Why was the Great Depression not so Great in the Nordic Countries? Economic Policy and Unemployment

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This article seeks to examine why the Nordic countries performed better than most other Western countries during the 1930s, when at the same time they experienced high unemployment levels. The conclusions drawn here are that the early abandonment of the gold standard and the adoption of a more inflationary monetary policy serve as the key explanation of the relatively mild Nordic depression and the rapid recovery. However, the paradox of persistently high unemployment remains. By means of international comparisons the article shows that this high unemployment can be explained by a positive shift in labour supply rather than by the scale of the depression. The analysis also reveals that Sweden performed more like continental Europe in respect of both the depression and the labour market.

1. Introduction

In the early 1930s the world saw the greatest and most devastating international depression in modern economic history. GDP fell dramatically in most capitalist economies, and in some communist countries, e.g. the Soviet Union, people were starving and suffering from undernourishment and malnutrition. In consequence of negative shifts in product demand, the demand for labour diminished too. The result was mass unemployment, underemployment and falling standards of living for millions of families who lost their regular income.

Despite these hardships, some groups maintained and even increased their standard of living, e.g. manufacturing and construction workers in many European countries, who did not lose their jobs. This was also the case for those employed in new service industries, which were, in fact, quite successful during the 1930s. Some economies also experienced a

surprisingly mild depression in the early 1930s compared with other economies.[1] Among the former were the Nordic countries, Denmark, Finland, Norway and Sweden. In this paper these economies are called The Nordic Four (N4). Admittedly, they faced a significant decrease in GDP and a corresponding increase in unemployment. However, the crisis was milder and shorter than in most other Western economies at the time, i.e. GDP and prices fell less and recovery was faster. However, despite the relatively rapid recovery in production, unemployment stayed persistently high throughout the decade.

The present paper seeks to explain this dilemma. We ask firstly why was the depression milder and shorter, and why was the recovery more rapid in the N4 than in most other countries? Secondly, given the good performance of the N4, why did unemployment persist at very high levels until the second world war?

To answer these two questions, the paper first presents a brief overview of the development of GDP, prices and unemployment in the N4 during the interwar period. In order to do this we present comparable PPP figures derived from an ongoing project, which aims to harmonise historical national accounts for all the Nordic countries, Denmark, Finland, Iceland, Norway and Sweden. This is done in order to give an overview of comparative levels of income and the scale of economic crises.

Unemployment figures for the years prior to the second world war are imprecise. Thus, the paper goes on to map the scale of unemployment in the Nordic countries during the 1930s by presenting new and revised figures for the countries in question. By doing this, the paper offers valid and comparable figures for unemployment in the overall labour forces of the N4.

Thirdly, the paper seeks to examine why the N4 had relatively mild and short depressions. This can, of course, be due to both market forces on the supply and demand side on the one hand, and to economic policy on the other. In this paper, we give an overall view of the effect of economic policy, with emphasis on the effect of monetary policy on the economic performance.

[1] P. Scholliers and V. Zamagni, *Labour's Reward: Real wages and economic change in 19th and 20th century Europe*, (London 1995).

Finally, the paper aims to explain the persistently high unemployment during the rapid Nordic recovery in the 1930s, considering both the demand and the supply aspects of the labour market. In order to answer our two questions, we use an international comparative approach with data from 17 western economies, including the N4.

2. The Nordic economic performance in the 1930s

Like all Western economics, the Nordic economies were seriously hit by the Great Depression of the 1930s. However, during the international crisis after the first world war, whereas the Nordic countries experienced a more severe set-back in the early 1920s than did most other Western countries, the crisis of the 1930s was milder than for most other economies. *Figure 1* describes the level and duration of the inter-war crises in the N4 in terms of reconciled GDP per capita in purchasing power parities (PPPs). The figures are estimated on the basis of the UN 2005 calculations of world-wide GDP figures expressed in PPPs of 2003, by prolongation back in time through harmonised historical national account series.[2] Thus, they give a representative and comparable view of both the level and the development of GDP per capita in the N4.

The chart reveals huge differences in per capita income in the Nordic countries during the period. Denmark was clearly ahead of Norway and Sweden, whereas Finland lagged significantly behind the others. The differences at the end of the period were lower in relative terms than at the beginning. However, they were still too high and the closing of the gap was too marginal to call the development convergence. Denmark remained by far the wealthiest of the Nordic countries, whereas Finland

[2] R. Hjerppe, *Finland's Historical national Accounts 1860-1994*, (Jyväskylä 1976), O. Krantz, Olle, *Swedish Historical National Accounts*, (Umeå 2001), O.H. Grytten, "The gross domestic product for Norway, 1830-2003" in Ø. Eitrheim, J.T. Klovland and J.F. Qvigstad (eds), *Historical Monetary Statistics for Norway 1819-2003*, (Oslo 2003), pp. 241-288, S.A. Hansen, *Økonomisk vækst i Danmark*, (København 1977), pp. 237-260. For alternative GDP figures for Sweden, however, basically in line with those used here: R. Edvinsson, *Growth, Accumulation, Crisis: With New Macroeconomic Data for Sweden 1800-2000*, (Stockholm 2005).

remained the poorest. It took Finland twenty years to obtain the same per capita income level as Denmark had in its worst recession year in 1918. The level of Denmark's lowest point during the post-war depression in the early 1920s was not permanently reached in Norway and Sweden until the mid-1930s. As for Finland, they did not reach the same level until after the second world war.

Furthermore, according to the chart the economic problems in the N4 must have been greater in the period during and after the first world war than during the 1930s. *Table 1* reports the decline in GDP per capita between their peak and bottom years during the main inter-war business cycles.

In all four countries, the greatest recession hit during wartime, with falls between 13.5 and 34.7 per cent in per capita GDP. Denmark, Norway and Sweden were all neutral, and experienced similar declines. As for Finland, the situation was dramatically worse. This was basically due to the Russian involvement in the first world war. Finland did not directly take part in the war. However, the Russian occupying power did. And parts of Finland were occupied by Russian armed forces during the war. After the parliamentary majority declared the country independent from Russia in December 1917, the Finish civil war during the spring of 1918 again forced the Finish economy to shrink significantly.

Denmark, Sweden and, in particular, Norway were severely hit by the post-war depression of the early 1920s. The crisis occurred both as a result of the international depression, which followed the over-heating of the economy up to the late summer of 1920, and as a consequence of a sharp reorientation from an inflationary to a deflationary monetary policy in order to restore the par silver values of the Danish, Norwegian and Swedish currencies.

In Finland, the wartime crisis had been so great that the country, in fact, experienced moderate growth in the early 1920s. In addition, Finland did not depend on the severely depressed British economy as did the other three. Finally, Finland did not run a strong deflationary monetary policy during the early 1920s.

The great depression of the 1930s was surprisingly mild in all the N4 countries, with declines in GDP per capita of 3.6 to 6.5 per cent. At the same time GDP per capita fell by more than 10 per cent in Western Europe

and more than 30 per cent in the United States and Canada.[3] The Nordic performance during the Great Depression is compared to the performance of 13 major Western powers (W13) in *Table 2.*

As seen from the table, GDP in the Nordic countries shrank moderately compared to most other countries during the Great Depression. Furthermore, Nordic development seems to match the British performance, as GDP per capita in the UK fell about as much as in the Nordic countries.

In conclusion, compared to other Western economies, the Nordic countries were hit moderately by the Great Depression of the 1930s. In Denmark and Norway, the crisis of the early 1930s seems to have been milder than that of the early 1920s, whereas in Sweden they were of a similar dimension. As for Finland, both the early 1920s' and the 1930s' recessions were relatively mild, whereas the economy was hit devastatingly during the war years.

3. From inflation to deflation

The recessions are also mirrored in the evolution of prices. As a consequence of an inflationary fiscal and monetary policy, a positive shift in aggregated demand for goods and services took place between 1914 and 1920. Together with a negative shift in supply, due to the lack of important products, this gave rise to inflation and the depreciation of the national currencies. The rapid financial boom during 1919 and until the summer of 1920 fuelled inflation. Thereafter, the rapid inflation turned into deflation in Denmark, Norway and Sweden, whereas Finland saw strong inflation in 1921 and a more moderate inflation in the rest of the 1920s.[4] *Figure 2* reports consumer price developments for the N4 for the period 1920-1939.

For Denmark, Norway and Sweden, this chart clearly reveals that deflation was severe both in the 1920s and in the 1930s. Finland, however, had inflation in the 1920s and then strong deflation in the 1930s. Towards

[3] A. Maddison, *The World Economy: Historical Statistics*, (Paris 2003), pp. 62-68 and p. 88.
[4] A. Maddison, *Phases of Capitalist Development*, (Oxford 1982), pp. 238-239, O.H. Grytten, "A Consumer Price Index for Norway 1516-2003", Ø. Eitrheim, J.T. Klovland and J. F. Qvigstad (eds), *op.cit*, (2004), pp. 47-98.

the last years of the 1930s, all four countries saw moderate inflation. The deflation of the early 1920s can be explained by both the great international post-war depression and by the deflationary monetary policy practised in Denmark, Norway and Sweden. This policy was monitored by the central banks in order to lower prices and thereby raise the value of their currencies back to their par gold values as they were set in the 1870s. This policy was deemed necessary after six years of high inflation and monetary depreciation between 1914 and 1920.[5]

In the early 1920s Finland, however, greatly devastated by domestic and international conflicts, had given up the par gold value of the mark. Unlike their Nordic neighbours, the Finns practised an inflationary monetary policy which led to high inflation.[6] After the post-war recession in the early 1920s, deflation was temporarily turned into inflation in Denmark and Norway, following a short break in the tight monetary policy. A new deflationary policy in the following couple of years, however, compensated for this new inflation. In the early 1930s, deflation was significantly higher in Finland than in the other three economies, which, unlike Finland, had experienced deflation for a decade.

4. Unemployment

The 1930s are known as the decade of mass unemployment. Indeed, unemployment was high. However, writers on the interwar labour market have shown a tendency to exaggerate the problem. In the 1930s, unemployment figures were more or less taken from randomly available sources. Major sources were unemployment schemes run by labour insurance bodies, which, for the most part, were connected to trade unions. These were later often taken as representative figures for the scale of unemployment between the two world wars.

[5] H.C. Johansen, *The Danish Economy in the Twentieth Century*, (London 1987, L. Schön, *En moderen svensk ekonomisk historia: tillväxt och omvandlingunder två sekel*, (Stockholm 2001), pp. 25-32, T.J. Hanisch, 'Om virkninger av paripolitikken' *Historisk tidsskrift* 58.3. (1979), pp. 239-267.

[6] R. Hjerppe, *The Finnish Economy 1860-1985. Growth and Structural Change*, (Helsinki 1989), pp. 65-66.

However, their validity can, indeed, be questioned. In the first place, the sources cover only part of the total labour force, i.e. insured trade unionists, most often working in industries, sectors and firms most sensitive to business cycles. Hence, they tend to exaggerate the overall rates of unemployment. During the last decades, these figures have been revised for several countries in order to arrive at representative and comparable data for unemployment throughout the whole economy.[7] These new estimates reveal that unemployment rates were still high during the 1930s, but far below previous assumptions.

Estimates of interwar unemployment with higher coverage have been calculated for Denmark, Norway and Sweden.[8] However, some of these need revision, which has been done here. As for Finland, however, we still lack comparable data for the labour force throughout the whole economy. Thus, we try to present such estimates here, along with revised figures for the other three Nordic economies.

Denmark

For Denmark, Svend Aage Hansen has suggested a downward adjustment of the union figures by dividing them by a factor of two.[9] Niels Kærgaard, however, has proved Hansen's rates to be too high as an indicator of total unemployment.[10] The adjustment factor should rather fluctuate between two and three annually, depending on the business cycle, with the highest factor during recessions. Given the similarities in development between the Danish and the Norwegian economies and labour markets during the interwar period, it seems reasonable to use the annual relative differences between the Norwegian trade union and total unemployment rates as adjustment factors for Denmark. By adopting the Norwegian ratio,

[7] A. Maddison, *op. cit.*, (1982), p. 206, W. Galenson and A. Zellner, "International Comparison of Unemployment Rates", W. Galenson and A. Zellner (eds), *The Measurement and Behaviour of Unemployment*, (Princeton 1957), p. 455.

[8] A. Maddison, *op. cit.*, (1982), p. 206, S.A. Hansen, *op. cit.*, (1977), p. 231, p. 327, O.H. Grytten, 'The Scale of Interwar Unemployment in International Perspective' *Scandinavian Economic History Review* 43.2. (1995), pp. 226-250.

[9] S.A. Hansen, *op. cit.*, (1977), pp. 231, 327.

[10] N. Kærgaard, 'Færre ledige – utopi eller virkelighed?', *Social forskning* 12, (1992), pp. 5-6.

we can calculate representative and comparable total labour force unemployment rates for Denmark between the two world wars.

Finland

Finland leaves us with a difficult challenge. There were no consistent and regular records for unemployment throughout the economy in Finland during the 1930s. In his work on making interwar unemployment figures comparable, Angus Maddison presents a series of figures concerning Finnish unemployment between the two world wars as a percentage of the entire labour force. The figures applied by Maddison were originally compiled by Kaarina Vattula.[11] However, for the purpose of international comparison they seem to be too low.

Jarmo Peltola has calculated total unemployment with the help of several available sources. For the first years of the 1930s, the figures seem fairly reliable. However, before and after the early 1930s, the sources are too poor to arrive at any satisfactory figures. The highest official record is of February 1932 when 91,788 persons were out of work. The National Unemployment Committee estimated between 110,000 and 120,000 unemployed in late 1931.[12] On this basis, Peltola concludes unemployment reached a peak of 8.4 per cent in 1932.[13]

By comparing Peltola's estimates with Maddison's and Vattula's for 1932, we arrive at a multiplier of 1.45. By using this on the established figures we achieve better series. However, for the 1920s the numbers still seem too low, as unemployment records were almost non-existent during those years. Thus we use the more reliable series for 1918 published by Peltola and use the 1918 multiplier, i.e. 2.5, on the Maddison/Vattula figures.

However, these calculations produce Finnish unemployment rates which are far below those for the other Nordic countries. This can basically be explained by the loss of manpower, and hence an inward shift in labour

[11] A. Maddison, *op. cit.*, (1982), p. 206.
[12] R. Hjeppe, *op. cit.*, (1989), pp. 102-103.
[13] J. Peltola, "Why did the Unemployment Rate Vary? Finnish Interwar Unemployment in a Comparative International Context", T. Myllyntaus (ed), *Economic Crises and Restructuring in History: Experiences of Small Countries*, (St. Katharinen 1998), p. 207.

supply during the wars up to 1918, by the rebuilding of the country, and by the huge farm population. With more than 60 per cent of the labour force occupied in agriculture, this was a sector less affected by unemployment during recessions.[14]

Norway

Our Norwegian figures are taken from work on the standardisation of international unemployment figures from the mid-1990s.[15] These were later revised in 2000.[16] The Norwegian figures regarding unemployment in the labour force as a whole are calculated on the basis of a detailed unemployment census with national coverage in connection with the population-census of December 1930.[17] Some figures are added on the basis of an unemployment census taken from records in the public labour exchanges (public labour offices) in January 1931.[18] Together, these two censuses give us a precise number of unemployed persons in Norway at the turn of the year (1930-1931).

By using population and employment data from Statistics Norway we arrive at annual numbers for labour force and employment with December 1930 as the base.[19] We then subtract the annual number of employed persons from the annual size of the labour force to find the numbers of unemployed in the 1930s. For the 1920s, we have compiled data from labour exchanges and local unemployment reports kept at the National Archive and aggregated them up to national figures.[20] Unreliable reports, with, according to the labour inspector and his staff, too high numbers are omitted.

[14] R. Hjerppe, *op. cit.*, (1989), pp. 95-106.
[15] O.H. Grytten, *op. cit.*, (1995), pp. 226-250.
[16] O.H. Grytten and C. Brautaset 2000, 'Family Households and Unemployment in Norway During Years of Crisis: New Estimates 1926-1939' *The History of the Family* 5.1. (2000), pp. 23-53.
[17] NOS IX. 61, *Population Census for Norway. December 1st 1930*, (Oslo 1935), pp. 14*-15*.
[18] NOS VIII. 165, *Arbeidsledighetstellingen 15. januar 1931 ved de offentlige arbeidskontorer*, (Oslo 1931), pp. 11-31.
[19] NOS XII. 163, *National Accounts 1865-1960*, (Oslo 1965), pp. 328-329.
[20] National Archive of Norway, Unemployment reports given to the Inspector of Labour 1919-1941.

Sweden

As for Sweden, the sources limit us to a more simplified approach, i.e. estimating the difference between unemployment rates in the trade unions and in the economy as a whole. Compared to the census taken in March 1936, unemployment rates among insured trade unionists were 2.4 times higher than for the total.[21] If we assume a constant factor for every year, we arrive at adjusted figures for Sweden.

However, this method gives too high rates for the early 1920s, as the ratio between trade union and overall unemployment was not constant, but obviously significantly higher in the early 1920s than in 1936. Thus, we change the adjustment factor for these years with the relative difference of the similar Norwegian ratio of trade union to total unemployment in the early 1920s compared to the following years.[22] Hence, we use 3.2 as a downward adjustment factor for Sweden in 1921 and 1922, and arrive at revised unemployment rates for the entire Swedish labour force between the two world wars.

5. Overall unemployment in the economies of the N4

Table 3 clearly reveals significant revisions of the unemployment figures in order to make them representative for the entire labour force. The new estimates suggest that Denmark and Norway had higher unemployment rates than Finland and Sweden during the 1920s, whereas the relative increase in unemployment was higher in the two latter in the 1930s. However, Denmark and Norway seem to have had the highest unemployment rates, whereas Finland, as explained above, naturally had the lowest rates of the N4 because of its huge agricultural sector.

Table 4 reports unemployment rates in 15 Western countries, including the Scandinavian countries Denmark, Finland, Norway and Sweden. They prove puzzling, because when the depression in the Nordic countries remained relatively mild in the 1930s, unemployment was high and close

[21] A. Maddison, *Economic Growth in the West: Comparative Experience in Europe and North America*, (London 1964), pp. 216-222.
[22] O.H. Grytten, *op. cit.*, (1995), pp. 241-245.

to the Western average. In other words, the scale of unemployment does not seem to reflect the scale of the depression.

6. Why was there a relatively mild depression in the Nordic countries?

Two central questions can then be connected to the economic performance of the Nordic countries in the 1930s. Firstly, we may ask why they experienced a milder depression than most other Western countries. Secondly, given the relatively sound performance, why did unemployment stay persistently high in the Nordic countries during the 1930s? In this section we will focus on the first of these questions.

Several factors can be put forward to explain the favourable performance of the Nordic economies in the 1930s. Some may be linked to market forces and others to economic policy.

Market explanations

From the point of view of the market, it is difficult to explain the good Nordic performance by high international demand, because world trade sank by two thirds in the early 1930s. It is a fact that the Nordic countries experienced a lower contraction in exports than most other economies during the depression years, and thereafter they experienced higher export growth and a higher degree of import substitution.

The relatively good Nordic performance has been analysed as Schumpeterian supply-side matter.[23] During the years of depression, entrepreneurs had to come up with innovations in order to survive. New technology was used in manufacturing industry. Production became more efficient and was better matched to actual demand. Nordic manufacturing industry was thus able to operate on larger markets. In addition, cost-efficient production gave competitive advantage to Nordic companies. Thus, exports increased and import substitution took place.

[23] E. Dahmèn, *Svensk industriell företaksombet*, (Lund 1950), L. Schön, "Industrial Crises in a Model of Long Cycles" in T. Myllyntaus (ed), *Economic Crises and Restructuring in History: Experiences of Small Countries*, (St. Katharinen 1998), pp. 404-409, F. Sejersted, *Vekst gjennom krise. Studier i norsk teknologihistorie*, (Oslo 1982).

The problem with this explanation is that, despite entrepreneurial activity in the 1930s, this decade did not see the breakthrough of new manufacturing industries. The preceding decades saw most of the breakthrough of new capital-intensive manufacturing industry, whereas it was not until after the second world war that new industry begun in the 1930s enjoyed its breakthrough. Despite this counterargument, we do see signs of creating new industries during the Great Depression, and we find industrial areas, e.g. Western Norway, where there was a significant growth in new industries such as furniture, bicycles and lighter consumption industries. It is also argued on an empirical basis that the Nordic economies did better than most other economies in respect of both exports and import substitution.[24]

We shall not, therefore, dismiss the possibility of a Schumpeterian contribution to the way out of the 1930s' crisis. But, rather, we will seek to examine other possibly more important factors for the recovery. In this article we take a closer look at economic policy.

Market regulation

During the depression, the Nordic countries took measures to regulate markets in order to solve the problem of overproduction. The governments of the Nordic countries in particular intervened with respect to agriculture. Several writers on Nordic economic history have investigated the market intervention policy of the 1930s.[25] The conventional conclusion seems to be that agriculture benefited from the intervention. The supply surplus was reduced by the creation of cartels controlling production, by subsidies to decrease stocks and increase import tariffs, all in order to obtain higher product prices than the equilibrium price in a free market.

In Norway, parliament decided on a compulsory addition of butter to margarine as an important means of getting rid of the excess milk

[24] E. Bjørtvedt and C. Venneslan, Veien ut av krisa', *Historisk tidsskrift* 71.2. (1998), p. 106, O.H. Grytten, "Monetary Policy and Restructuring of the Norwegian Economy during Years of Crises, 1920-1939" in T. Myllyntaus (ed), *op. cit.*, (1998), pp. 119-121.
[25] S.A. Nilsson, K. Hildebrand and B. Øhngren (eds), *Kriser och krispolitikk i Norden under mellankrigstiden*, (Uppsala 1974).

production.[26] Paradoxically, Denmark prevented the addition of margarine to butter to solve a similar problem.[27] Since milk was the major agricultural product, these measures were efficacious from the producers' point of view. On the demand side, higher prices on necessary milk products caused a loss to consumers. However, during a time of deflation and later moderate inflation, they probably did not pay too much attention to this negative effect on their consumption possibilities.

We do not question that the protected industries benefited from government intervention. However, there must have been a consumption loss, due to higher prices and less efficient equilibrium solutions than in the free markets. This has also been demonstrated by quantitative empirical research.[28] However, the marginal consumption propensity was low. Thus, it is not obvious that the consumption loss led to any significant reduction in demand for other products. Hence, promoting key industries may have caused net multiplies effects for the rest of the production side of the economy.

Fiscal policy

During the 1930s, the Social Democrats had gained governmental power in all four Nordic countries included in this analysis. Denmark was the first: after a short-lived Social Democratic government led by Thorvald Stauning in the mid-1920s, the Social Democrats gained power together with the Radical Liberals from 1929 to 1940, again under Stauning's leadership. In Sweden, Per Albin Hansson became the first prime minister of a Social Democratic government which, beginning in 1932, lasted for 44 years. Johan Nygaardsvold became the first Norwegian Social Democrat to form a permanent government after an agreement with the Farmer's Party in 1935. As for Finland, the Social Democrats first

[26] E. Hovland, 'Smør og margarin blir et fett', *Historisk tidsskrift* 58.3. (1979), pp. 305-325.
[27] V. Dybdahl *et al*, *Krise i Danmark. Strukturændringer og krisepolitikk i 1930'erne*, (København 1974), E.H. Pedersen, *et al*, "Nordens jordbruk under världskrisen 1929-1933" in S.A. Nilsson, K. Hildebrand and B. Øhngren (eds), *op. cit.*, (1974), pp. 155-207.
[28] O.H. Grytten, "The Consumer's Burden – What did regulations of the Norwegian milk market in the 1930s cost consumers?" in B.L. Basberg, H.W. Nordvik and G. Stang (eds), *I det lange løp*, (Bergen 1997), pp. 143-164.

gained governmental power under the leadership of Väinö Tanner in 1926-1927. Thereafter, they were kept out of office by several coalitions until 1937, when they joined a Centre-Left coalition.

During the first decades after the second world war, it was a common opinion among writers on Scandinavian economic history that the Keynesian revolution gained momentum in the Scandinavian countries during the Social Democratic takeover in the 1930s. Thus, active fiscal policy led to an improvement in the business cycle during the last years of the 1930s.

From the 1970s onwards, however, this view has been challenged by many scholars.[29] It is indeed difficult to trace any persistent deficit budgeting policy during the 1930s in any of the Nordic countries. There was a significant growth in the public sector. However, this increase was levelled out by higher taxes. Thus, in this respect, the net effect on demand was neutral. On the other hand, the marginal propensities to consume and save differed in the public and in the private sector. Empirical evidence from Norway suggests that the marginal propensity to consume was higher in the public sector than in the private sector.[30] Thus, *cet. par.* the relative growth in the public sector had a positive impact on demand. Nevertheless, due to budget discipline and moderate multiplier effects, fiscal policy in Norway under Labour Party rule in the 1930s was neutral.[31] In conclusion, fiscal policy seems to have played a minor, if any, role in the relative good performance of the Nordic economies during the 1930s.

Monetary policy

We are then left to investigate possible effects caused by monetary policy. After the UK was forced to abandon the gold standard on 21 September 1931, Norway and Sweden followed six days later. Denmark

[29] M. Larsson, *En svensk ekonomisk historia*, (Stockholm 1991), pp. 104-121, H.C. Johansen, 'The Danish Economy in the Crossroads between Scandinavia and Europe', *Journal of Scandinavian History* 18.1. (1993), p. 43, F. Hodne, *The Norwegian Economy 1815-1970*, (Trondheim 1975), pp. 441-445.

[30] H.W. Nordvik, 'Finanspolitikken og den offentlige sektors rolle', *Historisk tidsskrift* 58.3. (1979), pp. 223-236.

[31] M. Værholm, *En empirisk etterprøving av den norske finans- og pengepolitikken i mellomkrigstiden*, (Bergen 2003), pp. 58-71.

clung to the gold standard for another two days, whereas Finland suspended gold redemption on 12 October. This early un-intentional move away from the gold standard made the N4 some of the first countries to abandon their tight monetary policy, a situation which was the exact opposite of that in the 1920s.

Whereas other countries concentrated on clinging to the gold standard, the suspension countries were able to implement a more inflationary monetary policy. This had positive effects on both the domestic markets and the foreign sector. The domestic effect of abandoning the gold standard was that of leaving a deflationary for an inflationary monetary policy. The money supply did then increase, and thus there was a positive shift in aggregate product demand. This caused an increase in production. The real interest-rate effect was of great importance in this respect. Abandoning the gold standard and monitoring a more inflationary monetary policy resulted in the central banks' lowering their interest rates. This resulted in higher economic activity. Deflation was thus turned into moderate inflation. Along with lower interest rates, this caused real interest rates to fall significantly. Together with more optimism and higher future expectations for the economy, lower interest rates gave important incentives to invest.

The transition to a more inflationary monetary policy also had important effects on the foreign sector. Abandoning the gold standard was followed by a depreciation of currencies. If all else remained constant, this meant relatively lower prices on products from the depreciation countries and thereby an improvement in cost efficiency. Thus, both an increase in exports and import substitution would naturally take place. Foreign trade statistics definitely reveal that the export performance of the N4 was quite good in the 1930s. This is clearly shown in *Figure 3*.

The chart clearly reveals that the Nordic economies saw a more moderate decline in exports than the western economies in general and than the global economy during the crisis. Furthermore, exports grew relatively rapidly in the N4 during the recovery period in the second part of the 1930s. However, it must be emphasised that the rates of growth in exports fluctuated significantly among the Northern economies. Finland and Norway had the most impressive performance. Sweden saw a

significant fall in exports during the first years of the international trade crisis, but did clearly better than most other countries thereafter, whereas Denmark struggled to regain the level of foreign trade throughout the 1930s, as reported in *Figure 4*. This implies that the increase in foreign trade cannot sufficiently explain the relatively good GDP performance of all the N4.

Import substitution can be mirrored directly in imports as a share of the GDP. However, when comparing high and low performance economies, this measure may be irrelevant. Good economic performance allows an economy to increase its imports. And moving from depression to growth makes foreign trade increase its relative share of GDP. Thus, relative import substitution is not easy to measure. Since the Nordic economies performed better than most other countries, their imports also increased compared with those of most other economies.

The rapid Nordic revival after the international crises also made the share of foreign trade increase compared with those still fighting the depression. A way of measuring relative import substitution would then be the balance of trade. If imports decreased in relation to exports in the Nordic countries compared to other countries, this give us a clue to import substitution. *Table 5* reports exports and imports of goods for 17 Western economies from 1929 to 1935 as percentages of GDP in current prices.

The table clearly shows that the Nordic countries, and in particular Finland and Norway, were good performers when it comes to trade surplus as an indication for import substitution. The relative development can be seen more easily in a histogram. *Figure 7* shows the trade surplus of goods as a share of the GDP in 1931, 1933 and 1935 relative to the trade surplus of goods as a share of the GDP in 1929. The histogram indicates that a huge import substitution took place in the N4 compared to the rest of the Western world between 1929 and 1933. Virtually all this effect was removed after 1931, in other words after the abandoning of the gold standard. When the Scandinavian countries then joined the Sterling Area in 1933, monetary policy became tighter and the rapid depreciation of the Scandinavian currencies with regard to other currencies stopped. Thus, the relative import substitution advantage declined, as is reflected in the histogram.

It should also be noted that the level of import substitution varied significantly among the N4. This is evident from *Table 6*, which reports the relative trade surpluses as a share of the GDP for the four Nordic countries.

6. International examination

The effects of monetary policy on both the domestic and the foreign sector can be analysed more carefully by a more detailed comparison of key aggregates. Work by Barry Eichengreen already confirms that, internationally, monetary policy played an important role regarding the depth of and the recovery from The Great Depression.[32]

Here we use data from the same 17 Western economies as used above. The domestic effect of an inflationary monetary policy is admittedly difficult to measure empirically, as the Keynesian view would be that a positive shift in product demand is mirrored in a positive effect on GDP. Thus, using this reasoning, empirical "evidence" would be that inflationary monetary policy caused GDP to grow because product demand, measured as GDP, grew. Hence, we have to find other ways of examining this possible relationship.

One possible relationship could be through international comparisons of GDP performance and exchange rates. What happened to domestic markets in countries that abandoned the gold standard compared with those which still adhered to it? Since deflationary monetary policy went hand in hand with depreciation policy, we can use exchange rates as a measure of inflationary or deflationary monetary policy. Therefore, was the performance of depreciation countries superior to that of the appreciation countries?

In the same way, we can examine the effects of the foreign markets by looking at the relationship between exchange rates and exports, and between exchange rates and import substitution. This is all done in *Table*

[32] B. Eichengreen, *Elusive Stability: Essays in the History of International Finance 1919-1939*, (Cambridge 1993).

7, which reports the estimated simple log-log regression coefficients between the development of exchange rates as an independent variable, and GDP per capita, exports and relative trade surpluses as dependent variables. The table also reports some simple regressions with exchange rates as an independent variable and the other three as dependent.

Table 7 clearly emphasises the importance of monetary policy to economic growth and export performance. Those countries, which abandoned the gold standard in the early 1930s, i.e. the Sterling Area, including Scandinavia, were good performers, when we see the falling performance along with the level of tight monetary policy, making the US and the Gold Block suffer the most. As for import substitution, the results are not that evident. This may partly be a result of the problem of isolating and identifying the effects of import substitution in our data. However, on the basis of the above examination, it seems pretty clear that the economies which abandoned the gold standard early benefited from this as far as production, exports and import substitution were concerned. Thus, an unintended shift of monetary policy from being tight to becoming inflationary, thus allowing the exchange rates to depreciate significantly, is partially responsible for the N4 performing better than most other economies in the 1930s. The change in policy made the recession milder and shorter, and the recovery faster.

7. Why did unemployment stay high?

Despite the fact that the N4 were relatively good performers during the 1930s, unemployment remained persistently high into the second world war. We do not argue that the labour market situation developed favourably in the Nordic countries compared with those countries which still maintained their currency fixed to gold at par value. It has been argued in several articles that those economies which abandoned the gold standard early enjoyed more favourable consequences in unemployment than the countries which clung longer to the gold standard.[33]

[33] B. Eichengreen, *op. cit.*, (1990), pp. 215-238.

8. Explanation based on demand

Unemployment increased significantly during the big drop in output in the early 1930s. Thus, there is clearly a Keynesian explanation for this dramatic increase in unemployment, both in the Nordic countries and in the rest of the Western world. However, the decline in unemployment after the recession was not symmetrical with its rise during the years of crisis. Unemployment did not fall rapidly during the rapid recovery which began in 1933. The reasons for this are not easy to explain. A common view among historians has been that the deep depression, with its negative shift in demand, was followed by a correspondingly negative shift in employment in the 1930s. This caused unemployment to remain high. As already mentioned, we agree that this is a plausible explanation for the recession years during the first part of the decade. However, it can hardly explain the high levels during the rest of the decade. If lack of product demand and, thus, lack of labour demand was the case, there should have been no growth or merely marginal growth in employment even during the recovery period. But this was simply not the case. In fact employment increased rapidly in the Nordic economies after the trough of the recession was reached in mid- and late 1932.

The number of annual man-years performed in the N4 economies increased rapidly in the 1930s. According to Angus Maddison, the annual employment growth rate for the N4 between 1929 and 1938 was over 1.2 per cent. In comparison, the employment growth rate in the golden era of the 1950s and 1960s, with only one percent recorded unemployment rates, was less than 0.5 per cent.[51] Admittedly, the growth rates differed significantly between the N4 group in the 1930's, with Denmark, Finland and Norway all close to 1.5 per cent and Sweden with only minor growth. For the N4, minus Sweden, this, in fact, makes the 1930s one of the decades with the highest expansion in employment ever. Hence, we cannot use a Keynesian demand explanation as a

[51] A. Maddison, *op. cit.*, (1982), p. 210.

relevant measure to explain the persistently high unemployment rates in the last six or seven years before the second world war.

9. Explanation based on supply

If we cannot find plausible explanations on the demand side, we have to examine the supply side of the labour market. Can any event on the supply side explain the persistently high level of unemployment in the N4 during the 1930s, despite their relatively good performance? To be able to answer this question, we must first look at the development of the labour force. Again, we find a rapid growth between 1928 and 1939, with an annual growth rate of almost 1.2, against 0.6 per cent during the golden era in the 1950s and 1960s. As in the employment situation, growth in the N4's labour force between 1929 and 1938 is one of the highest ever recorded.[35] Thus, it seems that the persistently high unemployment rates in the second half of the 1930s can be explained by a significant positive shift in the supply of labour. However, here, too, it must be pointed out that Sweden followed a somewhat different pattern from the rest, in that the growth of the Swedish labour force was quite moderate compared with that of the other N4 countries.

Monetary policy serves as an explanation for the development of unemployment, i.e. those economies maintaining a tight monetary policy experienced an increase in unemployment compared with those with a less tight monetary policy.[36] However, it cannot explain why, despite relative improvement, unemployment stayed persistently high in the depreciation countries. In fact, some of the depreciation countries still had significantly higher unemployment rates at the end of the decade than some of the gold standard countries. Admittedly, the rates were converging, but some of the good performers still had the highest unemployment rates. Hence, we examine the growth of the labour force in different economies in order to ascertain its effect on the level of

[35] A. Maddison, *op. cit.*, (1982), p. 209.
[36] B. Eichengreen, *op. cit.*, (1990), pp. 215-238; O.H. Grytten, *op. cit.*, (1999), pp. 93-124.

unemployment. A possible relationship between unemployment and growth in the labour force is shown in a plot diagram in *Figure 6* below.

As we read the chart, those countries with the highest growth in labour supply clearly tended to have the highest unemployment rates in the 1930s. This also happened to be the case for Denmark, Finland and Norway, which were three of the countries with the highest growth in labour supply during the 1930s. Sweden, however, saw a significantly lower growth in the labour force. This helps to explain why unemployment stayed lower in Sweden than in Denmark and Norway, despite Sweden's relatively inferior performance during the decade.

Why then did the labour force grow so rapidly in Denmark, Finland and Norway? A major explanation is provided by the change in immigration policy in North America. In 1924 the United States introduced limitations on immigration. Consequently, the number of immigrants from the N4 was reduced by about 50 per cent. Furthermore, in 1930 an almost total immigration ban was introduced. Canada followed in the footsteps of the US, and so only a few hundred people moved from the N4 to North America every year during the 1930s.

In fact, positive net migration from North America to the Scandinavian countries was seen in this decade. In consequence of this shift from strong net emigration to net immigration to the N4, about 50,000 excess workers were thrown onto the Nordic labour markets annually. During the decade these constituted an excess supply of the labour supply of about half a million, or about seven per cent of the initial labour force.[37]

To obtain comparable figures, the unemployment rates for Belgium and Austria are adjusted downwards by a half, and for Australia by a quarter.

In addition, during the inter-war years the birth rates fell dramatically. Whereas the Nordic birth rate reached about 25 per 1,000 inhabitants in 1919, it was about 14 per 1,000 in 1935.[38] Consequently, the number of persons over 15 compared with the number of children increased, as did

[37] M. Tuveng, *Arbeidsløshet og beskjeftigelse i Norge før og under krigen*, (Bergen 1948), pp. 80-88; O.H. Grytten, *An Empirical Analysis of the Norwegian Labour Market, 1918-1939: Norwegian Interwar Unemployment in International Perspective*, (Bergen 1994), pp. 268-289.
[38] NOS XII. 245, *Historical Statistics 1968*, (Oslo 1969), pp. 45-47.

the number of persons over 15 compared to the total population. Thus, labour supply increased compared with consumers, and caused unemployment.

In conclusion, we see that, despite the rapid recovery of the Nordic countries, their persistently high unemployment rates seem to be a demographic phenomenon, due to the immigration ban to North America from 1930 onwards and to low birth rates in the 1920s and particularly in the 1930s. These two factors made the labour supply increase significantly compared with the number of consumers. Hence, unemployment stayed high due to a strong positive shift in labour supply.

10. Summary

This paper raises two questions. Firstly, why did the Nordic countries, Denmark, Finland, Norway and Sweden (N4) have a milder and shorter depression and a more rapid recovery than most other Western economies during the 1930s? Here we seek to ascertain the impact of economic policy on the performance. Secondly, given that the N4 performed better than most other economies, why did Nordic unemployment persist on a high level throughout the decade?

The paper seeks to answer these questions by means of an international comparative approach, where key macro and monetary policy indicators of the N4 are compared with the recoved of 17 Western countries. In order to carry out this analysis, revised figures of the total labour force unemployment are presented.

The early abandoning of the gold standard in September and October 1931 on the part of the N4 stimulated both the domestic and the foreign sectors of the Nordic economies. Thus, the crisis became milder and shorter and the recovery more rapid than in most other countries. The paradox of rapid recovery and persistently high unemployment can be explained basically by two demographic factors. The immigration ban into North America channelled half a million excess workers into the Nordic labour markets, and thus a positive shift in labour supply took place. In addition the combination of a dramatic decline in birth rates and the halt in overseas emigration of young adults resulted in a relative

increase in labour supply compared with the number of consumers. Hence, unemployment stayed high despite the fact that the business cycle was better than in most other countries.

The paper finally concludes that Sweden was somewhat different from the other N4 countries, with a slower recovery. However, unemployment in Sweden was not higher in the second half of the 1930s than in the total N4. This was due to lower growth in the Swedish labour supply.

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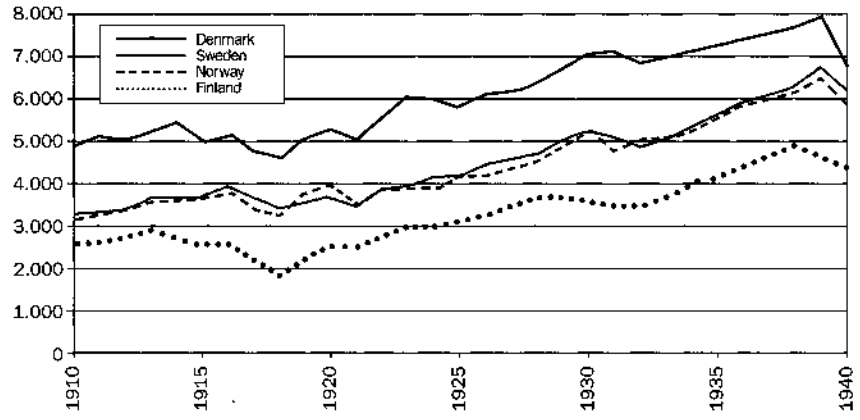
Appendix

Why was the Great Depression
not so Great in the Nordic Countries?
Economic Policy and Unemployment

FIGURE 1. Gdp per capita in ppp 2003 us$ for the N4 1910-1940



Source: UN 2005, Krantz 2001, Hjerppe 1996, Grytten 2004, Hansen 1977, Maddison 2003.

TABLE 1. Scale of decline in per capita GDP during years of crises for the N4

Peak to bottom	Denmark	Finland	Norway	Sweden
World War I	1914-1918	1913-1918	1916-1918	1916-1918
	-0.159	-0.347	-0.146	-0.135
Post-World War I	1920-1921	1920-1921	1920-1921	1920-1921
	-0.041	0.018	-0.108	-0.057
Great Depression	1931-1932	1929-1933	1930-1932*	1929-1932
	-0.036	-0.063	-0.044	-0.065

Norway's GDP was lower in 1931 than in 1932. However, this was a consequence of large-scale labour conflicts in 1931.

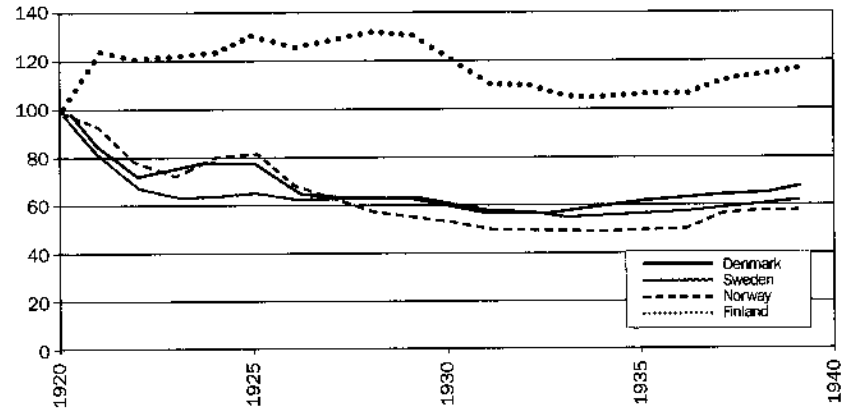
Sources: UN 2005, Statistics Denmark 2005, Statistics Finland 2005, Statistics Norway 2005, Statistics Sweden 2005, Krantz 2001, Hjerppe 2001, Grytten 2004, Hansen 1977, Maddison 2003.

TABLE 2. Fall in GDP per capita during the Great Depression

	Fall in GDP per capita	High	Low
Australia	20.6	1925	1931
Austria	23.4	1929	1933
Belgium	10.0	1928	1934
Canada	34.8	1928	1933
France	13.3	1929	1935
Germany	25.0	1929	1932
Italy	6.4	1929	1934
Japan	9.3	1929	1931
Netherlands	16.0	1928	1934
New Zealand	17.8	1929	1932
Switzerland	6.7	1929	1935
UK	6.6	1929	1931
USA	30.8	1929	1933
W13	17.0	1929	1933
Denmark	3.6	1931	1932
Finland	6.3	1929	1932
Norway	4.4	1930	1932
Sweden	6.5	1929	1932
N4	5.2	1930	1932

Sources: Maddison 2003, Krantz 2001, Grytten 2004.

FIGURE 2. Consumer price indices for the Nordic countries 1920-1939 (1920=100).



Source: Maddison 1982 , Grytten 2004b.

TABLE 3. Unemployment as per cent of total labour force and trade union unemployment schemes for the N4 1920-1939

	Denmark	Finland	Norway	Sweden
			Total labour force	
1920	2.5	2.8	1.7	2.2
1921	7.6	4.5	6.8	8.3
1922	8.5	3.5	7.5	7.2
1923	6.7	2.5	5.6	5.2
1924	5.3	3.0	4.2	4.2
1925	6.3	5.0	5.7	4.5
1926	7.4	4.0	8.7	5.0
1927	7.9	3.8	8.9	5.0
1928	7.7	3.8	7.9	4.4
1929	7.0	4.1	7.0	4.2
1930	5.7	5.8	7.0	4.9
1931	8.2	6.7	10.2	7.0
1932	10.9	8.4	10.6	9.3
1933	9.3	7.6	10.8	9.6
1934	7.4	6.4	10.3	7.5
1935	7.7	5.4	9.9	6.2
1936	8.9	3.9	8.7	5.2
1937	8.0	3.8	7.3	4.5
1938	6.7	3.8	6.8	4.5
1939	5.8		5.7	3.8
			Trade union unemployment schemes	
1920	6.1		2.3	5.4
1921	19.7		17.6	26.6
1922	19.3		17.1	22.9
1923	12.7		10.6	12.5
1924	10.7		8.5	10.1
1925	14.7		13.2	11.0
1926	20.7		24.3	12.2
1927	22.5		25.4	12.0
1928	18.5		19.1	10.6
1929	15.5		15.4	10.2
1930	13.7		16.6	11.9
1931	17.9		22.3	16.8
1932	31.7		30.8	22.4
1933	28.8		33.4	23.2
1934	22.2		30.7	18.0
1935	19.7		25.3	15.0
1936	19.3		18.8	12.7
1937	21.9		20.0	10.8
1938	21.5		22.0	10.9
1939	18.4		18.3	9.2

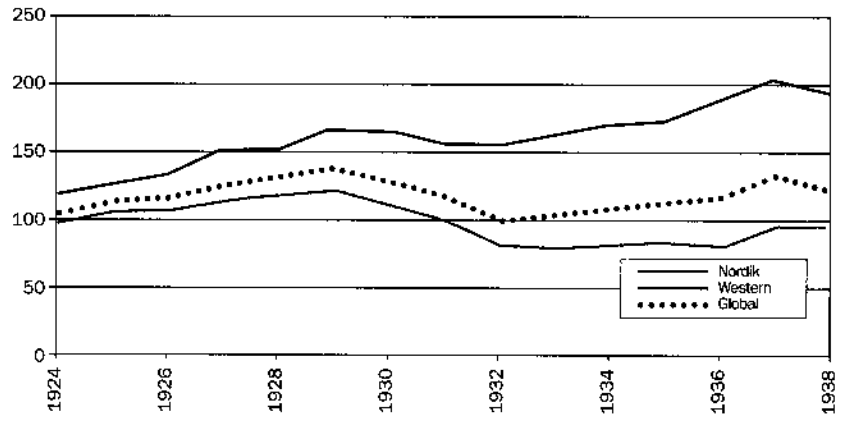
Sources: Grytten 1995, p. 247, Grytten and Brautaset 2000, pp. 47-50 and present estimates.

TABLE 4. Unemployment as per cent of labour force

	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
Australia	8.2	13.1	17.9	19.1	17.4	15.0	12.5	9.9	8.1	8.1
Austria	5.5	7.0	9.7	13.7	16.3	16.1	15.2	15.2	13.7	8.1
Belgium	0.8	2.2	6.8	11.9	10.6	11.8	11.1	8.4	7.2	8.7
Canada	2.9	9.1	11.6	17.6	19.3	14.5	14.2	12.8	9.1	11.4
France	1.2	2.0	2.2	3.0	4.0	4.5	5.0	4.5	4.0	3.7
Germany	5.9	9.5	13.9	17.2	14.8	8.3	6.5	4.0	2.7	1.3
Italy	1.7	2.5	4.3	5.8	5.9	5.6	5.4	5.2	5.0	4.6
Netherlands	1.7	2.3	4.3	8.3	9.7	9.8	11.2	11.9	10.5	9.9
Switzerland	0.4	0.7	1.2	2.8	3.5	3.3	4.2	4.7	3.6	3.3
UK	7.5	11.2	15.1	15.6	14.1	11.9	11.9	9.4	7.8	9.3
USA	3.2	8.7	15.3	22.9	20.6	16.0	14.2	9.9	9.1	12.5
Average W11	3.5	6.2	9.3	12.5	12.4	10.6	10.1	8.7	7.3	7.4
Denmark	7.0	5.7	8.2	10.9	9.3	7.4	7.7	8.9	8.0	6.7
Finland	4.1	5.8	6.7	8.4	7.6	6.4	5.4	3.9	3.8	3.8
Norway	7.0	7.0	10.2	10.6	10.8	10.3	9.9	8.7	7.3	6.8
Sweden	4.2	4.2	7.0	9.3	9.6	7.5	6.2	5.2	4.5	4.5
Average N4	5.6	5.7	8.0	9.8	9.3	7.9	7.3	6.7	5.9	5.4

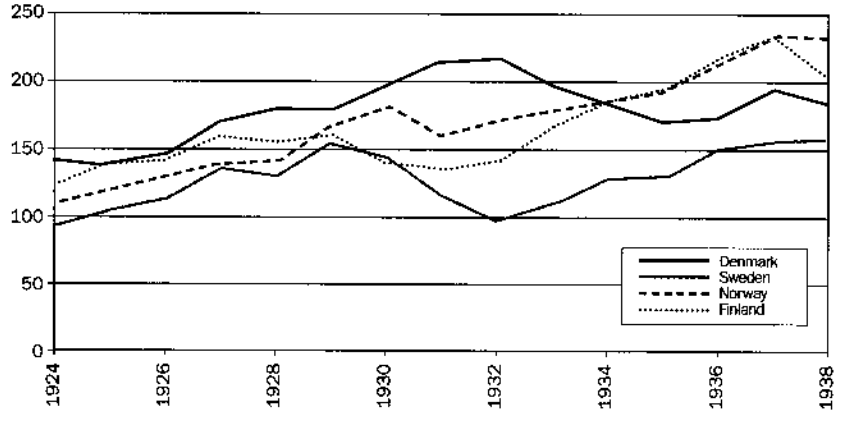
Sources: Maddison 1982, p. 206, Grytten 1995, p. 247, Grytten and Brautaset 2000 and present calculations.

FIGURE 3. Export volumes (1913=100)



Source: Maddison 1995.

FIGURE 4. Export volumes for the N4 (1913=100)



Source: Maddison 1982, Krantz 2001, Hjerppe 1996, Grytten 2004.

TABLE 5. Exports and Imports of goods percentage of GDP

	1929	1931	1933	1935	1929	1931	1933	1935
	Exports				Imports			
Australia	8.1	7.0	7.8	7.3	7.6	4.8	5.1	5.8
Austria	18.1	12.5	8.6	9.8	27.0	20.9	12.7	13.2
Belgium	39.3		27.9	31.8	46.8		28.4	34.4
Canada	19.2	12.8	15.3	17.2	21.2	13.4	11.5	12.8
France	14.5	10.2	7.4	7.6	16.8	14.1	11.4	10.3
Germany	17.0	16.4	8.6	5.9	16.8	11.5	7.4	5.8
Italy	10.6	9.2	6.1	4.7	15.3	10.5	7.5	7.0
Japan	16.0	11.8	16.4	19.6	17.0	13.5	17.2	19.6
Netherlands	30.9	24.0	15.8	15.2	42.6	34.5	26.2	20.9
New Zealand		34.4	37.3	36.1		26.5	25.3	29.0
Switzerland	21.0	14.7	10.4	10.2	27.3	24.6	19.5	16.0
United Kingdom	17.2	9.8	9.8	10.2	28.7	21.6	17.9	18.0
USA	5.1	3.2	3.0	3.2	4.3	2.8	2.7	3.3
West	17.0	12.5	10.1	10.4	21.70	16.7	13.4	12.7
	1.000	**0.735**	**0.598**	**0.611**	**1.000**	**0.771**	**0.618**	**0.585**
Denmark	27.9	23.5	21.1	19.0	29.6	26.3	22.3	20.2
Finland	24.3	20.9	22.9	22.7	26.4	16.2	17.0	19.4
Norway	17.3	12.2	14.4	13.9	24.7	22.4	17.2	18.9
Sweden	18.8	13.1	13.6	13.8	18.5	16.7	13.8	16.0
N4	22.1	17.4	18.0	17.4	24.8	20.4	17.6	18.6
	1.000	**0.789**	**0.815**	**0.786**	**1.000**	**0.823**	**0.709**	**0.751**

Relative shares compared to 1929 in brackets, where 1929=1.
* Australia, Belgium and New Zealand are excluded from the mean.
Source: Grytten 1999, p 119.

FIGURE 5. Relative changes in trade surplus as share of GDP

Source: Source, Grytten 1999, p. 119.

TABLE 6. Trade surpluses as share of GDP for the N4

	Denmark	Finland	Norway	Sweden	Nordic	West
1931	-0.046	0.246	-0.202	-0.206	-0.033	-0.037
1933	0.003	0.298	0.136	-0.023	0.107	-0.020
1935	-0.001	0.199	0.038	-0.131	0.035	0.026

Source: Grytten 1999, p. 119.

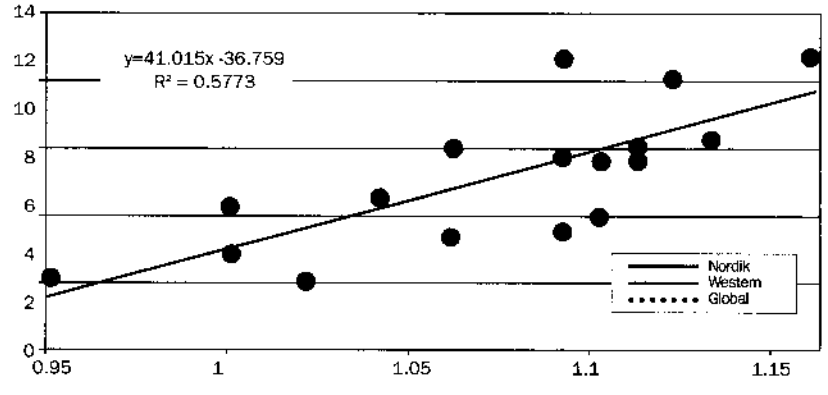
TABLE 7. Estimated relations between exchange rates and key macro economic indicators

Simple log-log regressions with exchange rates (lnE-1) as independent variable.

Dep var	Intercept	ß1	Std error	R^2
ln∂Y(1933/1929)	5.584	-0.251	0.113	0.247
		(-2.216)**		
ln∂Y(1935/1929)	5.232	-0.159	0.087	0.181
		(-1.822)*		
ln∂X(1933/1929)	8.669	-0.999	0.216	0.589
		(-4.636)***		
ln∂X(1935/1929)	8.874	-1.068	0.157	0.755
		(-6.796)***		
ln(∂X/M)(1933/1929)	5.644	-0.225	0.211	0.071
		(-1.067)		
ln(∂X/M)(1935/1929)	5.345	-0.171	0.114	0.131
		(-1.503)		

* Significant at 10 per cent level.
** Significant at 5 per cent level.
*** Significant at 1 per cent level.

FIGURE 6. Plot diagram of average unemployment rates and growth in labour force



(LF1938/LF1929) 1929-1938.
Sources: Present calculations, Maddison 1982, p. 209 and Grytten 1994, p. 247.
To obtain comparable figures, the unemployment rates for Belgium and Austria are adjusted downwards by a half, and for Australia by a quarter.