth during these years, boosting demand for the most important products exported by Finland.

**Figure 3.9** *Developments in the value of Finnish goods exports*

<sup>137</sup>Bank of Finland, March 2014 Bulletin, Articles on Economy by Bank of Finland.



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However, this growth came to a halt in 2008, and in 2009 the value of exports dropped by more than 31%, leaving Finland's exports growth behind that of other euro area countries. Indeed, in 2009, goods exports were down 25% compared to the previous year, with no subsequent return of export volumes to the pre-crisis level. From the previous brief sectors' analysis, it is a matter of fact that the weak performance of Finnish exports since 2009 can be mainly explained by the rapid contraction in the output of telecommunications equipment and of the forest sector. Undoubtedly, it can be affirmed that the significance of these sectors to exports as a whole was more central in Finland than, for example, in Germany and Sweden. To better understand, in 2013, the forest sector's share of exports from Finland stood at almost 19%, against approximately 11% for Sweden and only around 2% in Germany and France. Hence, changes in demand for forest industry products were considerably more significant for Finnish exports than for the other countries in the comparison.

The crisis has thus reduced the market share of Finnish exports in world trade and, in order to better understand the market's dynamics and later providing an efficient solution to the problem, it is crucial investigating the extent to which market share's changes are crucial. Market share developments can be explained by structural factors, namely the product and geographical breakdown of exports, and by changes in competitiveness, which analyzes the part that is not explicable by the former elements.

<sup>138</sup> Bank of Finland, March 2013 Bulletin, Articles on Economy by Bank of Finland.

In other words, exports' market share is affected by their products' structure as well as their destination markets: exports typically grow rapidly if growth in demand for the products exported is strong. However, they strongly depend also on the advantage that the products have, which allow them to compete in the international market. Therefore, there are several reasons for the declining market shares of the advanced economies in international trade. To deeply appreciate them, it is important to explore the goods exported by the countries, their values and the geographical areas to which they export.

A constant market share analysis (CMS) enables assessment of Finland's exports performance by decomposing variations in market share into the two effects: the structure effect, caused by the product composition of exports and the destination market, and the competitiveness effect. The market shares of advanced economies in the value of world trade contracted in the first post-millennium decade at the same time as emerging market economies increased their respective shares. The structure of world changed: on the one hand, an ever larger part of advanced economies' production has migrated to Asia or other emerging economies in the world and, on the other hand, demand from Asia has grown so rapidly that a small country like Finland has not had the production potential able to meet such growing demand. The impact of the structure effect of exports on market share is positive if a country exports products for which demand increases faster than world trade, or if exports are directed towards countries whose imports grow faster than world trade. On the other hand, the competitiveness effect can be computed as the difference between the actual change in the market share and the hypothetical change caused by the structure effect, and thus includes all effects that cannot be derived from the geographical and product structure of exports. The CMS analysis realized by the Bank of Finland<sup>139</sup> reported that the product and destination market composition of Finnish exports has been supportive until the onset of the recession. Subsequently, they had a role in determining the sharp fall in market share, but the latter cannot be totally ascribable to the structure of exports: a crucial factor was represented by weakening competitiveness.

Firstly, focusing our analysis on the structure effect, it can be stated that goods are grouped according to their technology intensity into low, medium and high technology categories. In the first post-millennium decade, growth in the value of demand of low

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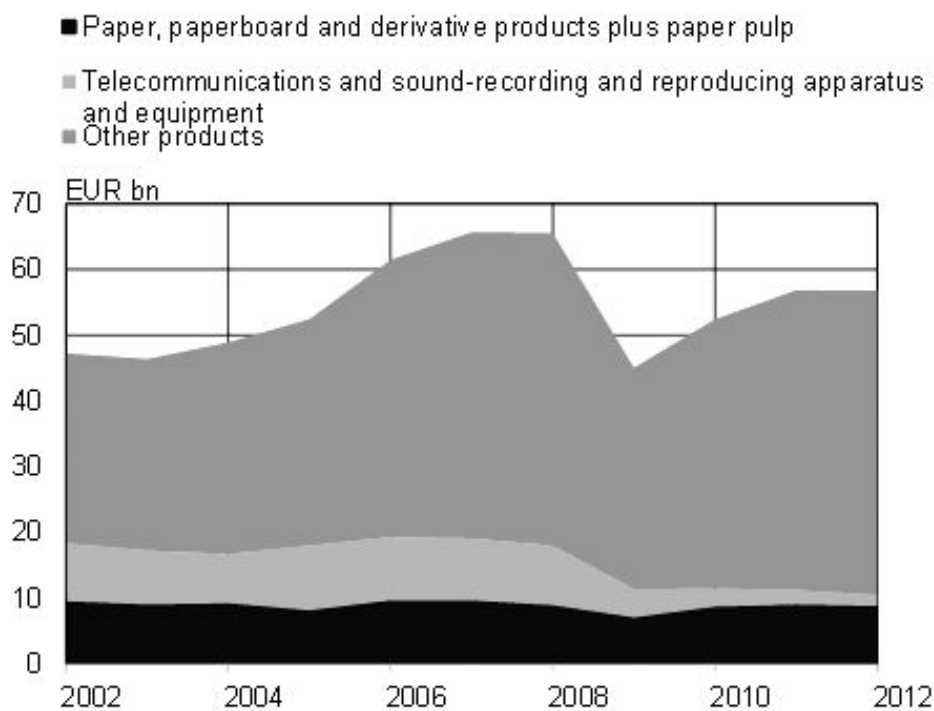
<sup>139</sup> Bank of Finland, March 2012 Bulletin, Articles on Economy by Bank of Finland.

technology products was slower than demand for high technology, which grew more quickly except for 2005-2008. Similarly, demand for medium technology products grew faster than world trade until the onset of the financial crisis, when it started to decline. Hence, it can be argued that the structure effect on the hypothetical market share remained almost unchanged until 2006. Subsequently, it turned distinctly negative. As approximately 40% of Finnish goods exports are classified as capital goods, world market demand for these products exerted a significant impact on Finland's export performance. As I have previously explained, the cause of the contraction primarily laid in the electrical engineering and electronics industries, whose contraction had reduced the share of the "Machinery, equipment and vehicles" in the value of Finnish exports in 2010 – 2013 of approximately 13 percentage points than in 2002 – 2007, making 'other industrial goods' the largest product group. As a result, the share of high technology products in Finnish exports decreased in the first post-millennium decade. At the beginning of the XXI century, they still represented 30% of Finland's total export value, but at the end of the first decade they accounted for 20%. Differently, medium technology products increased their share in the value of Finnish goods exports from 35% during the early years of the new millennium to 50% by 2010. Finally, low technology products accounted for approximately 30% of Finland's export value in the same period. The problem was that in 2009, global demand contraction focused, in particular, on the medium technology product category, which includes machinery and equipment, transport equipment and fabricated metal products. Lower demand for products in this category led to Finland's weakening market share via the product effect. Prior to the crisis, the effect of high technology products on Finland's market share was evident, particularly in 2000 – 2001. Indeed, in 1999 – 2001, Finland's high technology exports grew by about 10 percentage points faster than total world trade. Subsequently, however, their share in world trade declined drastically. In 2002 – 2010, high technology exports from Finland grew by about 30 percentage points less than in world trade on average. Summing up, in 1999 – 2010, the value of world trade more than doubled. Simultaneously, Finland lost market share in almost all its export countries and its global market share contracted by nearly a third. The strongest market share losses were recorded in 2009 and 2010. Indeed, in 2009, Finnish exports underwent considerably larger drops than world trade, and in 2010 export growth fell well behind export market growth. It is evident how problems in certain manufacturing industries



fundamental to the Finnish export sector led to the deterioration in the goods account. More specifically, the weak performance of the forest industries, electronics and electrical engineering have been determinant in the performance of Finland's exports. Although the value of goods exports was 20% higher in 2012 than in 2002, a comparison with the record year of 2008, shows that their value had declined by 13%<sup>140</sup>.

**Figure 3.10** *Value of Finnish goods exports*



Source: National Board of Customs.

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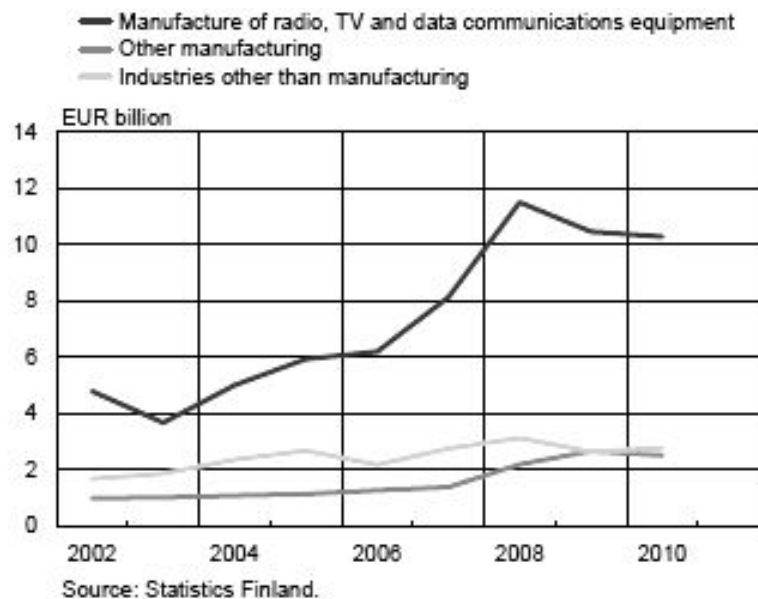
Indeed, looking carefully at figure 3.10, the first information that stands out is that the product structure of Finnish goods exports has changed over the reference period. At the start of the reference period, telephone and other telecommunications equipment represented the major product group, accounting for roughly 17% of total export value in 2002 – 2005. However, their share began to decline in 2006. In 2012, the export value of telephone equipment had fallen considerably below the 2002 level, with their contribution to total export value just under 3%. Another major export sector struggling

<sup>140</sup> Bank of Finland, March 2013 Bulletin, Articles on Economy by Bank of Finland.

<sup>141</sup> Ivi, p. 25.

with reconstruction, the paper industry, succeeded in keeping its export value quite stable since 2000. However, in the reference period, the export value of the paper industry fell by 8% and the GDP share of the paper industry exports fell from 6.5% to 4.5%. Differently, between 2002 and 2012, the export value of all other products increased by 60%. As a result, since the turn of the millennium, services exports (the category contains high-added-value services such as consulting, planning and design, expert services, IT services and R&D) have grown relative to goods exports, playing a fairly significant role in the Finnish economy. While in 2009 and 2010 services exports were dominated by the radio TV and telecommunication equipment industry (figure 3.11), in 2011 Finland's largest export category was IT services.

**Figure 3.11** Exports of 'other services' by industry



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As a consequence, hopes that exports of high technology could progressively fill the gap left by the decline in export income from mobile phones and other communication technology have gradually risen in Finland. However, foreign trade in services has in recent years declined somewhat from the heights of 2008 and Finland's exports of 'other services' have developed less strongly than those of competing countries. For instance, while Germany saw its export of 'other services' grow throughout the

<sup>142</sup> Bank of Finland, March 2012 Bulletin, Articles on Economy by Bank of Finland.

financial crisis, both Finland and Sweden suffered a significant decline in the sector taken into consideration. The total value of service exports, which accounted for a good 11% of GDP in 2008 – 2010, declined to below 10% in 2011 and they have not yet recovered from the recession of 2008 – 2009. In 2011, growth in Finnish exports of either goods and services lagged substantially behind growth in world trade. The export markets grew by around 7%, while goods and services exports from Finland contracted almost 1%. Services exports (narrowly based, with electronics constituting around two-thirds of services exports), although still accounting for approximately a quarter of the value of all Finnish exports in 2011, were down almost 9%. In 2012, the pace of the world trade growth slowed and Finland's export markets grew around 3 percentage points more slowly than in the previous year. In the euro area, the economy began to grow in early 2013 at a slow rate, but even if the most acute phase of the crisis has passed, developments in the euro zone are still highly divergent. "Growth is constrained by weak earnings growth and the poor employment situation, the slow process of deleveraging and the problem weighing on banking sector lending, which are hitting the SME sector in particular"<sup>143</sup>.

Going deeper in the geographical aspect, a country's market share typically declines in a situation where its exports are directed towards contracting markets or where the competitiveness of its products weakens relative to those of its competitors. From an accurate analysis it stands out that Finnish exports have focused more on growing markets and, correspondingly, less on shrinking markets than world trade on average. Indeed, with world trade growing rapidly in the early 2000s, Finland's market share was favorably affected by the direction of its exports towards the growing markets of neighbouring area, such as Russia and the Nordic countries. Europe accounted for approximately 70% of Finnish goods exports, with just under 50% of them directed to the euro area, while the 25% was allocated to Russia and the Nordic countries. In 2002, Finland's four key markets were Germany, Sweden, the United States and the United Kingdom, which, since 2009, was overtaken by the Netherlands. However, over the period 2008 – 2010, exports contracted on average in all continents, except for Asia. Indeed, over the years 2005 – 2008, the value of exports to UK, Germany and Russia was especially boosted by an increase in the value of motor vehicle and mobile phone

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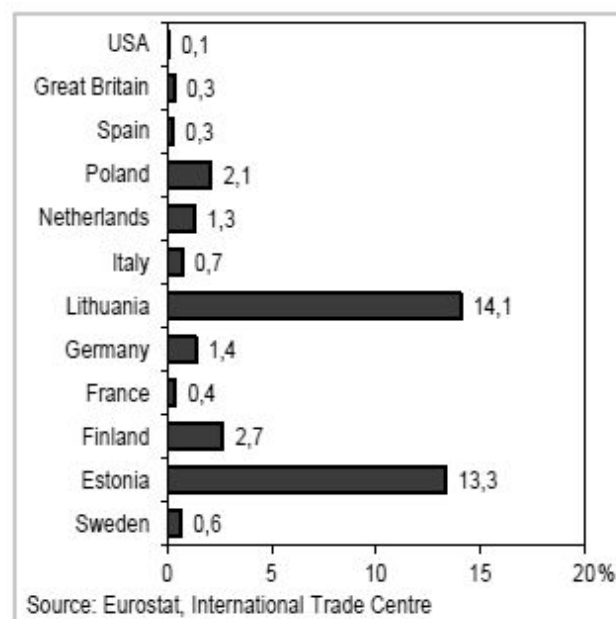
<sup>143</sup> Bank of Finland, March 2014 Bulletin, Articles on Economy by Bank of Finland.

exports, but exports of both of these products suddenly stopped in 2009. At the same time, import demand from neighbouring areas important for Finland declined or slowed significantly too. Consequently, Finland's current account went into deficit in 2011 after a long period of surplus. The deficit was equal to 0.6% of GDP, while at its height in 2002 the surplus was 8.5% of GDP. It is important taking in mind that the last time Finland experienced a current account deficit was in 1993. It is intriguing to note that the deterioration in the current account between 2002 and 2011 was particularly due to a weakening in the goods account. By contrast, the other current account components, namely the services account, income account and current transfers account, did not show significant changes over the same period. This means that developments in foreign trade volumes and prices played a key role in the current account deterioration: export volumes grew more slowly than import ones, in addition to which import prices rose relative to export prices. The rise in import prices was due particularly to the upsurge in the world market price of oil. At the same time, export prices were affected by a sluggish price trend for forest industry exports and for the electronics and telecommunications industries. Furthermore, the slower-than-average growth in Finland's exports relative to other euro area countries since 2009 has been partly due to the fact that the Finnish metals industry's production (electrical engineering and electronics) has focused more intensely than other countries on products whose prices developed weakly over the period 2009 – 2012.

However, in the years following the financial crisis, world trade has expanded, and there is hope for a further acceleration always in line with growth in the global economy. In these recent years, the situation has not significantly improved and growth in world trade has been much stronger than growth in Finland's export markets. Moreover, when the situation in Crimea exploded in late February and early March 2014, the recovery of the Finnish economy was exposed to many potential disturbances. Indeed, the Ukraine crisis increased uncertainties on the Russian market and, in 2014, its repercussions slowed Russian GDP growth by around 1 percentage point. Moreover, the investment climate weakened and the Bank of Russia rose interest rates considerably in order to prevent capital flight and depreciation of the rouble, tightening the financial conditions. In the future, particularly after the recent decision of the United States and the European Union to extend the economic sanctions against Russia, the eastern international crisis

will continue to have an impact on Russian short-term growth and on the global economy as a whole. Concentrating on the European Union, it can be affirmed that exports to Russia are important for many member states in the east, but only 2.6% of total EU exports go there. However, the geopolitical crisis led to a slowdown of the euro area economies, affecting their public deficits and debts. For instance, while Germany's finances remained in balance throughout the 2014, other states like France, Spain and Portugal were clearly above the 3%, violating the European Stability and Growth Pact. Germany's exports to Russia account for only slightly over 1% of its GDP, Italy's figure is a bit less than 1%, while the figures for France, UK and Spain are less than half a per cent.

**Figure 3.12** *Share of certain countries' exports to Russia relative to GDP 2013*



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Consequently, although Poland, Finland and the Baltic countries are strongly dependent on trade with Russia, it was quite unexpected that the decrease of its economic growth due to the political and economic sanctions would have had such an impact on the economic outlook of the euro area, making it vulnerable to new uncertainties. Restrictions on food imports and the sanctions imposed also to banks and finance companies have the role to cut investment, negatively affecting countries like Germany,

<sup>144</sup> Economic Forecast 2014-2015, *Ukrainian crisis hits Finnish economic growth*, Labour Institute for Economic Research, September 2014, p. 3.

Italy and Finland, which export capital goods to Russia. Already at the beginning of 2014, Russian investments, imports and private consumption started to fall, even though the government weakened the rouble, trying to alleviate the effect and boosting production of substitutes. Russia's economy grew at almost 1% rate during the first half of this year and the flight of capital from the country accelerated, further harming investments and private consumption. As a result, the EU put the most vulnerable countries in a precarious situations, and, in addition, it did not have the resources needed to compensate the extremely large impacts that the Russian sanctions have on the Baltic countries, Finland and Poland. In order to take advantage from the political effectiveness of the punitive measures, the euro area would have required to be as strong as Germany is. By contrast, the European Commission implemented them and encouraged the dissenters to join the sanction front, but at the same time, during autumn 2014, it became to rebuke those countries which were not able to maintain stable and solid public finances. The conflict did not impact only on exports to Russia, but it threatened also European energy supply and security, making companies and households more prudent and weakening European domestic demand.

As one of Russian most important trading partner, the effect of a more sluggish trade and of the prolongation of the Ukrainian crisis has been and will be very strong on Finland's economy. Focusing on this aspect, the Bank of Finland studied the shock using a macro-economic model and concluded that the impact comprises three branches: the direct trade impact, indirect effects and exchange rate effects. As I explained before, Russian trade is very important to output and employment development in Finland and its share of the value of Finland's goods exports has averaged 9% over the past 5 years. According to the OECD and WTO's data, in 2009, 7% of the value added exported from Finland ended up in final products in Russia, corresponding to around 1.7% of GDP. The negative repercussion of the reduction in exports on unemployment in 2016 will be of about 40,000 jobs, having an impact on certain individual industries like electronics and the tourist industry. During January-June 2014, Finnish goods exports to Russia fell by 12%. The Russian counter-sanctions that came into effect in August 2014 prevented almost all food exports to Russia, severely hitting Finnish export to Russia, which fell 20% from 2013. In June 2015,

Putin extended the counter-sanctions for another year, leading to a steady decline in exports for the next year.

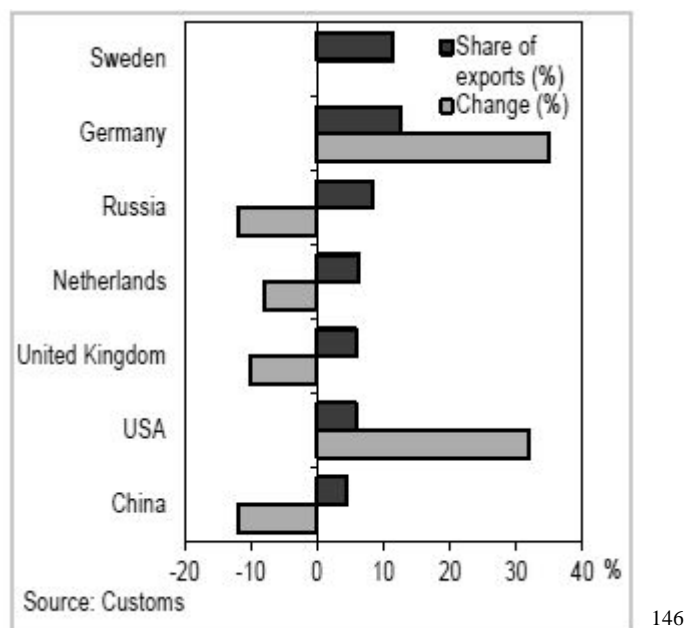
**Figure 3.13** *Demand for investment goods and Finnish exports 2008:1 – 2014:2*



Furthermore, the weaknesses in Russia's foreign trade have been also indirectly reflected in the Nordic country's economy, through the decline for Finnish exports from other countries. Indeed, a 25% contraction in Russian imports cut demand for Finnish exports by 2 percentage points, deteriorating Finland's terms of trade and leading Finnish exporters to cut their prices and to find new markets for their products. For instance, goods exports have increased in Germany and the UK: they increased more than 30% compared to 2013's data. By contrast, exports to Sweden and North America dropped significantly. However, at the end of 2014, the weakening of the euro strengthened Finnish export to the euro area.

**Figure 3.14** *Finnish merchandise exports in January-June 2014*

<sup>145</sup> Economic Forecast 2014-2015, *Ukrainian crisis hits Finnish economic growth*, Labour Institute for Economic Research, September 2014, p. 7.



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Finally, exchange rate changes have weakened the competitiveness of Finnish exports. The expected depreciations in the value of the rouble strengthen Finland's trade-weighted exchange rate by few percentage points, reducing Finland's GDP growth.

### 3.4 Internal structural problems: ageing population and weak labour productivity

The products' composition and destination only partially affected their decrease in the exports' market share. In the next paragraph, through the analysis of the internal structural problems of Finnish economy, I am going to address the competitiveness factor, which played a crucial role in the deterioration of the current account described above.

So far, I have explained how the crisis of 2008 – 2009 was completely different from the depression of the 1990s to the extent that it was an imported recession, originating from a dysfunction of the global financial markets and a collapse in global demand. However, in recent years, growth has been depressed not only by the weak international economy, but also by structural problems, such as ageing population and weak productivity developments. Estimations of long-term economic growth are generally explained by the developments in the available labour resources and on the possible developments in labour productivity. Labour input is quite easy to predict as it is based

<sup>146</sup> Ivi, p. 8.

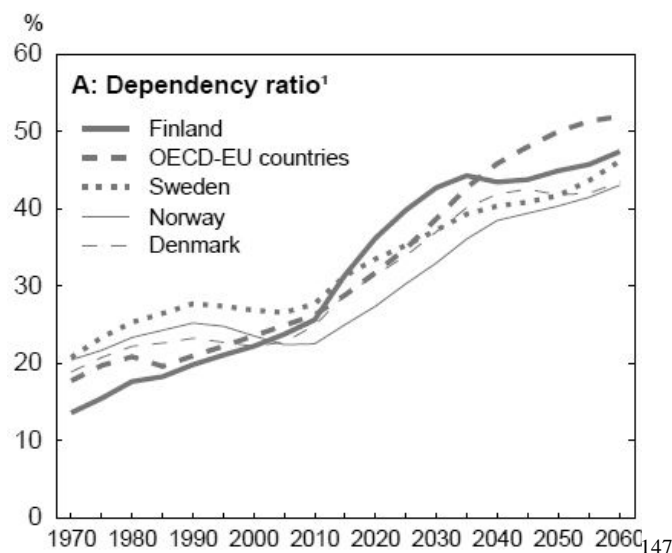


on the long-term population forecast published by Statistics Finland. On the other hand, productivity developments is much harder to foresee due to the recession experienced in recent years and to the diversified and strongly fluctuating productivity trends in different industries.

### 3.4.1 The ageing population

Population ageing brings significant changes to the structure of output in the economy. Indeed, the share of output supplied by social and healthcare services will grow, shifting output towards sectors characterized by a low productivity, reducing average productivity growth across the economy. In addition, population is ageing more rapidly in Finland than in most OECD countries. The old-age dependency ratio has risen steadily during the past four decades and it is going to grow faster between now and 2060. Figure 3.15 shows that, compared with the other Nordic countries, Finland will experience an earlier and faster increase in its old-age dependency ratio over the next two decades.

**Figure 3.15** *Old-age dependency and pension costs are growing rapidly*

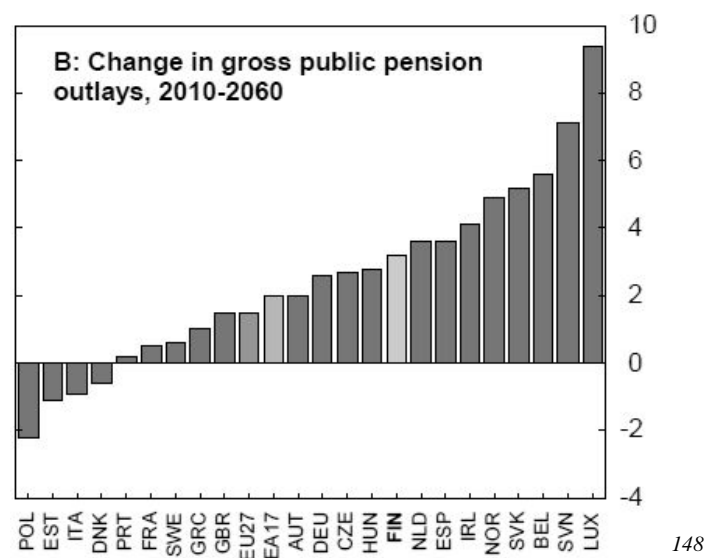


These demographic trends will put pressure on public finances and labour resources, but, at the same time, ageing can also create opportunities for innovation and new

<sup>147</sup> OECD Economic Surveys Finland, Overview, February 2014, p. 19.

markets and industries. Indeed, considering the fact that it is a global phenomenon, the strong Finnish competitiveness of goods and services demanded by older people could create a strong potential for exports. However, the recent pressure exercised on pension and health spending by population ageing constitutes a serious problem in Finland. The Finnish pension system is based on by three pillars. The First one is a non-contributory means tested national pension, combined, since 2011, to the guarantee pension aimed at reducing old-age poverty. The second pillar is the compulsory earnings-related pension system, entirely financed by employers and employees and based on insurance policies provided by different pension funds. The last pillar is instead constituted by private pension or life insurance schemes, but it is not very developed due to the high costs of private pension insurances and changes concerning the tax subsidy policies. As a result of this complex pension system, the ratio of pension expenditure to GDP rose by around 3.5 percentage points between 1890 and 2009, reaching more than 9% of GDP and reflecting both the rising old-age dependency ratio and the maturation of the earnings-related pension system.

**Figure 3.16** *Old-age dependency and pension costs are growing rapidly*

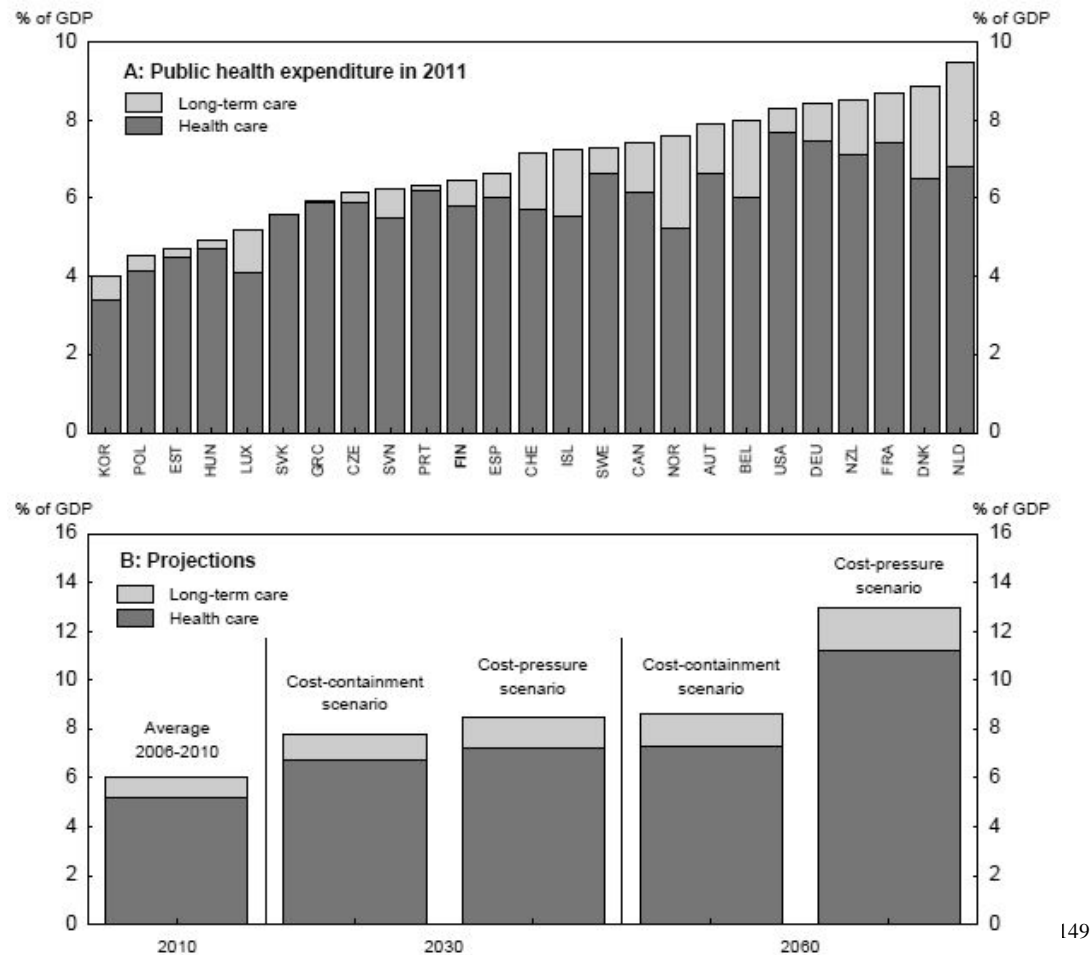


The European Commission Economic Policy Committee's baseline scenario foresees a further increase of 3 percentage points between 2010 and 2060, with a sharp increase before 2030 and a relative stability between 2030 and 2060 (figure 3.16 above). Since

the 2005 pension reform, the official retirement age was fixed between 63 and 68, with a possibility to delay retirement after 68. However, the majority of people continue to draw their pension at 63, and despite the prolongation of the retirement age provided by the reform of 2017, the latter is still below the official age for both men and women.

According to the OECD Economic Surveys, in 2011, public expenditure on health and long-term care was quite modest as a share of GDP (figure 3.17 A), but it is expected to grow over the next 50 years, despite strong policy action (figure 3.17 B).

**Figure 3.17** *Health and long term care expenditure are projected to rise sharply*



The increase in longevity will imply growing needs for long-term care and rise in total public health expenditure. “Even though the Finnish health care system offers good quality treatments at a fairly moderate cost, its efficiency could be improved, in

<sup>149</sup> Ivi, p. 20.

particular by reducing fragmentation and improving coordination, and strengthening incentives to achieve a better balance between primary and specialized care”<sup>150</sup>. As the share of older workers increase, the overall participation rate tends to decline. Indeed, they are characterized by low labour force participation and, if no reform to increase is going to be implemented, the participation rate will continue to decrease over the next 50 years. Despite labour force participation of people aged between 55 – 64 has increased during the past decade in Finland, it is still lower than in other Nordic countries and even though labour productivity could compensate this effect, the declining labour supply will lead to lower output growth. A coefficient which links pension benefits levels to life expectancy limits the impact of rising life expectancy on pension expenditures: as life expectancy increases, the coefficient reduces the amount of the monthly pension, which should lead individuals to work longer in order to avoid a cut in pension benefits. However, workers often prefer retiring at the minimum pension age. Summing up, the minimum pension age should be progressively abandoned, in order to maintain the ratio of retirement constant as life expectancy increases. Moreover, raising the minimum old-age retirement age forces people to work longer and thus to accumulate more entitlements, avoiding the risk to fall into relative poverty. Although the 2005 reform abolished the unemployment pension, older people are still entitled to an extension of the period during which they receive the unemployment allowance. To better understand, “a person who has turned 61 and has received an unemployment allowance for less than 500 days is entitled to it until the start of the pension or until the age of 65”<sup>151</sup>. Even though the previous reform was undoubtedly more generous than the current one, the system established the so called ‘unemployment tunnel’, creating a solid incentive for early retirement. Moreover, part time are subsidized and the large subsidies cut back working times significantly. Consequently, raising the minimum retirement age by two years, as provided by the 2017 reform, would lead to an increase in the effective retirement age from 8 to 10 months by 2025, but only if the unemployment tunnel and the part-time pensions are abolished. The disability benefits represent another instrument to retire earlier: an efficient reform to delay the process should provide disability pensions only for medical reasons. However, the lengthening of working lives cannot be achieved without a comprehensive reform of

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<sup>150</sup> Ivi.

<sup>151</sup> Ivi, p. 21.

the labour market. For instance, the implicit taxes on continued work should be reduced in order to encourage old people to continue to work. Moreover, there should be a repression of all disincentives and barriers to employment, adapting working conditions for older workers. Indeed, employers are often reluctant to hire older people or retain them in their jobs. In order to solve this problem, Finland has put in place different programs aimed at helping employers to manage the ‘greying’ of their labour force, like age-management training. Another solution could be lifelong training, aiming at enhancing the skills of older generations. According to the OECD Survey of Adult Skills, Finland’s adult population proficiency in literacy, numeracy and problem solving is among the highest of the 22 countries which took part in the survey. However, the extraordinary progress made in education over the past decades increased the gap between younger and older age groups.

### ***3.4.2 Sluggish labour productivity and lackluster competitiveness***

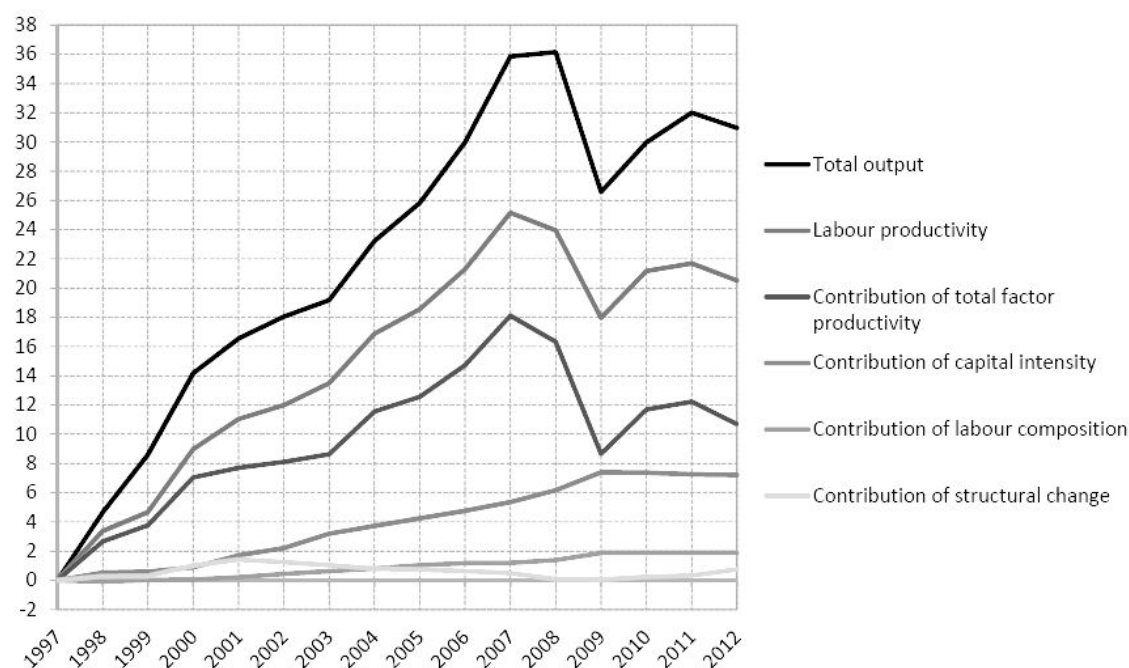
After having analyzed the effects of ageing population on economic growth, I am going to focus on the other structural problems that led to the economic stagnation in the present crisis: a decline in labour productivity. This has never happened before in the manner experienced today and, more important, it was not the element that brought to the great depression of the 1990s. To better appreciate the singular nature of development in recent years, it is necessary compare it with the previous years of growth that Finland experienced. Indeed, from 1997 to 2008, the total output grew 36%, but thenceforth it stood at 31%. In order to capture the reasons of the growth collapse, Holmström *et al.*<sup>152</sup> followed two different approaches. The first one aimed at investigating which component of labour productivity has collapsed; the second tried to identify the problematic sectors of the economy.

As it can be observed in the figure 3.18, since 2007, total factor productivity has declined by 7 percentage points, reaching its 2003 – 2004 level.

**Figure 3.18** *Cumulative growth (%) of total output and labour productivity, and contributions (% points) of labour productivity components.*

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<sup>152</sup> Holmström B., Korkman, S., Pohjola, M., *The nature of Finland’s economic crisis and the prerequisites for growth*, February 2014.



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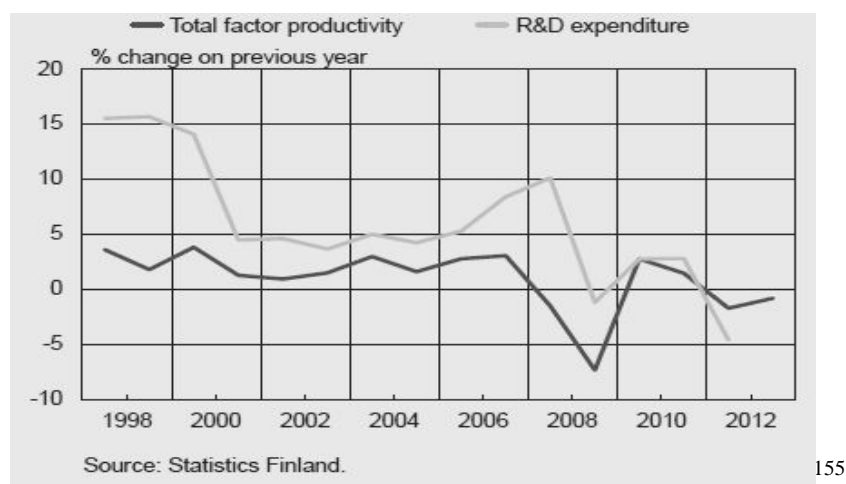
Total factor productivity measures “how efficiently the factors of production (labour and capital) are used in production and the various business processes linked thereto. The output from a given amount of labour and capital is bigger, the higher the level of total factor productivity”<sup>154</sup>. Consequently, changes in TFP are significantly reflected in the economy’s performance, and they play a key role in the business cycle fluctuations. Developments in total factor productivity depend on the ability of corporate and public sector units to exploit efficient technologies and components fostering innovations, on the presence of a sufficiently competitive operating environment and on a considerable input into research and product development. Indeed, behind improvements in productivity there is a sort of ‘creative destruction’ that, as competition increases, expels the companies unable to raise their productivity out of the market. In addition, it is worth emphasizing that significant changes in the sectoral structure of the economy influence developments in total factor productivity. For instance, it has been observed that, in a country characterized by a level of development inferior to that of its competitors, positive changes in the technological sector could have what is commonly called a ‘catch up phase’. In other words, the adoption of new operating models can lead to a rapid increase in total factor productivity and to a substantial change of the structure

<sup>153</sup> Ivi, p. 17.

<sup>154</sup> Bank of Finland, March 2014 Bulletin, Articles on Economy by Bank of Finland.

of the economy. From an accurate analysis of the long term trend in Finnish TFP, it can be deduced that it had both a catch-up effect and an economic structure effect. The former effect visualized in Finland in the 1970s and 1980s, while the latter belonged to the 1990s. In the 1980s, the engine of growth was constituted by increase in investment and the relative importance of total factor productivity was less than in the 1990s, when the impact of total factor productivity on economic growth started to be particularly apparent. Indeed, from the mid-1990s onwards, strong growth in GDP can be ascribed to the upward trend in TFP of the electronics industry. However, the depression of the 1990s and the consecutive financial crisis of 2008 impacted on total factor productivity, causing its considerable decline. As I specified above, one of the key measurable factors behind it is, besides improvements in education, corporate investment in research and development. Finland has been always characterized by a substantial input into R&D in comparison to other countries. In particular, R&D activities intensified towards the end of the 1990s and, in 2011, the GDP share of research and development expenditure was 3.8%, the highest among the EU27 countries. However, with the financial crisis of 2009, the figure considerably contracted.

**Figure 3.19** *R&D expenditure and total factor productivity*



R&D has always been strictly linked with the ICT sector, where Nokia occupied a key role. Since 2008, the sector stopped to invest in product developments, leading to the sector's R&D decline. It is intriguing to stress that the rapid growth in R&D expenditure

in the 1990s coincided with a rapid growth in total factor productivity, while the slow growth in TFP during the peak of the financial crisis (2009 – 2012) coincided with weak progress in R&D. While, during the 1990s, it seemed that the productivity growth was strictly linked to the exploitation of digital technology in the production process, after the recent crisis, the increase in total factor productivity would seem to be related to the information technology's use in business activities. Therefore, it is evident that faster growth will require bringing considerable changes and innovations to the way people work and in the production of goods and services. Obviously, such transformation requires time, with a risk for the TFP to remain slow for a prolonged period. By contrast, other components of labour productivity such as labour composition (education and age), which describe the quality of labour input, and capital intensity, which represents the amount and quality of capital, have increased the labour productivity as foreseen.

The second approach pursued by Holmström *et al.* tried to identify the problematic sectors of the economy, and a sectoral analysis of total output growth discloses problems in the manufacturing sector, particularly in the metal industry. Over the years 1998 – 2007, as much as half of the growth came from manufacturing, but since then the situation changed dramatically. Independent, strong and negative changes in the world market situation severely impacted on Finland's manufacturing. During the recent crisis the manufacturing output declined consistently, while the rest of the economy, in particular private services, maintained growth. The decline in the electronics was the greatest, but also profitability of basic metals deteriorated. Indeed, production of machinery, metal products and transport equipment fell sharply. In the electronics industry a key role was played by Nokia and its capacity to develop technological advantage, required to bear the international competitiveness. The paper industry has long faced falling demand in Europe and weak prices' development. The recession affected also Sweden and Germany, but while in those countries the sector's growth contribution is growing, in Finland it has not yet recovered.

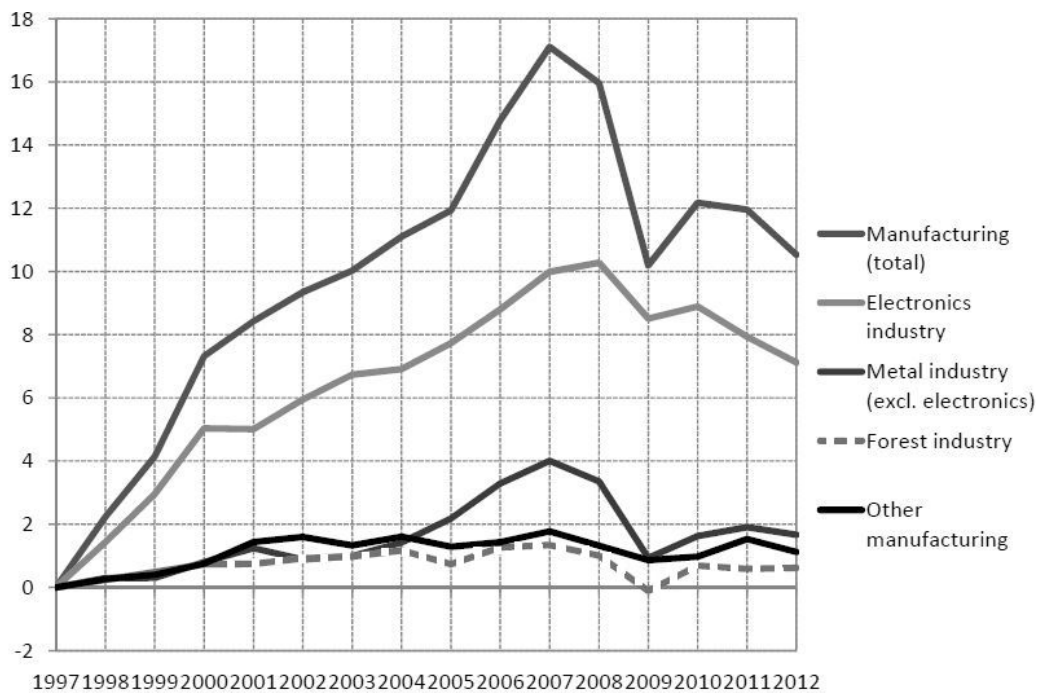
**Table 3.1** *Cumulative growth (%) of total output, and contributions of sectors (% points)*



	1988-2007	2008-2012	1998-2012
Total output	35.8	-4.8	31.0
Manufacturing	17.1	-6.6	10.5
Electronics industry	10.0	-2.9	7.1
Other metal industry	4.0	-2.3	1.7
Machinery, metal products, and transport equipment	2.5	-1.0	1.5
Electrical equipment	0.6	-0.1	0.5
Basic metals	0.9	-1.2	-0.3
Forest industry	1.3	-0.7	0.6
Other industry	1.8	-0.7	1.1
Private services	12.6	1.3	13.9
Government and household services	1.7	-0.2	1.5
Rest of the economy	4.4	0.7	5.1

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**Figure 3.20** *Cumulative contributions to growth of total output of the economy, % points.*



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As I have already underlined, during the last 15 years private services has been one of the sectors that contributed most to the growth of the whole economy. Indeed, the sector did not experience a similar collapse registered by the manufacturing and its growth

<sup>156</sup> Holmström B., Korkman, S., Pohjola, M., *The nature of Finland's economic crisis and the prerequisites for growth*, February 2014, p. 18.

<sup>157</sup> Ivi, p. 3.

impact has been positive also during the recession years. The Finnish service sector grew faster than the German one, but slower compared with the Swedish: Finland's services output growth has been faster than in Sweden only in ICT services. Generally, the rapid growth of the service sector coincides with the downward trend in manufacturing's share of GDP. In Finland, manufacturing represented an exceptionally high share of the economy, because, during the mid-1990s, the country reindustrialized through the rise in electronics industry. As a result, the decline of the sector experienced in these recent years, reaching the level of Sweden, had a particular impact on Finnish economy.

**Table 3.2** *Growth contributions of private services in Finland and in Sweden, % output*

	Finland			Sweden		
	1998–2007	2008–2012		1998–2007	2008–2012	1998–2012
Distribution services <sup>10</sup>	6.1	0.1	6.2	6.4	0.9	7.3
Business services	2.3	0.5	2.8	4.1	1.1	5.2
Information and communications	3.9	0.9	4.8	3.4	1.1	4.5
Finance and insurance	0.2	-0.1	0.1	1.8	0.6	2.4
Private services, total	12.5	1.3	13.8	15.7	3.7	19.4

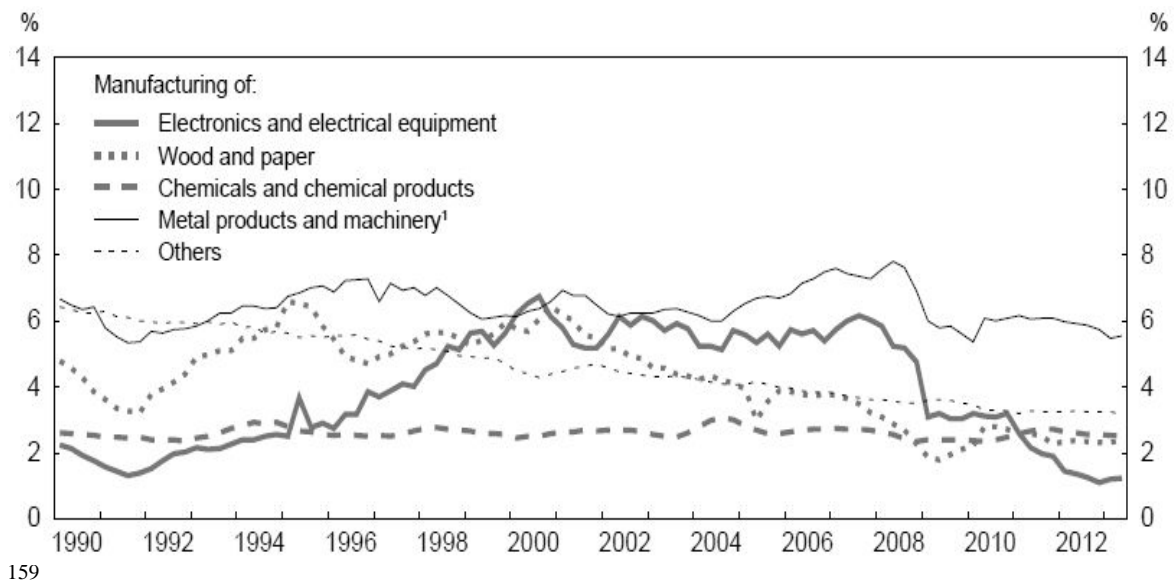
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In most of the developed countries, manufacturing is experiencing the same evolution undergone by primary production decades ago. In addition, the growth of high value-added services is too slow to replace the contraction of manufacturing: service production has not been sufficient to fix the damage caused by the collapse of another sector.

Paper industry suffered as well, experiencing a strong decline for printing paper in Europe. In 2014, the production, export and export prices of Finnish forest industry products have continued to growth, but downward trend in paper exports continued.

**Figure 3.21** *The share of electronic and forest products in output has collapsed*

<sup>158</sup> Ivi, p. 21.



In addition to the decrease in the exports of goods to Russia, they have been and are still reduced by the slower-than-anticipated recovery of the Euro zone and low demand. Moreover, the crisis in Ukraine and the unrest in the Middle East have increased uncertainty, and exports to countries outside the euro area have been slowed by the high value of the euro. Broadly speaking, growth in demand for wood products is slowing. Although during the early months of 2014 the revitalization of demand for sawn wood in Europe and North America increased its production in Finland, construction is on a downturn throughout the European Union, hindering the market outlook for the wood product industry for the next future. “However, the fall in demand in Europe is gradually leveling out, although the use of electronic media instead of printing and writing paper is increasing, and demand for printing paper is continuing to decline”<sup>160</sup>. In a different manner, the global demand for pulp is being maintained by the increasing use of tissue paper, and in 2014 both pulp production and exports will increase by 2%. As a result, the profitability of pulp production has remained at a high level for several years, boosting the average profitability of the entire sector.

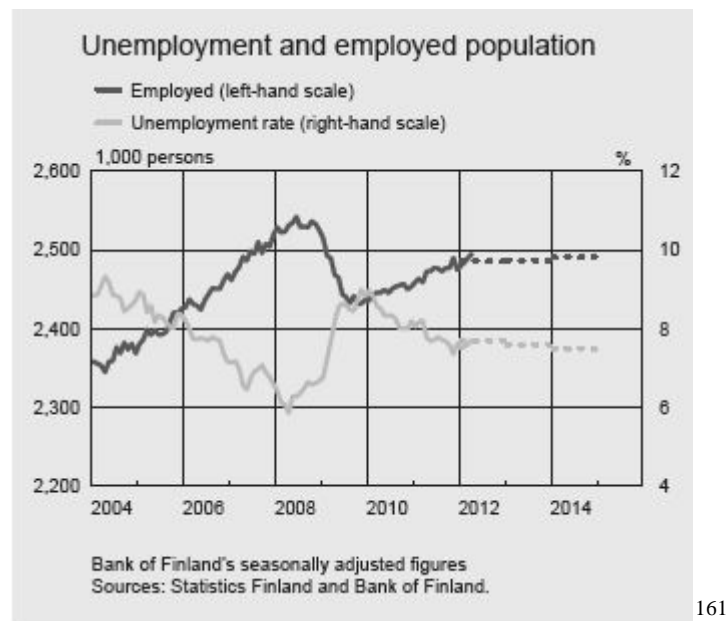
Before analyzing the cost competitiveness trend, it is necessary spending few words on the Finnish labour market. Employment improved in the trade and construction services and in publicly funded services (social and healthcare services). In 2012, the number of employed has increased by some 60000 persons compared to the 2009 data. However,

<sup>159</sup> OECD Economic Surveys Finland, Overview, February 2014, p. 9.

<sup>160</sup> Economic outlook 2014 – 2015, *Finnish Forest Sector*, Executive Summary, October 2014.

this improvement came to a halt during 2013 and 2014, registering the biggest job losses in industrial production and construction. By contrast, the trend unemployment rate in April 2014 was 8,5%, broadly unchanged from March and 0.3 of a percentage point higher than a year earlier. The trend employment rate in April was 68.4%, 0.2 of a percentage point lower than a year earlier.

**Figure 3.22** *Unemployment rate and employed population*



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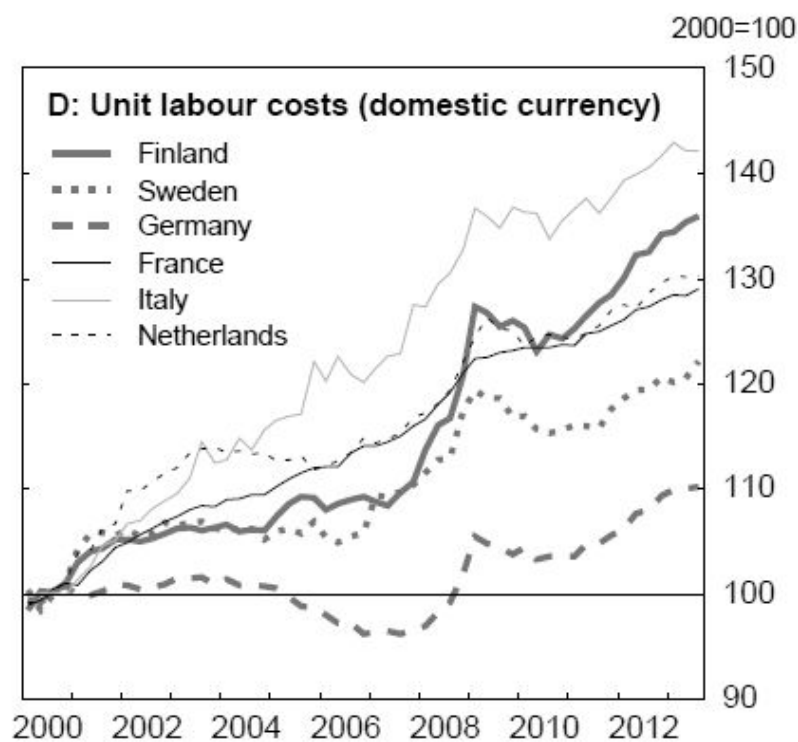
In 2015, no significant revival in manufacturing employment has been experienced, leaving the number of people employed unchanged from the previous year. Indeed, it is a matter of fact that, in the recession years, it has become harder for unemployed people to find work and periods of unemployment have grown longer. Moreover, it is intriguing underlying how unemployment growth is due less to new unemployed entering in the labor market and more to weaker employment opportunities for the already unemployed. One reason behind the shortage of new jobs is the lack of new firms, which creates the largest number of jobs. According to the forecast, the employment rate in 2016 will be 69.4%, still lower than before the onset of the financial crisis in 2008; in 2016, the average unemployment rate will come down to 7.8%, around 1 percentage point lower than in 2014<sup>162</sup>. Indeed, as the pace of output growth slowed,

<sup>161</sup> Bank of Finland, March 2012 Bulletin, Articles on Economy by Bank of Finland.

<sup>162</sup> Bank of Finland, March 2014 Bulletin, Articles on Economy by Bank of Finland.

there was no need for labour in industrial concerns, leading to a substantial decrease in labour demand over the crisis period. The slow pace of growth in output has led to a rise in labour cost, which started to exceed the productivity growth. Cost competitiveness will not improved in the future and unit labour costs in many of Finland's competitors will grow at the same pace or slower than in Finland. It is worth noting that, in recent years, cost competitiveness is contributing to the decline in Finland's current account. Indeed, unit labour cost rose exceptionally quickly in 2008 and 2009, due both to the rapid increase in wages and salaries, which, since the turn of the millennium, have risen faster in Finland than in the euro area average, and to the decline in productivity experienced in the recession.

**Figure 3.23** *Competitiveness has eroded*



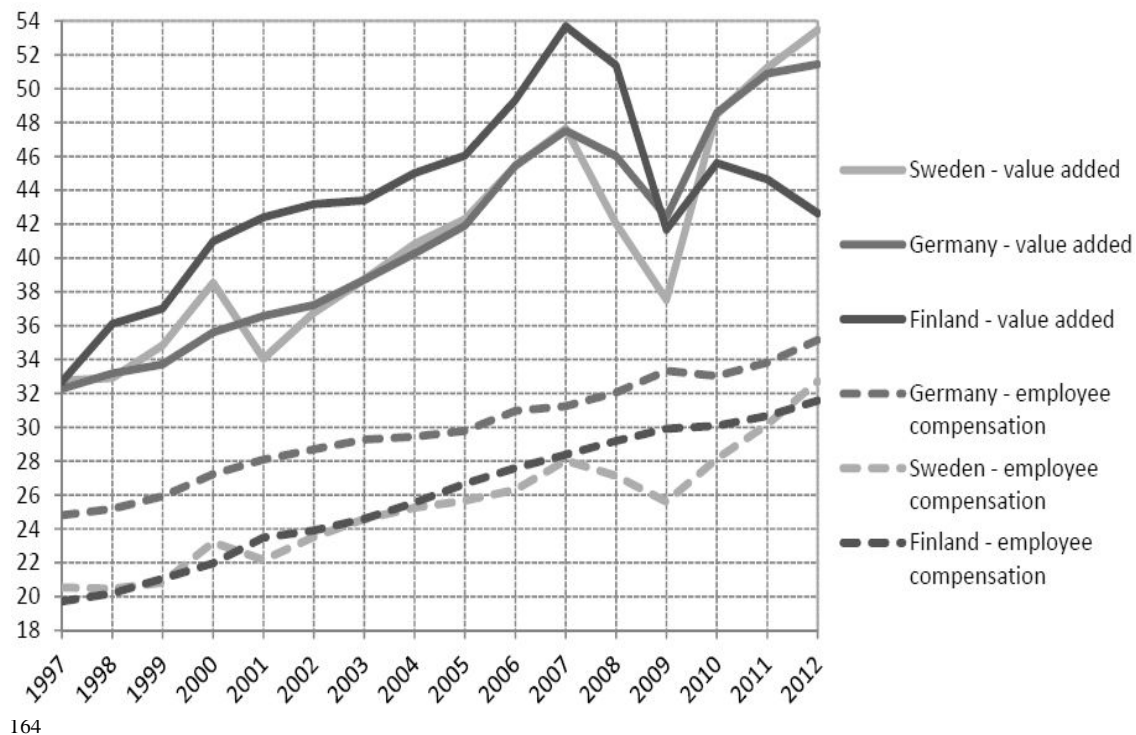
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Among the factors that have weakened the current account, the more rapid pace of growth in labour costs will continue to weigh on the current account in the immediate years ahead. Finland's problem is the collapse of the value of output (i.e. nominal gross value added) measured per hour worked, which is mainly due to the contraction of the

<sup>163</sup> OECD Economic Surveys Finland, Overview, February 2014, p. 10.

high margin electronics industry and is reflected in the rise in unit labour costs and decreasing profitability.

**Figure 3.24** *Manufacturing sector's gross value added and compensation of employees per hour worked at current prices*



Indeed, the favorable development of manufacturing's unit labour costs from 1997 to 2007 was based on the exceptionally fast productivity growth of the electronics industry which could afford salary increases. However, since 2007, the sharp declines in exports and output have reduced the output growth, increasing unit labour costs, and undermining measured competitiveness and profitability.

### 3.5 Possible solutions to foster growth

Finland ranked third in the World Economic Forum Global Competitiveness Index 2012 – 2013, behind Switzerland and Singapore and ahead of the other Nordic countries<sup>165</sup>. Nevertheless, growth enhancing measures are still the primary objective of Finnish

<sup>164</sup> Holmström B., Korkman, S., Pohjola, M., *The nature of Finland's economic crisis and the prerequisites for growth*, February 2014, p. 25.

<sup>165</sup> Schwab, K. *The Global Competitiveness Report 2012-2013*, World Economic Forum, Geneva, 2013.

government. Structural reforms and clearest possible plans are needed to correct structural problems, leading to an increase in production potential.

One of the most important area of intervention concerns labour market. Working careers have to start earlier and end later. It is worth noting that economic recovery and improving productivity will not remove the general government budget deficit which is largely due to the change in the population's age structure. The pension reform, which will be implemented in 2017 and that will raise the minimum retirement age from 63 to 65, is going to improve the economic outlook, but fiscal sustainability is necessary to bolster significant structural reforms. Fiscal consolidation cannot be avoided and the objective of bringing general government debt ratio onto a downward trajectory is a key priority<sup>166</sup>. To a certain extent, the reduction of the corporate tax rate is helpful: this will increase companies' profits, leading them to invest and employ in Finland. Differently, the real-estate tax is an economically efficient tax and the Finnish one is low by international standards: it should be raised and its base expanded. Hence, raising the rate of work participation must be viewed as a means in order to expand the tax base. Moreover, the government has to promote a higher degree of labour market adaptability, investing in education and labour mobility. In order to improve cost competitiveness, one element could be low nominal wage growth. Indeed, just before the global financial crisis, union-level wage agreements took place and generous wage increases were agreed upon, extending the contracts for two years. Taking in mind the great power exercised by the trade unions in the Nordic countries, it is not difficult to imagine that, once the recession started, Finnish wages did not change at all. As a consequence, in order to enhance competitiveness, wages should increase less in the future. Recently, in order to boost competitiveness, the social partners signed a centralized wage agreement with relative low wage increases.

In addition, one of the most important goals is improving the long-term sustainability of public finances. In 2013, the OECD estimate of the fiscal sustainability gap, which represents the additional finding needed to balance the public sector in the long run, amounted to around 7% of GDP. Wide ranging measures are needed to eliminate it in order to safeguard economic growth and the welfare state. Indeed, the new Government's programme includes aspirations and policies which focus on a social and

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<sup>166</sup> Bank of Finland, March 2015 Bulletin, Articles on Economy by Bank of Finland.

healthcare reform aimed at achieving cost savings. Finland's major strengths like education, infrastructure, reliable judicial system, must be preserved in order to convert them in real sources of economic profitability. For instance, Finland's education system is at a high level by international standards, but its education institutions need to be developed. To promote quality and internationalization of higher education establishments much remains to be learned from elsewhere and a continuous reallocation of resources is required. Competitions should be increased in services and construction, lowering the pace of growth in house prices and rents, improving the efficiency of the labour market in bigger cities.

Another fruitful sector is digitalization that could offer great opportunities to raise labour productivity. During the 1990s, Finland's success was strictly linked to the electronics industry and, although it has recently suffered a brutal standstill in the sector, it still maintains a comparative advantage in information technology services, praising those prerequisites that are indispensable for the utilization of digitalization. Government investments should take advantage of the opportunities offered by technology, creating new jobs to replace those lost through automation<sup>167</sup>. As far as innovation is concerned, start-ups could be important instruments for economic renewal. They should be seen as an important opportunity to raise productivity and create new jobs. Over the past decades, production of goods and services has become increasingly fragmented into global value chains (GVCs), taking advantages of huge opportunities to generate revenue in specific areas. In 2009, nearly 15% of Finnish exports were linked to participation in electronics GVLs. However, since the collapse of the sector, new opportunities for participation in GVCs should be found to revive output growth. "While traditional sectors like chemicals and metals are already well integrated into GVCs, developments in new areas, such as electronic games, bio-technologies and bio-medicine and green technologies, are promising"<sup>168</sup>. Moreover, as the national forest industry experienced difficulties to the contraction of the global paper market, bio-energy is a promising reconversion opportunity. As the other Nordic countries, Finland has always had climate change mitigation and green growth among its first priorities. The government is using many demand and supply-side instruments to

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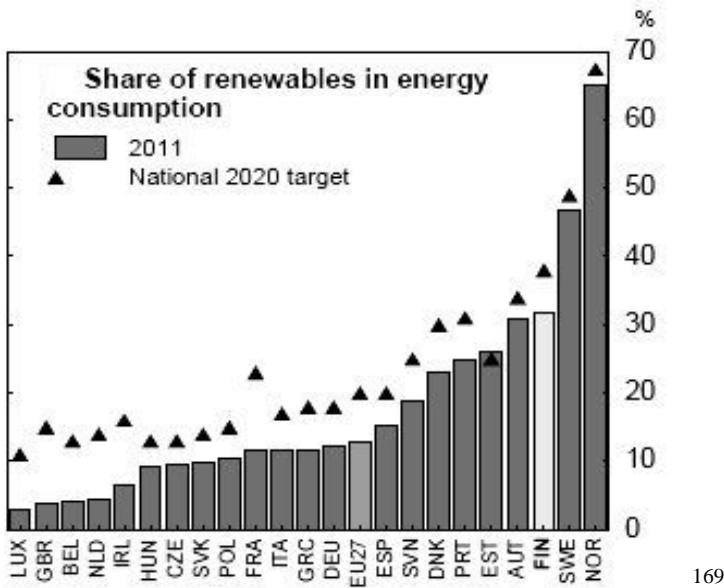
<sup>167</sup> Holmström B., Korkman, S., Pohjola, M., *The nature of Finland's economic crisis and the prerequisites for growth*, February 2014.

<sup>168</sup> OECD Economic Surveys Finland, Overview, February 2014.



promote energy efficiency, supplementing EU legislation. For instance, energy taxes are based on energy content, CO<sub>2</sub> and particle emissions, following international best practice. The share of renewable energy in the total energy production is about a third, tanking among the highest OECD countries, and Finland is going to meet its ambitious target of a share of 38% for renewable energy by 2020.

**Figure 3.25** Policies are promoting green growth



Indeed, the Nordic country is a strong innovator in clean technologies, and the Finnish government has always invested to promote green innovation, in partnership with public and private stakeholders. Clean technologies offer opportunities to foster economic growth, to boost exports and to create jobs.

To sum up, it could be affirmed that “areas for further action include streamlining R%D support, improving the efficiency of higher education through more performance-based allocation of resources, and boosting productivity by exposing sectors like health provision, network industries and retailing to more competition”<sup>170</sup>.

<sup>169</sup> Ivi.

<sup>170</sup> Ivi.

## **CONCLUSION**

With this thesis I wanted to examine in depth the business cycle experienced by Finland during the last 25 years. In particular, I wanted to show the strong relation that existed between the three economic scenarios that composed the time-span taken into consideration. In addition, my further objective was investigating Finland's capabilities to cope with the three different economic periods that I analyzed in details: the Great

Depression of the 1990s, the following economic recovery lasted until the first years of the 2000s, and the current economic crisis, that burst at the end of the first decade of the 21<sup>st</sup> century, severely impacting on Finland.

In order to demonstrate the connection between the three phases, I started with the Great Depression of 1990 – 1993. I have focused on the principal causes that originated it: the improper financial liberalization of the 1980s and the collapse of the Finnish-Soviet trade relation. However, the financial crisis that erupted, the macroeconomic actions gradually implemented and the subsequent financial integration, made Finnish economy more receptive, inclined to “Schumpeterian” values and determined to achieve a strong economic growth. As a result, in the second chapter, I have analyzed the phase of economic recovery that characterized Finland in the first decade of the new millennium. This was boosted by the process of European integration that the Nordic country undertook in 1994. Indeed, among the benefits of the single currency area there was not only the abandonment of the floating regime, and a subsequent reduction of speculative attacks, but also the cut of transaction costs and an increase in competition, leading to an obvious rise in exports. This was vital for a small open economy as Finland, which started to export to Europe products from its two strongest industrial sectors: paper industries and ICT. However, among the risks of the euro zone there was the possibility to go through devastating asymmetric shocks. In 2008, the crisis exploded in the United States affected Europe, leading to negative repercussions on each single European state. Hence, in the third chapter, I have focused on its effects on the Finnish economy. Indeed, in 2009-2010, Finland started to experience an economic downturn primarily caused by the collapse of export demand. The latter was due not only to the weak development of the global economy, but also to the lacking demand from the paper firms and the low level of competitiveness of the ICT sector experienced during the last years of the decade. All these factors affected Finnish GDP, exports, industrial production and labour market. Therefore, to conclude, I have dedicated few pages to possible solutions in order to foster growth, employment, labour productivity and the sustainability of public finances.

Furthermore, with the analysis of the sequence of the economic scenarios provided so far, I wanted to investigate Finland’s ability to handle the different problems and difficulties experienced in each single period. It can be argued that Finland proved to be

a country able to learn from its previous mistakes. The homemade depression of the 1990s was a traumatic experience for the Nordic country, but it gave to Finland the necessary strength to undertake a durable growth path, achieving a post-crisis growth rate higher than the EU average. In addition, the Great Depression, left behind several lessons and instructions, which proved to be essential during the 2008 economic crisis. At that time, a financial crisis was not a new experience for the Nordic economy, and, as a consequence, the mental shock caused by the recession was smaller than in many other countries. Finland did not underestimate the first signs of financial fragility, understanding the importance of regulation and supervision in reducing the risks of financial instability and basing the policy planning on a worst case scenario. Moreover, when the crisis erupted, Finland was part of the euro area, being characterized by low interest rates, balancing the increasing budget deficit with a low public sector indebtedness and strong public finances.

To conclude, going deeper in the Finnish business cycle of the last 25 years allowed me to find out how effectively each economic downturn might be due to different economic reasons and influenced by several factors. In particular, in the case of Finland, the process of integration in the European Union played a key role. It let the Nordic country to come out of the crisis, increasing its GDP and providing the needed tools to counterbalance the negative effects of the subsequent recession. However, integration could also have unfavorable consequences, to the extent that any negative economic trend experienced by one country have repercussions on the others. Hence, it clearly emerged that international coordination and the abandonment of the local way of thinking are definitely crucial to manage the different economic shocks of an integrated and composite system as the European Union.

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