WORKING PAPER

THE DISEASE THAT BECAME A MODEL

The Economics Behind the Employment Trends in the Netherlands

by Ronald Schettkat and Jan Reijnders

Working Paper No. 120
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Economic Policy Institute

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Ernest Berkhout, Marieke van Ginkel, Loes van der Heijden, Christelien Timpers, Maiumi Sadler, and Esmée Schilte provided assistance in the preparation of this report. We also received invaluable comments from our colleagues Joop Hartog of the University of Amsterdam; Wiemer Salverda of LOWER (Low-Wage European Research Network), University of Groningen; Antoon Spithoven; John Schmitt; participants in the "Polder Model" conference in Utrecht; and two anonymous referees.

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INTRODUCTION

The Dutch economy is being heralded around the world these days for its combination of strong employment growth, low inflation, falling public budget deficits, low inequality, and strong social welfare policies.[1] The recent attention is particularly remarkable given that, not long ago, the Dutch prime minister at the time declared that "this country is sick." Back then, no one thought of the Netherlands as a trend-setter.

What are the factors that have turned the "Dutch disease" into a model? Recent history suggests caution in exploring this question, since the attraction of national economic models is usually short lived. Not long ago, the business press lavished praise on Japan; today, Japan is widely perceived to be a basket case, and what were described as strengths of the Japanese model less than a decade ago are now seen as weaknesses. Germany, the economic dynamo of the 1980s, is now regarded as "sclerotic." The Asian tigers, which some predicted would surpass the U.S. and European economies within our lifetimes, now need cash infusions from the International Monetary Fund (IMF). Boosters of the U.S. model, the current darling of the world business press and policy makers, might well take pause.

Explanations for the Dutch success are controversial. They range from macroeconomic considerations—the consolidation of public budgets, aggregate wage restraint, and real depreciation of the guilder against the German mark, with resulting trade surpluses—to microeconomic factors—increased labor market flexibility, rising wage inequality, and social security reforms. In any case, the model creates problems for the currently popular view that decentralized free market economies are the best and only way to raise employment and income. In the Netherlands, the approach to economic policy is anything but laissez-faire; rather, policy derives in large part from formalized consensus building through two institutions. In May 1945, shortly after the liberation of the Netherlands, Dutch employers and unions founded the bipartite Labor Foundation (Stichting van de Arbeid) to discuss economic issues. In 1950, the Dutch government established the Social Economic Council (Sociaal Economische Raad, or SER), an official advisory council for the government to promote the development of consensus (see Appendix). The SER is structured as a tripartite institution, comprising unions, employers, and so-called "crown members," who are nominated by the head of state to provide economic and policy expertise.[2]

The Labor Foundation in particular is celebrated by many as the institution that made the Wassenaar agreement possible, and the Wassenaar agreement is widely considered to be a seminal event behind the evolution of the Dutch model. In late 1982, Dutch unions, led by the current prime minister Wim Kok, and the employers' association reached an agreement on (1) wage restraint, (2) working-time reductions to stimulate employment growth, and (3) active employment measures. After that time, real wages rose only modestly in the Netherlands and employment started to grow, culminating in the recent worldwide attention to the "Polder model."[3]

Nevertheless, a major debate has developed around the contribution of these consensus-building institutions to the current success, with views varying from those that attribute almost all of it to consultation within the Labor Foundation framework to those that deny the foundation any role at all.

Before the Wassenaar agreement, unemployment had risen dramatically and the public debt had skyrocketed. Elections in autumn 1982 brought Ruud Lubbers into government, and he was prepared to intervene seriously in wage setting.[4] His efforts brought the unions and the employers' associations into the Wassenaar agreement. The unions feared that in the absence of an agreement they would lose influence, and so they opted for wage restraint to avoid having wages eventually set directly by the Lubbers government.[5] A separate part of the plan, designed to gain credibility, had the Nederlandse Bank (the Dutch central bank) fix the exchange rate

of the guilder relative to the mark in 1983. Since then, the Netherlands and Germany have operated a quasi–currency union. This "fixed" exchange rate, at least with respect to the mark, has led some to argue that Dutch unions did not deliberately choose a policy of wage restraint but rather that they had no other option, because otherwise unemployment would have risen even further.[6] However, even if it was external pressure that led to the Wassenaar agreement, it was the contacts established through the Labor Foundation that made quick communication between unions and employers possible. After all, another solution to external pressure could have been that employers' associations and unions ended up engaging in conflict.

Before discussing the links between economic outcomes on the one hand and economic policies and social institutions on the other, we will first attempt to determine where the Dutch economy has succeeded and where it has failed. We will try to determine whether developments in the Netherlands have been special in any way and, if so, starting when.

SOME INSTITUTIONAL CHARACTERISTICS OF THE DUTCH ECONOMY	
Social security	
Health insurance	Universal coverage.
Sickness compensation	Sickness benefits are at least 70% of earnings. Collective agreements increase the replacement rate to 100%. Since 1996, employers are responsible for the first year of sickness benefits.
Unemployment insurance	Compulsory for all workers. Replacement rate is 70% of earnings (up to a maximum).
Pension system	Tax-financed basic pension for every Dutch citizen. Additional pension scheme depending on work history.
Disability insurance	Compulsory for all workers.
Minimum income	Single individuals may receive social assistance amounting to 70% of the legal minimum wage.
Labor market regulation	
Employment protection	Dismissals require approval of Labor Office.
Minimum wage	Yes.
Union density	29%
Coverage by collective bargaining	70%
Tax rate	48.9%
Coordination, main institutions	Labor Foundation (*Stichting van de Arbeid*), Social Economic Council

We analyze Dutch economic development from a long-run perspective and contrast the Dutch experience to developments in the United States and Germany. We choose these countries for comparison for several reasons. The Netherlands seems to share the success in employment growth with the United States, but not the trend in inequality. Germany has an institutional structure similar to that of the Netherlands, but it has failed to create jobs. Furthermore, the Netherlands and Germany have maintained a de facto currency union since 1983; as a result, the Dutch have suffered as much from German monetary policy as the Germans have, but the Dutch have somehow been more successful in creating employment.

We then examine the empirical evidence on the relationship between government policies and job creation. First, we present detailed employment figures by industry and a breakdown of wages by different labor contract categories. We then make use of "integrated sectors" (input-output) analysis to identify the demand components responsible for employment growth. An important focus of this analysis is how export demand worked its way through the economy. At the same time, we also identify how much of Dutch service sector employment is derived from manufacturing employment (intermediate services) and how much resulted from changes in the composition of domestic demand.

Although many observers see wage restraint as the main cause of employment growth, the relationship is not as clear-cut as is often claimed. Of course, wage restraint should improve the balance of trade, and this in turn should raise employment, given a constant nominal exchange rate. The domestic effects of wage restraint, however, are more ambiguous. Wage restraint does lower prices and thereby raises internal demand. At the same time, wage restraint can also lead to stagnating incomes, which dampen the positive price effect.[7] In addition, wage restraint may also improve profits (i.e., if markets are not competitive and cost advantages are not passed through), leading to higher investment.[8] David Soskice (1997) and others have argued that aggregate wage flexibility (restraint)—not relative wage flexibility—has been the key to the Dutch employment miracle. Indeed, the wage inequality measures published by the Organization for Economic Cooperation and Development (OECD) show only slight increases in wage inequality, far smaller than the trends in the United States. However, the OECD indicators hide substantial developments in the wage structure. The minimum wage has fallen substantially, and employment growth is concentrated in industries paying wages below the average.

ECONOMIC TRENDS IN THE NETHERLANDS VS. THE U.S. AND GERMANY

This section reviews recent developments in the Dutch economy and compares them to data for the U.S. and German economies in order to facilitate judgements on the relative performance of the Dutch economy. We start with labor market indicators, since the discussion of the "Dutch Miracle" has focused primarily on labor market performance. We then provide indicators for production, trade, income, investment, and other performance measures. We conclude this section with an overview of the development of the industry structure.

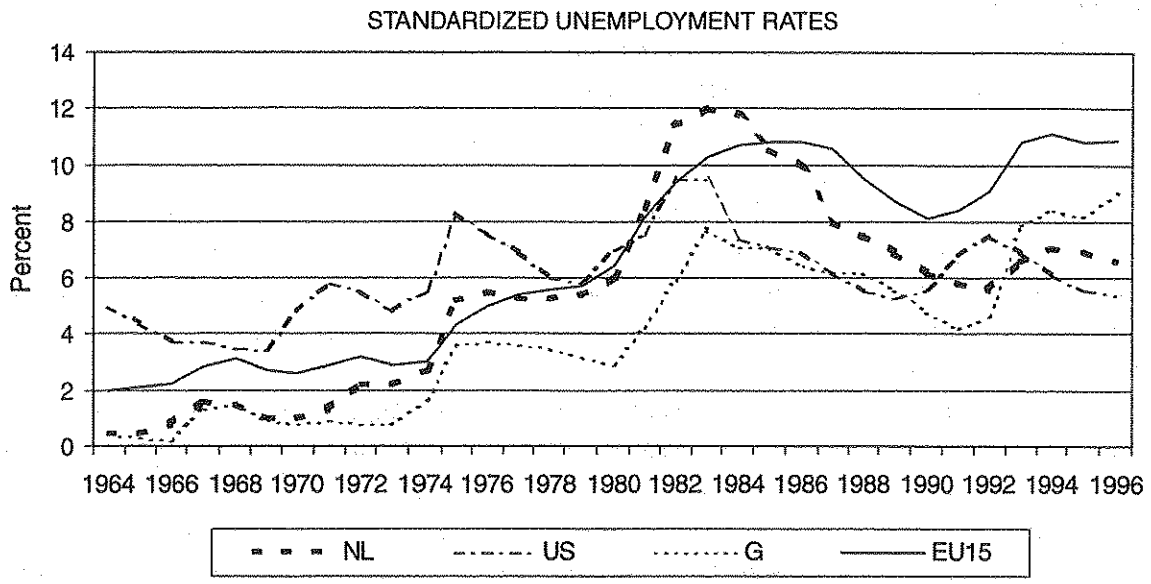
Labor market trends

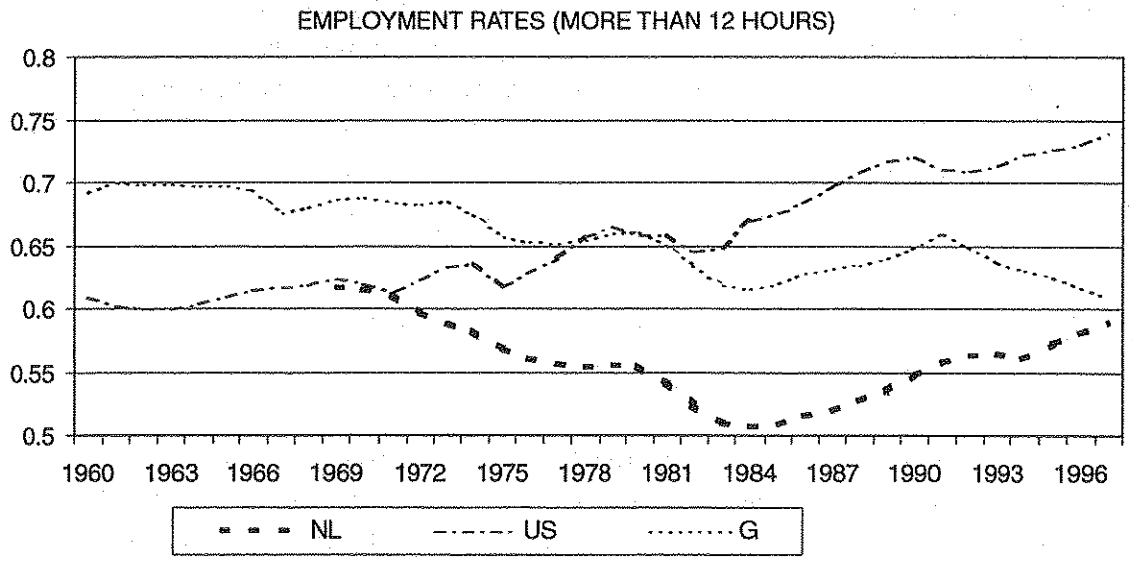
Unemployment

Standardized OECD unemployment rates (top panel of **Figure A**) show the trend that brought the Dutch Miracle to the front pages of international newspapers. In the mid-1990s, as the German unemployment rate and that of the European Union's 15 economies were rising, the Dutch unemployment rate declined. By contrast, prior to the mid-1990s the Dutch unemployment rate generally tracked the German rate.[9] The graph also illustrates

FIGURE A

Unemployment rates and employment-to-population ratios in the Netherlands, the United States, Germany, and the EU





Source: OECD.

clearly the "Dutch shock" in the early 1980s, which led to the 1982 Wassenaar agreement. From 1979 to 1982, unemployment rates doubled from 6% to 12% and the number of unemployed persons more than tripled, from 194,000 in 1979 to 612,000 in 1983. This development shook the Netherlands and created strong pressures for change that manifested themselves in the Wassenaar accord between Dutch employers and union associations. Broader measures show much higher levels of unemployment in the Netherlands than do these standardized

rates. When workers in subsidized jobs, recipients of means-tested welfare benefits, early retirees, and workers receiving disability pensions are counted as unemployed, the broad unemployment rate in 1993, in full-time equivalents, rises to about 26% (of which just under half were receiving a disability pension). In 1970, only 8% of the population would have been unemployed by the same broad measure (with just over half of this group on disability pensions).

Employment

The biggest difference between the Netherlands and the rest of Europe is the rapid growth in Dutch employment-to-population ratios, or employment rates. Employment-to-population ratios may be a better indicator for the comparison of labor market performance between countries than unemployment rates, because unemployment rates are more sensitive to measurement problems than are employment rates. As with the standardized unemployment rates, German and Dutch employment rates follow generally similar trends (albeit at different levels) from the late 1960s through the mid-1980s. But in the mid-1980s the Dutch rate starts to rise more rapidly than the corresponding German rate (Figure A, bottom panel). From that time on, in fact, Dutch employment rose even faster than it did in the United States. Nevertheless, even in 1996, the Dutch employment rate was still about 15 percentage points below the U.S. rate and about 10 percentage points below the German rate. For the whole period, the Dutch series is uncorrelated with the U.S. series, but this reflects a strong negative correlation through 1986 and a positive correlation thereafter.[10] Low employment rates create problems for European-style social welfare states: low employment rates are costly for public budgets because low participation is linked to high transfers.

Employment rates by age groups

Table 1 shows how the Netherlands tried to solve rising unemployment in the 1970s and early 1980s. Early

TABLE 1
Employment rates by age groups

		Men		Women		Total
		25–54	55–64	25–54	55–64	15–24
1983						
Netherlands	(>1 hour)	85.1%	50.5%	38.0%	12.5%	38.5%
NW-Europe*	(>1 hour)	88.7	56.8	57.8	28.4	48.8
EU	(>1 hour)	89.1	58.5	51.1	25.0	44.6
U.S.	(>1 hour)	86.1	65.2	62.0	39.4	55.6
1996						
Netherlands	(>1 hour)	88.7	40.7	62.5	19.4	54.1
	(>12 hour)	87.7	39.2	53.0	14.0	39.5
NW-Europe*	(>1 hour)	86.1	47.3	67.4	29.6	45.3
EU	(>1 hour)	84.8	46.4	61.7	24.4	38.3
U.S.	(>1 hour)	87.9	64.7	72.8	47.9	57.6

Source: Sociale Nota 1998, p. 27.

* Weighted average Belgium, Denmark, Germany, France, United Kingdom, Netherlands, Sweden.

retirement, including disability pensions, was the prime measure used to reduce labor supply, and these policies mainly affected labor force participation of men (**Figure B**). In the 55-64 age group only half of men were employed in 1983; this rate dropped to 40.7% by 1996. These rates are much lower than the comparable employment rates in the United States (stable at about 65%) and even lower than the European average. Low participation rates have been identified as the principal problem facing the Dutch economy; they cause transfer payments to rise, which, in turn, raises labor costs and thus lowers employment, which, in the next round, raises transfers, and so on (WRR 1997).

Employment rates by gender

Figure B illustrates that the positive trend in the overall employment rate in the Netherlands is caused by a rise of both the female and male employment rates, but clearly female participation is the main force behind the overall numbers. The German data illustrate the cause of low employment rates in Germany and much of the rest of Europe: male employment has declined while female employment has risen only slightly. In the United States, by contrast, male employment rates have fallen only slightly, while female employment has increased continuously.

Wages

Average real wages in Dutch manufacturing changed little between the mid-1970s and the mid-1990s, largely mirroring the experience of the United States (see **Figure C**). Over the same period, real wages in German manufacturing more than doubled. This is the familiar picture, often found in the business press and usually linked to employment trends. Indeed, the relationship is striking. In both the United States and the Netherlands real wages were basically flat, while employment increased strongly. In Germany real wages rose sharply, while employment stagnated. Simple economic reasoning suggests that low wages stimulate labor demand, but, in practice, the links between wages and employment are often more complicated.

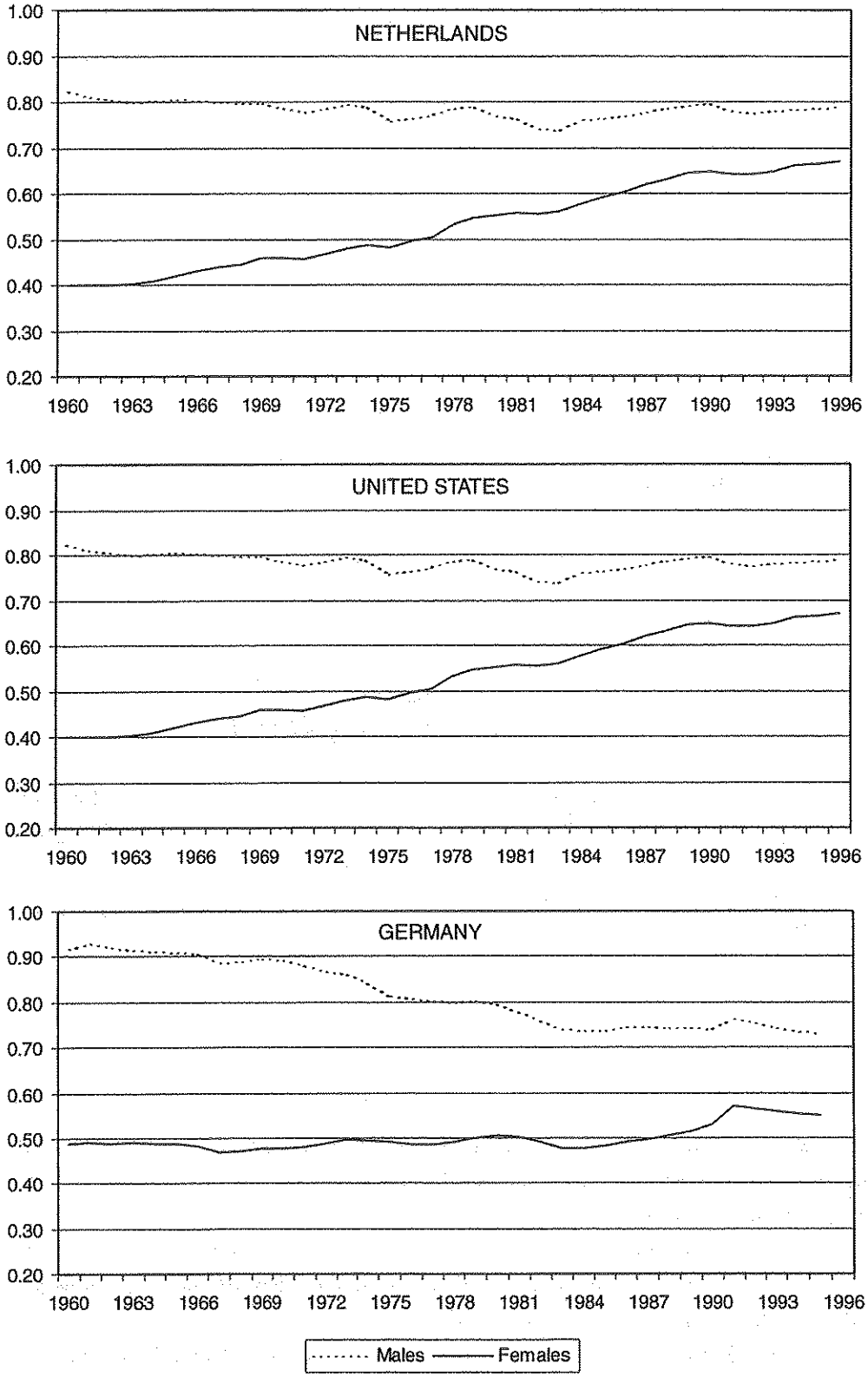
The Netherlands has had a minimum wage since 1969 (Albeda and Dercksen 1975), applicable to jobs of more than 12 hours per week (one third of the regular working week). In 1976 the minimum wage was about 76% of the average wage, but in 1992 it had fallen to 54% (Hartog and Theeuwes 1993) of the average wage. The level was originally set to provide the minimum income required to support a one-earner household, and it was later lowered for single workers and for youth between ages 15 and 23.[11] Wiemer Salverda (1998) points out that the development of the standard legal minimum wage, which fell in real terms (comparable, Salverda notes, to the fall in the United States), understates the actual fall of wage costs at the low end of the labor market. Specifically, the minimum wage for young workers has fallen faster than the minimum wage for adults age 23 years and older.[12] An employment-weighted minimum wage[13] shows an even stronger fall than the standard legal minimum wage (see **Table 2**).[14]

Working hours

The Netherlands are known for an extremely high share of part-time work: almost 40% of all jobs are part time (see **Figure D**). It may be that the increase in the employment rate is just the result of shorter working hours rather than the effect of "real" job creation. The top panel of **Figure E** shows the differences between the U.S., Germany, and the Netherlands in average hours worked. The United States, once the model with respect to working time for Europe (see Bell and Freeman 1995), lost its leadership around 1970, when average working hours in Europe continued to decline but stagnated in the United States and later even increased. However, both the German and Dutch economies experienced collectively negotiated working time reductions, which

FIGURE B

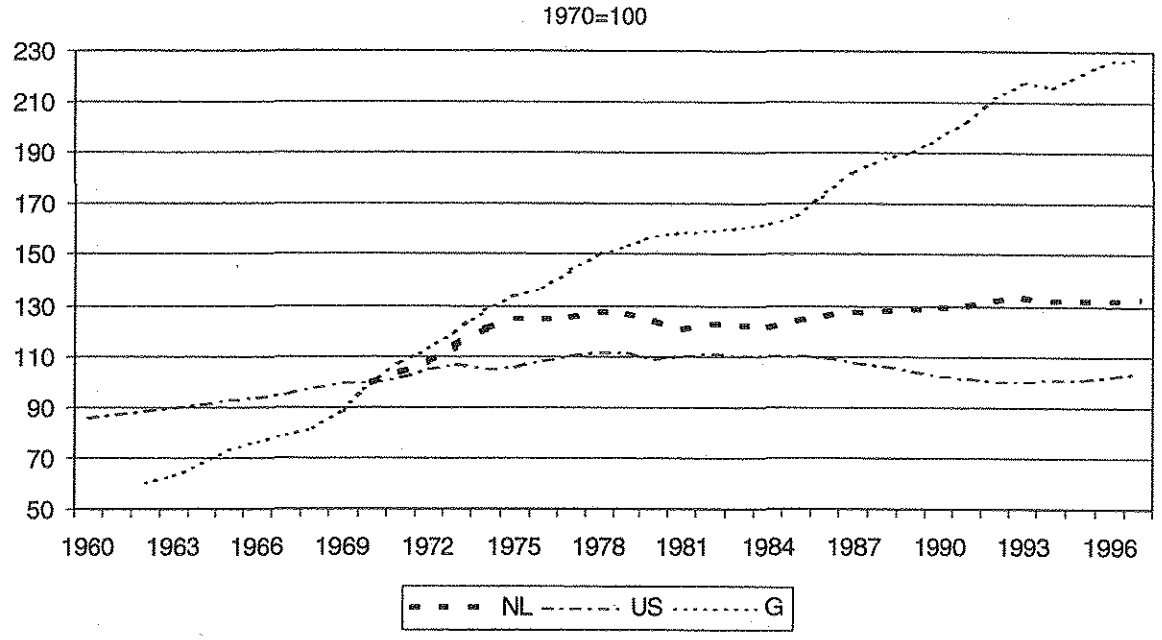
Employment rates by gender



Source: OECD.

FIGURE C

Average real wages in manufacturing



Source: OECD.

TABLE 2
Real minimum wage level (1979 = 100)

	Average wage full-time	Adult minimum wage	Employment-weighted minimum wage
1979	100%	100%	100%
1982	95	93	89
1988	92	85	78
1996	95	78	71

Source : Salverda 1998.

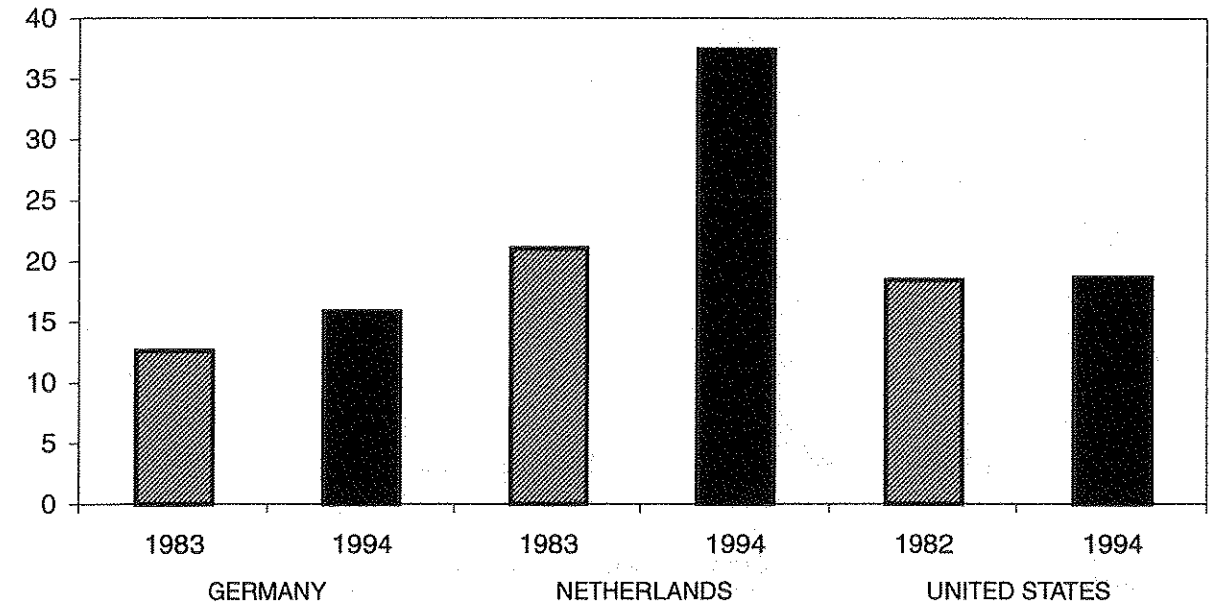
led to working weeks of 36 or 38 hours (depending on industry). Average working hours in the Netherlands in the 1990s are substantially below German hours,[15] but the difference is mainly a result of the Netherlands' higher share of part-time workers.

In the United States, overall hours worked increased (middle panel of Figure E), but they stagnated or even declined in the Netherlands and in Germany. Working-time reductions, therefore, appear to have substantially affected employment growth in the Netherlands.

Stephen Nickell (1996) has suggested using the ratio of actual to potential hours worked as an indicator of employment creation in an economy. We label this measure the "Nickell index" (lower graph in Figure E).

FIGURE D

Part-time work as percent of total employment



Source: Authors' analysis of OECD data.

We estimate potential hours worked as the average annual hours for full-time employment in 1970 (1,950 hours), a year when all three countries had roughly similar average working hours. This value is multiplied by the population at working age (15 to 65 years old). Although this index cannot speak to welfare issues, it nevertheless gives a good impression of the importance of market work. While a rising Nickell index suggests a greater availability of work, we might expect welfare to rise as the Nickell index fell. At least in a traditional economic framework, work is a burden and not a pleasure, and we thus expect countries to show a declining Nickell index as they grow richer. In this respect the United States certainly differs from the Netherlands and the rest of Europe (see also income trends below).

Part-time and flexible work

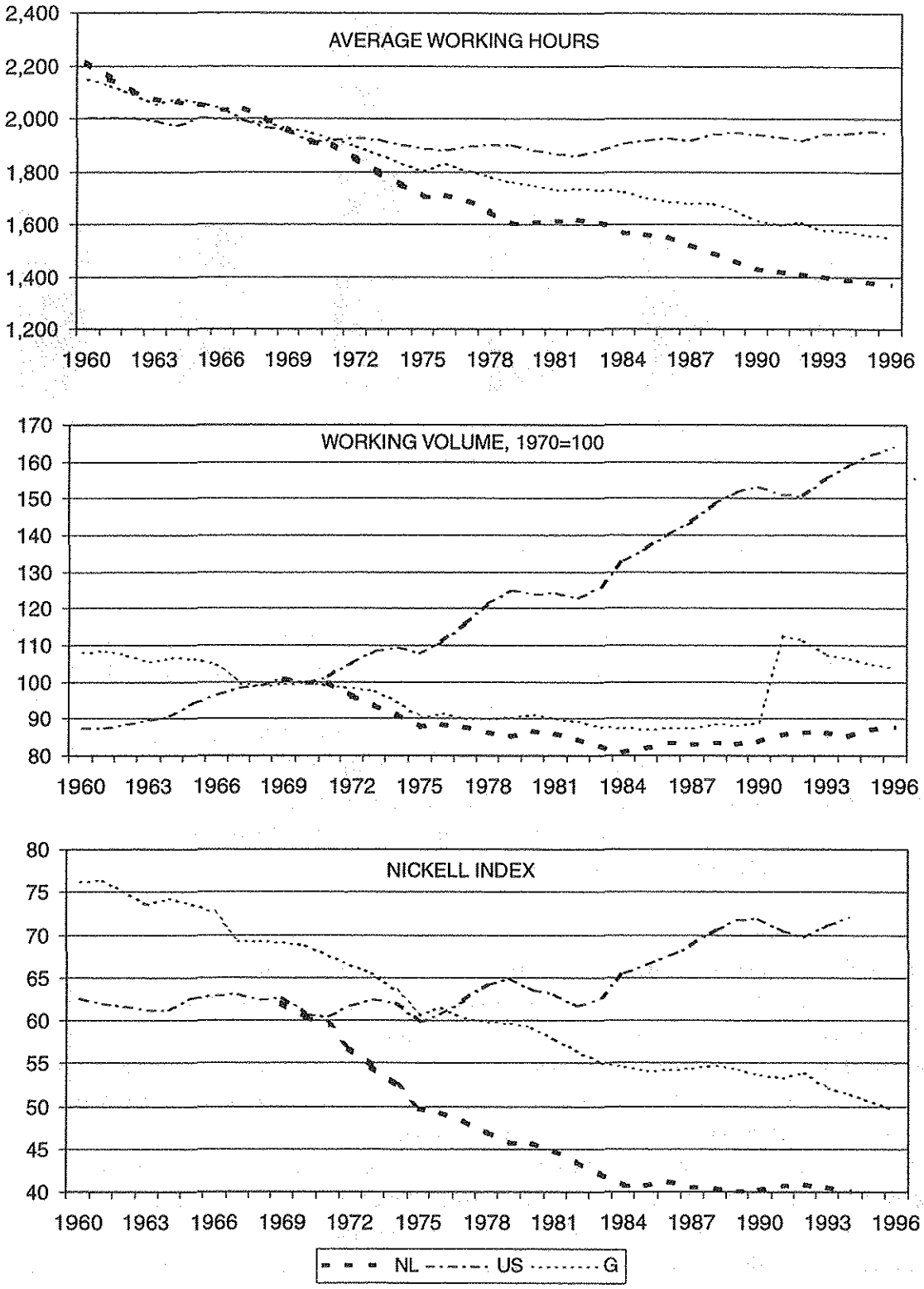
Critics of the Dutch employment success emphasize that the net increase in jobs is almost entirely composed of either part-time or "flexible" jobs. Indeed, the absolute number of full-time jobs has remained more or less constant for about 25 years (**Table 3**), while the share of regular full-time jobs in total employment has fallen substantially (**Table 4**). Part-time work has increased enormously, as have so-called flexible jobs.

Flex workers are employed in a variety of jobs under at least five different kinds of contracts. Some flex workers work unspecified hours (they may be called in whenever there is demand), some are on call but for a fixed amount of hours, some have a fixed-term contract, some are temporary workers. More than 40% of flex workers work less than 12 hours per week. **Table 5** gives an overview of the composition of flex work.

Flex workers are disproportionately young, and many combine work with school. In the 15-19 age group half of workers are in flexible arrangements, compared to only 10% among workers 25 and older. Flexible contracts cover various different working arrangements. Temporary contracts account for the largest share of

FIGURE E

Trends in average hours worked, working volume, and the Nickell index*



*Actual hours worked divided by potential hours worked.

Source: OECD.

TABLE 3
Distribution of hours, the Netherlands

	1970	1982	1987	1990	1996
Less than 12 hours	271	487	565	666	837
More than 12 hours	4,940	4,982	5,267	5,576	5,977
Overall total	5,284	5,522	5,832	6,242	6,762

Source: Sociale Nota 1998, p. 151; CBS 1997, Enquête Labor Force.

TABLE 4
The composition of employment by working time and flexible work in the Netherlands

	Regular full-time	Regular part-time	Flexible	Self employed	Total
1970	69	12	4	15	100
1982	64	16	6	14	100
1990	58	21	10	11	100
1996	50	27	11	12	100

Source: Sociale Nota 1998, p. 115; CBS 1997, labor surveys including jobs less than 12 hours a week.

TABLE 5
'Flexible workers' by type of contract, the Netherlands

	1992	1996
No specific hours	15%	11%
Temporary work agency	16	23
On call with permanent contract	28	31
Temporary worker	9	8
Fixed-term contract less than 1 year	32	27

Source: Sociale Nota 1998, p. 116; CBS 1997, Enquête Labor Force 1996, including jobs of less than 12 hours a week.

flex contracts, and many workers under these arrangements eventually secure permanent contracts with the same employer. (OSA 1996). Moreover, flex contracts often serve as an entry into the regular job market, especially for first-time jobholders and women who reenter the labor market. We discuss flex workers' wages in detail below.

Part-time work is not a social problem and hardly represents hidden unemployment if working-time arrangements fit workers' preferences. In fact, working hours in the Netherlands seem to fit preferences of work-

ers quite well. Around 80% are satisfied with their actual working hours, and those who are dissatisfied are about evenly split between those who want to work more hours and those who want to work fewer. Germany also has a symmetrical distribution of desired hours around actual working hours. In the United States, however, the number of workers who want to work longer hours is higher than the number of workers who want to work fewer hours (Bell and Freeman 1995). This is a surprising result, given the notion that decentralized bargaining systems, such as in the United States, are better suited to representing individual interests.

Inequality

The Dutch earnings deciles reported in the 1996 OECD *Employment Outlook* (see also **Table 6**) show no change in earnings dispersion for the ratio of the 90th percentile wage to the 50th percentile wage and even a decrease of 0.01 in the 50/10 ratio for the period 1989-94. These dispersion figures, however, are based on annual earnings of full-time workers. Given that net employment growth in the Netherlands is almost entirely caused by part-time and flex workers (see above), dispersion data based on full-time employees may be misleading. **Table 7** shows the remarkable and increasing difference between hourly wages for flexible workers and full-time workers, and it suggests that dispersion measures based on full-time workers' wages will underestimate the rise in inequality. The earnings of part-time workers[16] relative to full-timers was fairly stable over the period 1985–96. The earnings of flexible workers, however, deteriorated relative to full-time workers over the same period.

Given that almost the entire net employment growth in the Netherlands has occurred in part-time[17] and flexible employment, it is hard to believe that wage inequality did not rise. Salverda (1998) reports 90/10 ratios of 2.53 for 1979, 2.42 for 1983, 2.31 for 1989, but 2.83 for 1995, suggesting that inequality fell between 1979 and 1989 but rose sharply in the 1990s. By international standards, however, inequality in 1995 was still low.

Economic growth, public debt, and investment

Given the differences across the Netherlands, Germany, and the United States in employment, hours, and wages, the similar path of gross domestic product (GDP) in all three countries is remarkable. Business cycles differed, but all three roughly doubled their GDP from the end of the 1960s to the mid-1990s (**Figure F**, top

TABLE 6
Bargaining indices, union density, wage differentials, and incidence of low pay

	Union density (% of labor force) 1985	Coverage* 1980–90	Earnings inequality** D9/D5 1980	D9/D5 1990	D5/D1 1980	D5/D1 1990	D9/D1 1980	D9/D1 1990	Incidence of low pay** %	Residual Hartog and Teulings
U.S.	18	18	2.2	2.2	2.2	2.5	4.8	5.6	25	0.39
Netherlands	28.7	71	1.6	1.7	1.6	1.6	2.5	2.6	12	0.22
Germany	37.4	90	1.6	1.7	1.6	1.5	2.7	2.5	13	0.33

* The coverage ratio gives the share of workers covered by collective agreements.

** Source: OECD; Teulings and Hartog 1998.

TABLE 7
Hourly wages by type of contract and working time in the Netherlands

	Total	Full-time	Part-time	Flexible
In Hfl				
1982	18.37	n.a.	n.a.	n.a.
1985	18.47	19.03	15.61	11.92
1990	20.48	21.24	17.75	13.83
1996	28.42	30.34	23.89	17.23
In % of full-time				
1982		n.a.	n.a.	n.a.
1985		100.0	82.0	62.6
1990		100.0	83.6.	65.1
1996		100.0	78.8	56.7

Source: CBS 1997.

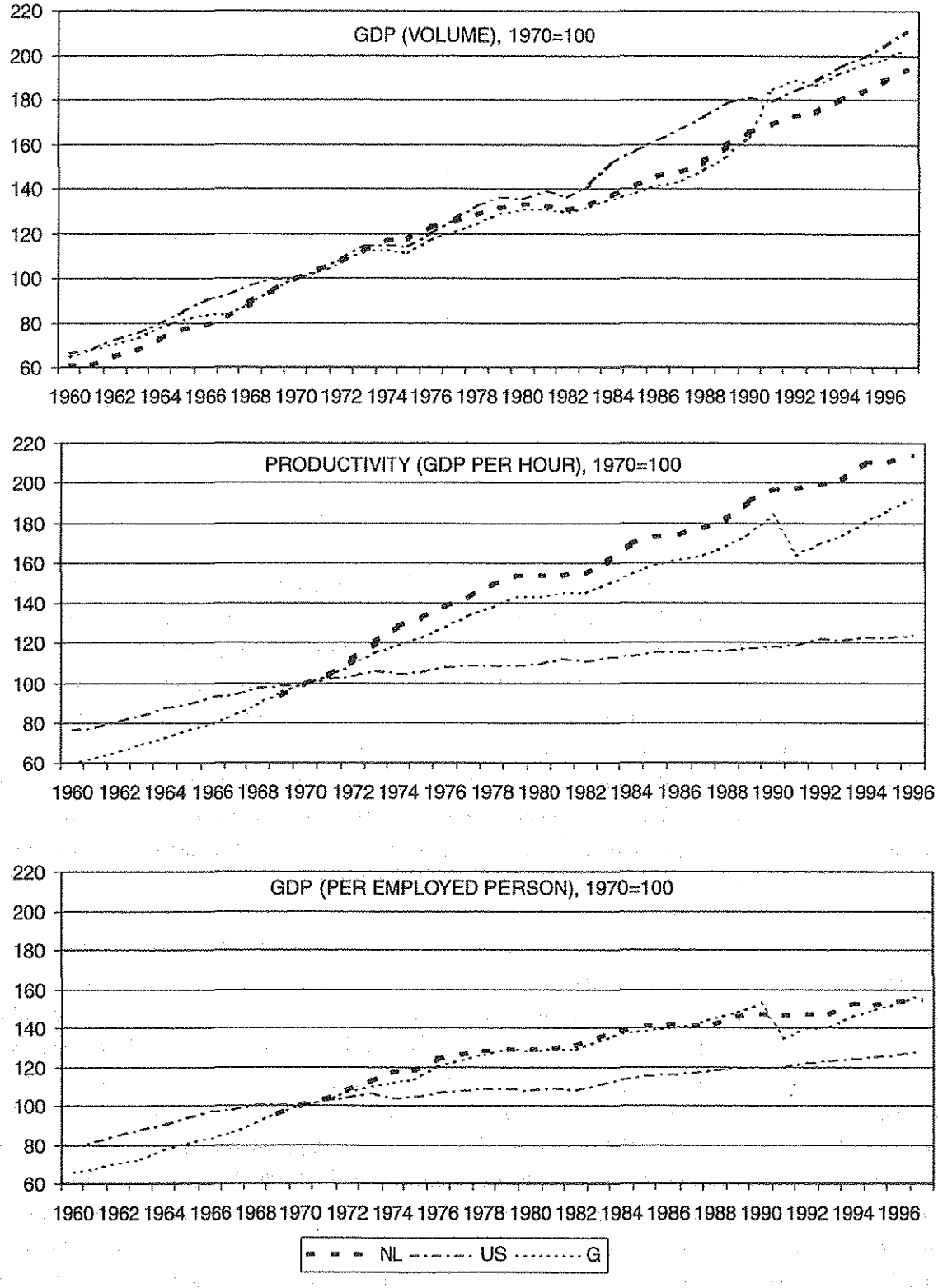
graph). Therefore, differences in employment trends can hardly be explained by differences in GDP growth rates.

By definition, if GDP growth rates are similar but employment trends differ, productivity must have developed differently. As measured by GDP per hour worked, the two European countries show productivity growth similar to GDP growth, and thus flat employment trends, whereas the United States had a flat productivity[18] trend but rising employment (Figure F, middle graph). In the Netherlands, the productivity trend became flatter in the late 1980s, when employment rose. This pattern is a similar to that of the United States, which is characterized by a strong increase in hours worked. Most important, however, is the flattening of the Dutch "GDP per employed person" curve in the late 1980s, which is much more pronounced than the flattening of the productivity trend.[19] GDP per employed person is almost flat from the late 1980s forward, indicating the importance of the working-time policies for Dutch employment trends. In the Netherlands, the correlation between GDP growth and employment growth became stronger, that is, the correlation between GDP growth and productivity growth weakened.

Paul Krugman (1994) has argued that a country is getting wealthier only if it improves the efficiency of its economy, that is, if productivity is rising. In Krugman's view, growth among the Asian tigers was an impressive development because output growth was strongly related to input growth. However, a similar trend holds for the United States, which experiences GDP growth primarily because of rising labor input. Nevertheless, GDP per capita of working-age population (15 to 65 years old) rose in the United States as well as in Germany and the Netherlands (see **Figure G**). In the United States, and to a lesser extent in the Netherlands from the mid-1980s on, the rise in GDP per capita of the working-age population is the result of rising labor force participation in combination with low productivity growth. In the Netherlands, the flat trend in GDP per capita again indicates that the shortening of working hours contributed substantially to employment growth. The policy of shorter working hours is often regarded as a passive measure to improve employment. But if it increases the employment rate, this process can have a substantial effect in a welfare state, where increasing participation in the labor market can reduce transfers and therefore release the pressure on public budgets.

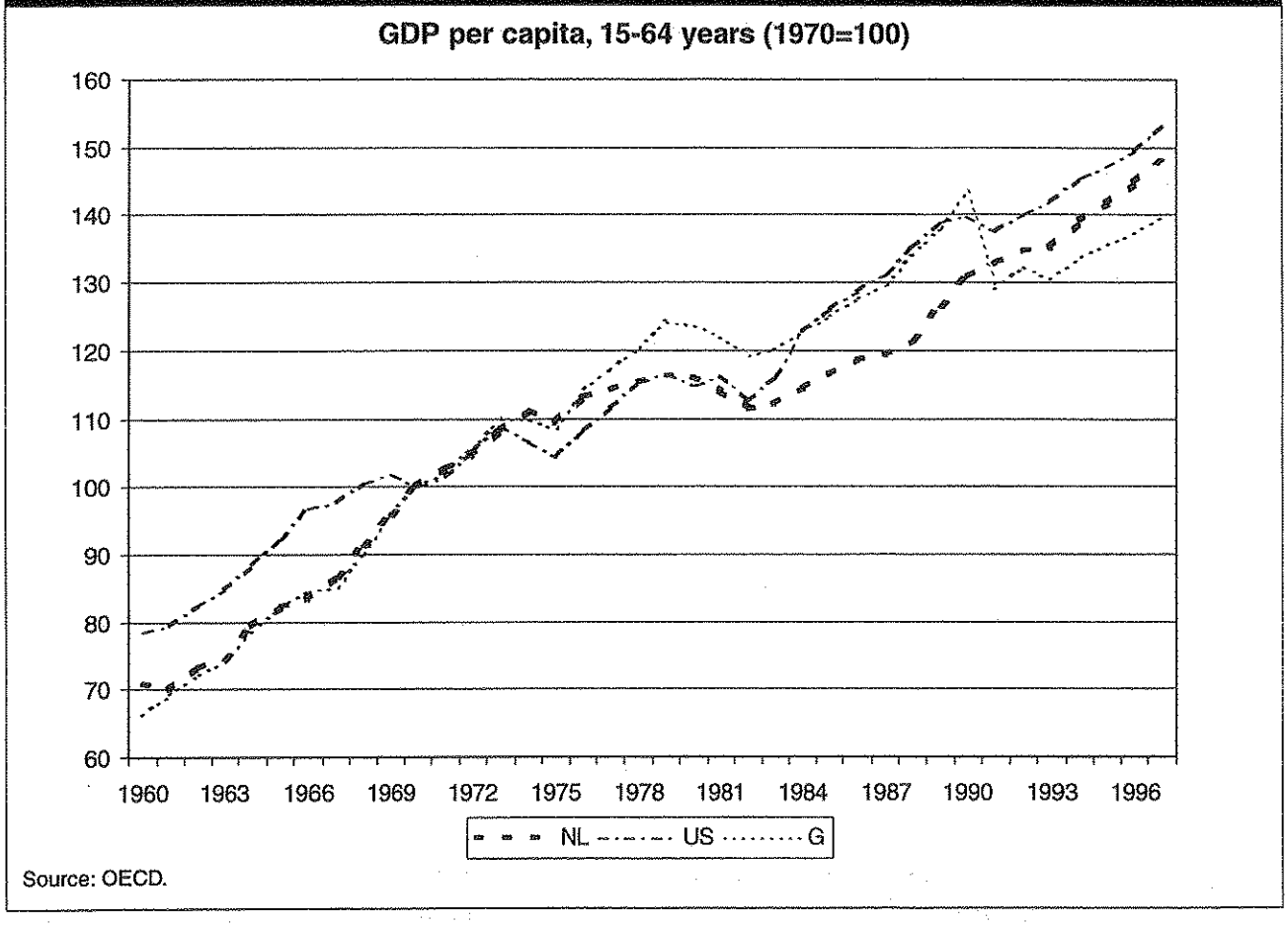
FIGURE F

GDP, productivity, and GDP per employed person



Source: OECD.

FIGURE G



Source: OECD.

The public deficit

Figure H illustrates the situation that led to the Wassenaar agreement. Net government borrowing rose dramatically in the early 1980s, but improved from the mid-1980s on, and is now at a level that easily fulfills the Maastricht criteria for joining the euro.[20]

Investment

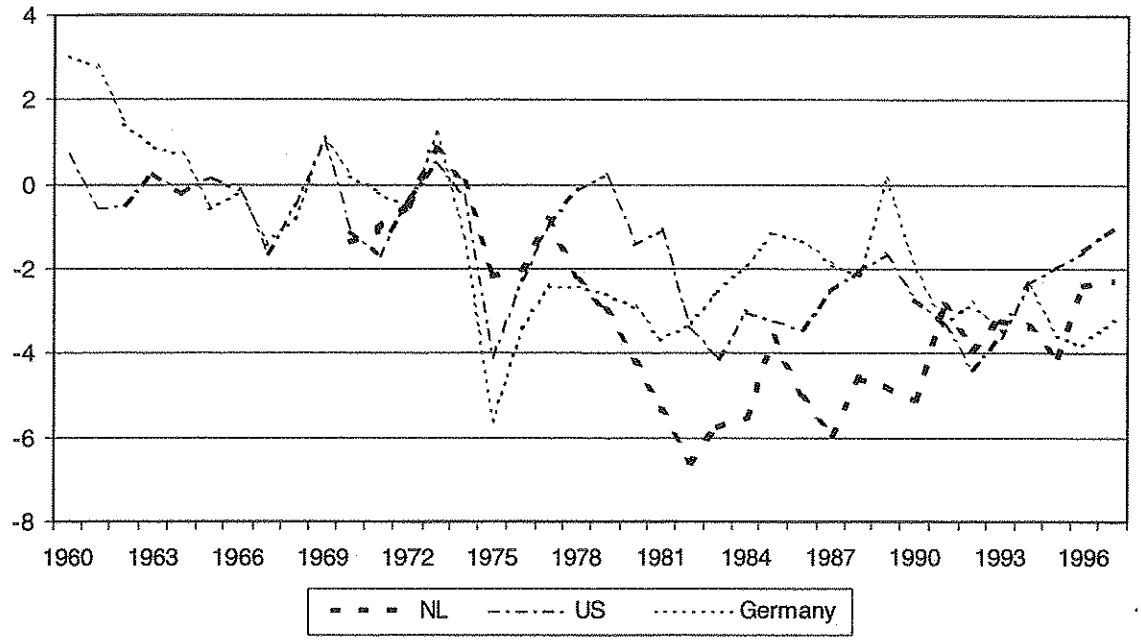
Profits in the Netherlands (measured by the rate of return in the business sector) climbed after 1982 and persisted at a high level (**Figure I**, top graph) comparable to those in the United States. In Germany, on the other hand, the profit rate has been rising throughout the 1980s and 1990s, but it remains below the level of the other two countries. For the Netherlands, the rise in profits coincides with a rising share of business investment[21] in GDP. The investment share in both Germany as well as the Netherlands is above that of the United States, and so it is unlikely that profit and investment trends are the main cause for international differences in employment growth. The simple relation between rising profits and investment over time turns out to be unclear.

Trade and the exchange rate

Germany is, by far, the Netherlands' most important trading partner. About 30% of Dutch exports are shipped to Germany, accounting for roughly 25% of Dutch GDP. Almost 80% of Dutch exports are traded within the

FIGURE H

Public deficit (% of GDP)



Source: OECD.

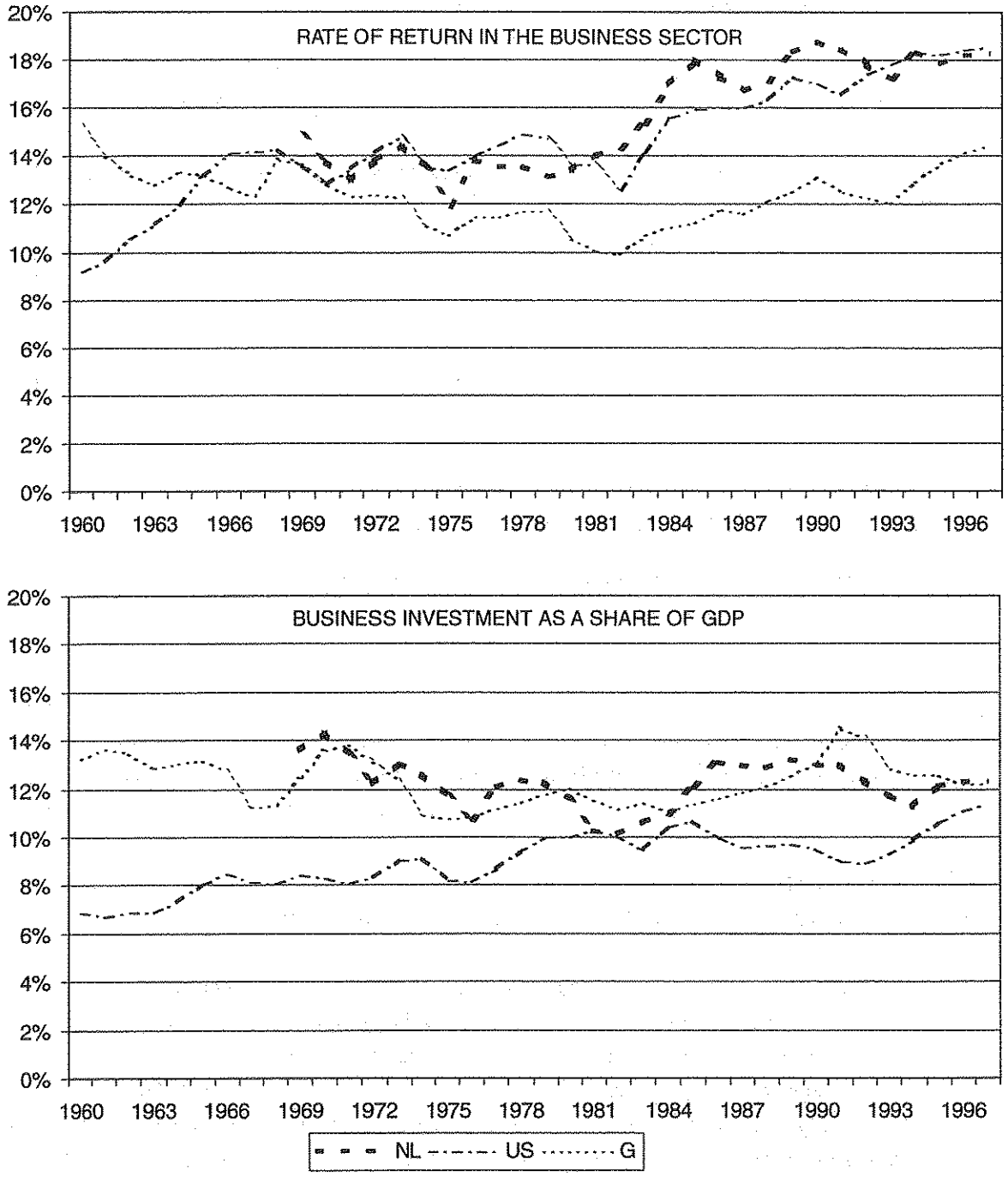
European Union, and the EU also supplies the majority of imports entering the Netherlands. German trade is less concentrated in the EU, and, of course, the Netherlands constitutes a smaller share of German trade, but nevertheless the Netherlands accounts for roughly 10% of German exports and imports. Given these trade relations, the stable, nominal guilder-mark exchange rate, together with the difference in wage trends, has been crucial for the Dutch trade balance. Since 1983, the Nederlandse Bank (the Dutch central bank) has followed the Bundesbank's lead on monetary policy in order to fix the nominal exchange rate. Wage restraint in the Dutch economy has caused prices to rise less in the Netherlands than in Germany,[22] and thus it has led to a real depreciation of the guilder against the mark (see **Figure J**). In other words, one mark bought more and more Dutch goods, and its rising value, all else equal, should have resulted in a rising Dutch trade surplus with Germany and the rest of Europe.

The guilder-mark exchange rate affects not only direct trade with Germany but also trade with the rest of the European Union, since the mark is the dominant currency in Europe and many EU currencies are linked to it (although with some disturbances, especially in the early 1990s). The results of the real depreciation of the guilder can be seen in the trade balance, which became increasingly positive from the early 1980s and made a jump in the early 1990s. A similar trend holds for the current account balance (**Figure K**, bottom graph).

That the nominal guilder-mark exchange rate did not adjust to the real exchange rate is quite remarkable. Economic theory suggests that a country with a trade and a current account surplus should see its currency appreciate in nominal terms, but the nominal guilder-mark ratio has remained constant. This apparent anomaly cannot be explained by interest rate differentials because rates were, if anything, higher in the Netherlands than in Germany. If speculation could affect the British pound, which nominally depreciated in the early 1990s, why was speculation not forcing the guilder to appreciate nominally? It may be possible that a small currency

FIGURE I

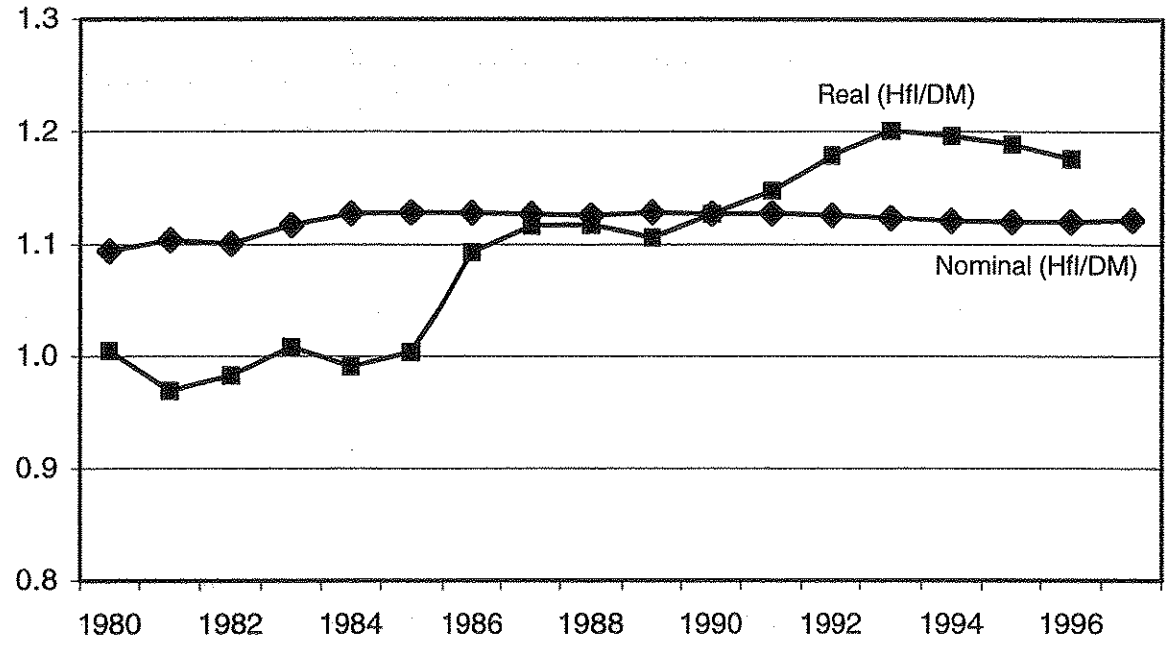
Rate of return and investment



Source: OECD.

FIGURE J

Nominal and real exchange rates, guilder to mark



Source: Computations based on OECD data. A depreciation of the guilder leads the Hfl/DM ratio to rise.

simply goes unnoticed, or that the Bundesbank convinced potential speculators that it would do everything to keep the nominal guilder-mark exchange rate constant. (Given that the guilder is a "small" currency, the Bundesbank would certainly be able to do so.) However, it is clear that wage restraint together with the fixed nominal exchange rate affected the Dutch trade balance positively, which surely is part of the "miracle."

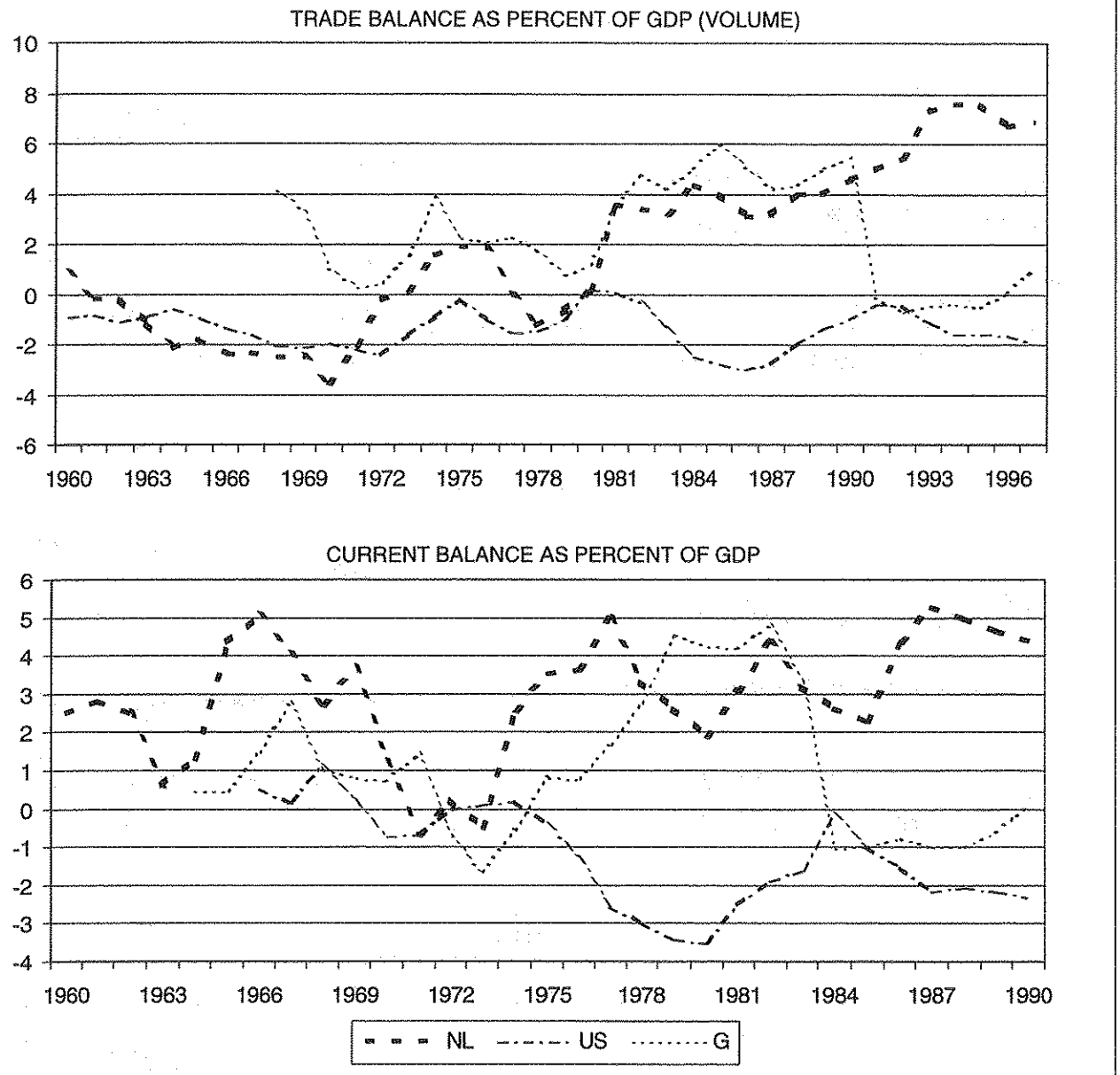
Sectoral composition

All three countries have experienced a decline in the share of total employment in each industry (industry in the OECD definition covers manufacturing, construction, and energy) and an increase in the share of employment in services (**Figure L**). Germany has historically had a high share of employment in industry, exceeding the share in the Netherlands and the United States and even exceeding employment in German services through the mid-1970s. The situation in the Netherlands changes dramatically from the mid-1980s, with the employment rate in services rising much more steeply than before and much higher than in either Germany or the United States. Remarkably, the Dutch employment rate for industry stabilized in the mid-1980s, but it did not rise (except for some short-term periods). These trends are not just an artifact of working hours. **Table 8**, which shows changes in employment measured in person-years (full-time equivalents), demonstrates that working-volume estimates suggest comparable changes in total hours worked across sectors. These sectoral data suggest that a complete explanation of the Dutch employment success must include a structural component. The pure macroeconomic explanation is not sufficient and, in addition, general wage restraint clearly favored the sector with tradable goods, which is mainly industry.

The market share of domestically produced goods is about 55% in industry but about 100% in retail and

FIGURE K

Trade and current account balance

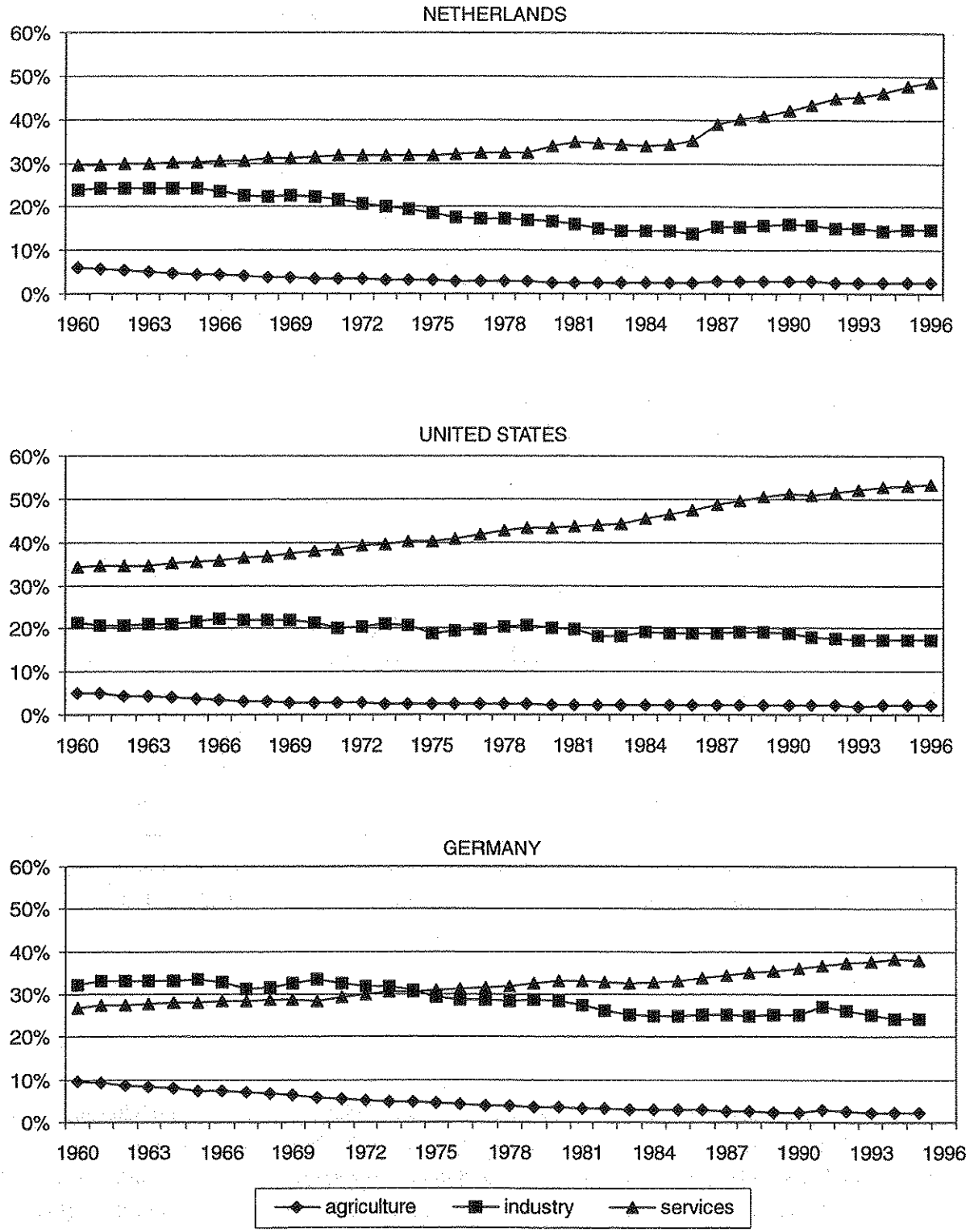


Source: OECD.

wholesale trade and other services. In the "open sector" (which includes agriculture, manufacturing, transport, and communication), the domestic market share is roughly 60% (CPB 1997, 220-1), whereas in the "sheltered sector" (which includes trade, banking and insurance, and tertiary services) the domestic market share is 85%. At the same time, productivity growth in the open sector was much higher than in the sheltered sector, and so wage restraint did not lower productivity growth in the open sector as it is often assumed. However, employment growth occurred in the sheltered sector, where productivity growth was lower.

FIGURE L

Employment rates for three sectors



Source: OECD.

TABLE 8
Sectoral distribution of employment growth (1995–98, in person years)

	Change 1995-98
Agriculture	-1.25%
Manufacturing	0.00
Energy	0.50
Construction	-0.75
Tertiary services	1.75
Care	1.25
Market sector	1.00
Public sector	-0.75
Total	1.75

Source: Central Planbureau 1997, p. 132.

INDUSTRY ANALYSIS

Employment, wages, and labor contracts

Table 9 displays the distribution of employment (measured in full-time equivalents) across service industries in the Netherlands and the United States. Except for transport, the United States has a higher share of employment in all service industries. Most remarkable, given the common perceptions about overly expanded public sectors in Europe, is the high percentage of U.S. employment in public services. In 1993, 10% of U.S. workers were in the public sector, compared to just 6.5% in the Netherlands (down from 7.6% in 1982). Also surprising is the substantial difference in "social services," where the U.S. reaches 8.4% but the Netherlands only 3.4%.

For the Netherlands, we further differentiate employment by type of employment contract: full-time, part-time, or flexible. **Table 10** displays the contribution of individual industries and contract categories to overall employment growth (measured in full-time equivalents) from 1990 to 1996. Full-time employment contributed only about 9% to overall employment growth while part-time employment contributed about two-thirds. Flexible contracts added another 25% to net employment growth.

Employment in manufacturing declined and reduced overall employment growth by more than one-third, and the drop was concentrated almost entirely among full-time workers. By contrast, flexible contracts expanded marginally (as measured in full-time equivalents) in manufacturing. Employment boomed in the service industries, especially "business services," where 86.4% of net new employment was created. (Within business services, temporary help agencies were the most important job generators.) "Other services," which mainly cover public services, declined as a direct consequence of public budget consolidation. Health sector employment was the exception.

Wages in part-time and flexible jobs were below the wages for full-time jobs in every industry: the part-time wage was around 80% of the full-time wage, and the wage in flexible contracts was only about two-thirds the full-time wage. However, flexible contracts also acted as an entryway into permanent employment, and workers with flexible contracts were, on average, younger and had less work experience than full-time workers. Part of the difference between the full-time and the flexible wage can, therefore, be explained by workers' characteristics.[23]

TABLE 9
Employment share in services, the Netherlands and the United States
(person years)

	Netherlands			United States		
	1982	1993	Change	1982	1993	Change
1. Wholesale, retail trade, restaurant, & hotels	**8.5**	**9.8**	**1.3**	**13.5**	**15.4**	**1.8**
1.1. Wholesale & retail trade	7.4	8.4	1.0	12.7	14.5	1.8
1.2. Restaurants & hotels	1.0	1.3	0.3	0.9	0.9	0.0
2. Transport, storage, & communication	**3.3**	**3.4**	**0.2**	**2.8**	**2.9**	**0.1**
2.1. Transport & storage	2.5	2.7	0.2	1.9	2.2	0.3
2.2. Communication	0.8	0.7	-0.1	0.9	0.7	-0.2
3. Finance, insurance, real estate, & business services	**4.4**	**6.2**	**1.8**	**7.4**	**10.4**	**3.0**
3.1. Financial institutions	1.2	1.1	0.0	1.7	1.9	0.2
3.2. Insurance	0.6	0.7	0.0	1.2	1.4	0.2
3.3. Real estate & business services	2.6	4.4	1.8	4.5	7.2	2.7
4. Community, social, & personal services	**8.0**	**8.8**	**0.8**	**9.0**	**12.0**	**3.0**
4.1. Sanitary & similar services			0.0			0.0
4.2. Social & related community services	3.1	3.4	0.3	6.1	8.4	2.3
4.3. Recreational & cultural services	0.8	0.8	0.0	0.6	1.0	0.3
4.4. Personal & household services	4.1	4.5	0.4	2.3	2.7	0.4
5. Producers of government services	**7.7**	**6.5**	**-1.1**	**9.6**	**10.0**	**0.4**
6. Other producers	**0.5**	**0.6**	**0.1**			**0.0**
Total employment, services	**32.3**	**35.2**	**2.9**	**42.3**	**50.7**	**8.4**
Total employment	49.2	50.7	1.5	62.0	68.8	6.8

Employment shares = employment in the specific industry divided by population of working age (16-65 years).

Source: OECD.

In general, industries with below-average wages experienced higher employment growth rates. The correlation between the position in the inter-industry wage structure and employment growth was about -0.6, and the correlation between wage growth and employment growth was -0.44.[24]

The minimum wage in the Netherlands has fallen steadily in the 1980s and 1990s (Salverda 1998 and above), and the lowest collectively bargained wages, although above the minimum wage, followed its path. Heated debates over the employment effects of the minimum wage, which are common in the U.S., where the wage stands at about 38% of the average wage, may be less relevant to the Netherlands, where the minimum wage is about 50% of the average wage.[25] Vogels (1997) analyzed Dutch industry wage profiles to evaluate the importance of minimum wage levels (the legal minimum wage or collectively negotiated wages) for employment, and concluded that, except for some effects in "cleaning" and "retail trade," a significant negative employment effect from minimum wages is unlikely. "Cleaning" and "retail trade" are dominated by female and younger workers, who are typically not main breadwinners (see also Gregg and Wadsworth 1996; Roorda and Vogels 1997; and Horrigan and Mincy 1993).

Vertically integrated sectors

Production processes in market economies are highly specialized in the sense that many firms and industries contribute to the production of a final good. Industry-specific analysis as presented above, therefore, captures

Table 10
Net contribution to employment growth, by industry and contract category 1990-96*
(full-time equivalents)

		Total**	Full-time	Part-time	Flexible
0-9	**TOTAL**	**100.0%**	**8.5%**	**65.9%**	**25.6%**
(in employees x 1,000)		293	25	193	75
0	Agriculture and fisheries	3.4%	1.4%	1.4%	0.7%
INDUSTRY					
1	Mining and quarrying	-0.3%	-0.3%		
2/3	Manufacturing	-37.5	-37.9	-0.7%	1.0%
4	Energy and water company ***	-1.7	-1.7	0.0	
5	Construction and installation	-0.7	-1.0	0.0	0.3
SERVICES					
6	Trade, hotels, restaurants, repair, etc.	48.8%	27.3%	22.2%	-0.7%
	Trade	34.8	20.8	15.7	-1.7
	Hotels, restaurants	14.0	6.5	6.5	1.0
7	Transport, storage and communication	9.2	4.1	4.1	1.0
8	Banking, insurance, business services	88.4	46.4	19.1	22.9
	Financial services	2.0	0.7	1.0	0.3
	Business services	86.3	45.7	18.1	22.5
9	Other services	-9.6	-29.7	19.8	0.3
	Public government	-12.3	-14.7	2.7	-0.3
	Education	-1.7	-8.9	7.5	-0.3
	Health and social services	24.6	2.0	20.8	1.7
	Social and other services	-20.1	-8.2	-11.3	-0.7

* Second quarter 1996.
** The increase in total employment from 1990 to 1996 was 6.2%.
*** Energy and water companies public until 1993, then privatized.

Source: Authors' calculations based on CBS maandstatistic.

only a fraction of the developments and may actually be misleading. For example, the decline in manufacturing employment may be caused by outsourcing of service activities, and this outsourced labor will move to the category "service industries," even though the labor input necessary to produce the standard good may not have changed at all. These movements may cause ups and downs in employment in the various industries. To capture such effects, vertically integrated sectors (Pasinetti 1983), which integrate all stages of production according to a product line, have been proposed. Input-output data allow for such an integration of sectors, and we make use of this method to investigate direct and indirect employment effects of demand expansion in certain products.

For example, the main channel for aggregate wage restraint to affect the economy is through international price competitiveness. Industries with tradable goods gain most from such a policy, and the expansionary effect is most likely to occur in manufacturing industries. Similarly, increased investment in response to rising profits will mainly affect manufacturing and construction, but it will also affect employment in other industries, such as services, that deliver inputs to industries not directly affected by final demand.

Composition of demand

Differences in the composition of various final demand categories in the Netherlands are illustrated in **Figure M**. Exports consist mainly of manufacturing products, although the manufacturing share of exports has been falling. Private consumption is made up mainly of services (government services accounting for around 30% and market services for just below 30%) and manufacturing (about 20%). The share of government services, manufacturing, and agriculture has been declining, while business services, transportation and communications, and trade have been rising. More than 60% of investment demand is concentrated in the building sector and about 20% in the manufacturing sector. The share of investment in business services has been increasing, from approximately 12% in 1987 to almost 16% in 1996.

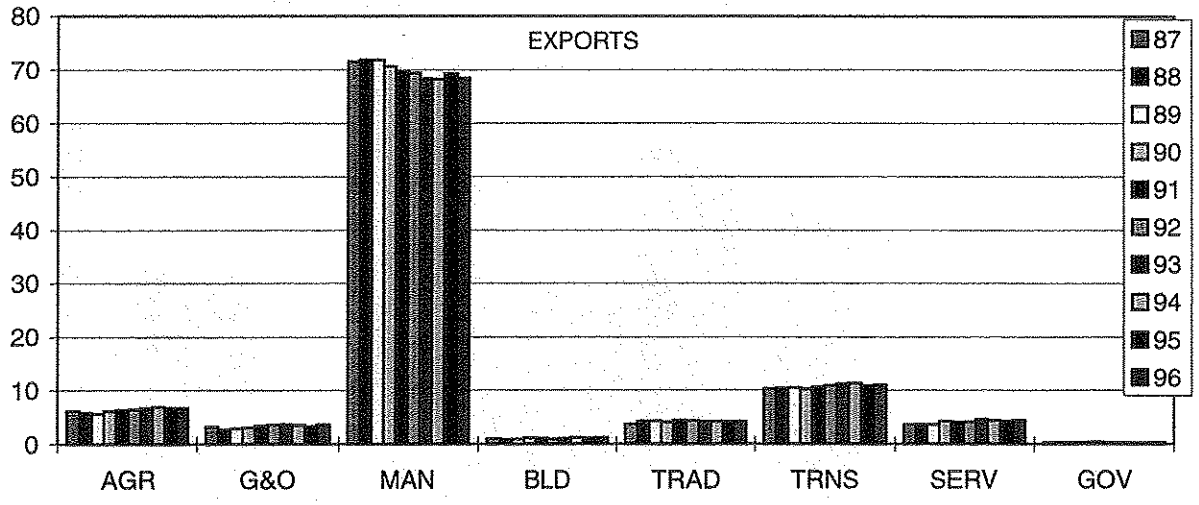
Although exports have increased, the share of integrated sector employment related to exports has declined. This confirms the results reported above, that is, that employment in tradable goods did not increase. **Figure N,** which includes direct employment in industries that produce tradable goods as well as indirect employment in industries stimulated by exports, illustrates that stagnating employment in industries that produce tradable goods is not just a statistical artifact, but real. Similar arguments hold for the final demand directed to investment. Employment related to demand for public goods declined as well, a direct result of the reduction in government spending. On the other hand, private consumption expenditures created employment, a finding perfectly consistent with the view that employment growth took place in the non-tradable-goods sectors. Private consumption is increasingly concentrated in services and trade—together they account for about 40% of private consumption.

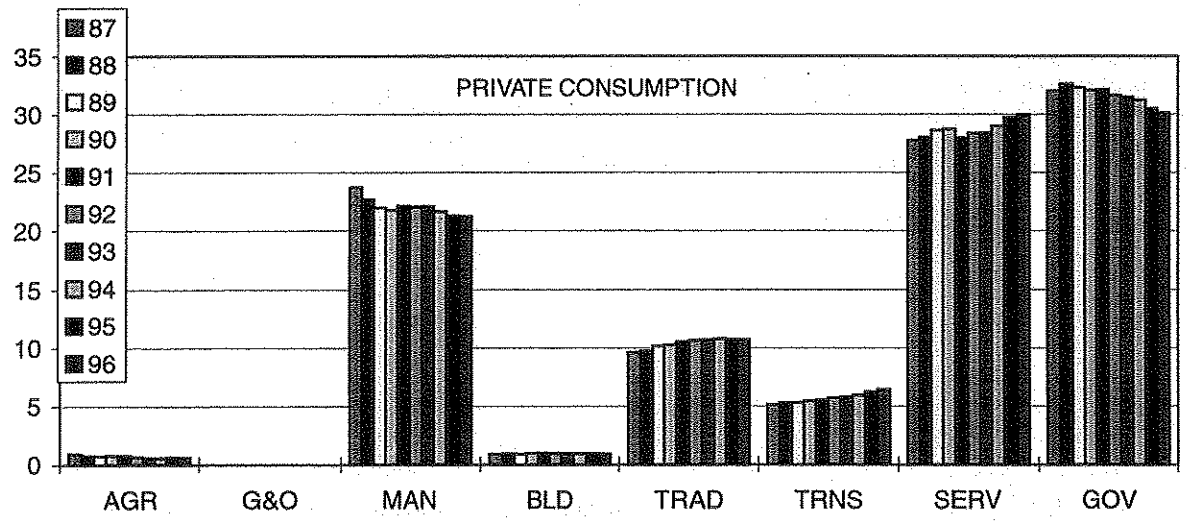
Two extreme scenarios may explain these employment trends: either a pure income effect or a pure structural effect. Under a pure income effect, the income set in motion by increases in exports is spent proportionally (according to initial proportions), but, given differential productivity growth, the employment effects are stronger in the service sector, where productivity is lower. The observed changes in the employment structure, then, are nothing more than the effect of rising income. If this argument is right, we expect the real consumption pattern to remain unchanged; only the nominal shares will change (and thus the employment structure would change; for a discussion see Appelbaum and Schettkat 1997). However, real consumption patterns changed in favor of services. For the indirect income effect of export expansion to occur at all, a consumption multiplier greater than 1 is required. A "back-of-the-envelope" calculation of likely values for the consumption multiplier could be as follows: the marginal rate of consumption is about 0.61, the marginal propensity of imports is about 0.43, and a marginal tax rate (including social security contributions) is about 0.43. Given the government policy of budget consolidation, one would get a fairly small multiplier between 0.92 and 1.53. At best, an increase in the share of net exports by two percentage points would lead to another one percentage-point increase in overall demand, but the impulse could be limited to the net export effect itself. This is a widely discussed characteristic of small open economies: they gain from international developments, but openness leads expansionary impulses to spread worldwide.

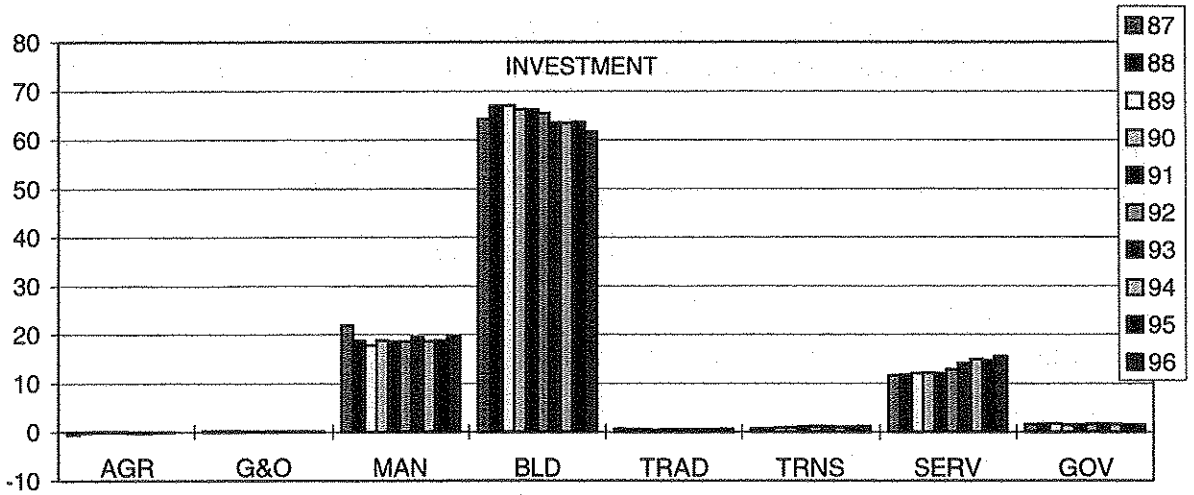
In the other extreme case, the whole development is supply-side driven—a pure structural effect. A multiplier of 1 would be assumed, and, the increase in net exports aside, all other effects would be ascribed to the decline in the minimum wage, the use of more flexible labor (in part-time or in flexible contracts), and so on, which may have promoted demand for consumer services. Under this scenario, we expect shifts in real private final consumption to industries that made the most gains from the introduction of flexibility. These shifts indeed occurred, as Figure M illustrates. However, in the real world, different trends occur simultaneously, and extreme scenarios are unlikely to capture reality. In the Netherlands, the activation of some service demand took place along with an expansionary effect from foreign trade. The Dutch miracle was therefore not just about flexibility but about flexibility in an expansionary environment.

FIGURE M

Composition of final demand categories



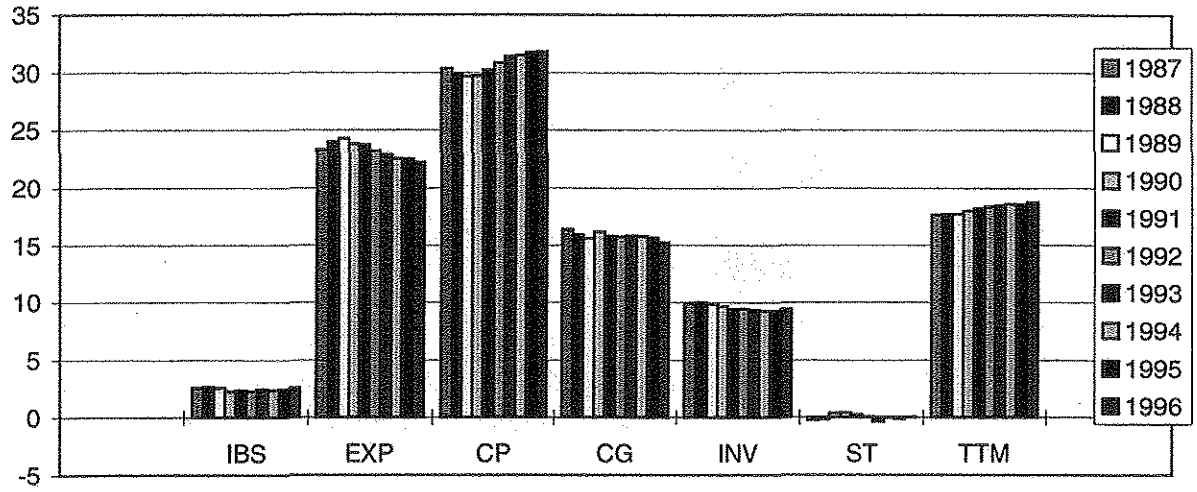




Source: Authors' calculations based on input-output data, CBS.

FIGURE N

Relative contribution of final demand categories to total employment
(in person years, direct and indirect employment)



Note: The category "transport and trade margins" (TTM) is not really a final demand category but rather an undistributed residual that cannot be attributed to specific sectors. These trade and transport margins exist because firms in a given sector not only produce their main product but also engage in trading and transporting this product. Little is known about the destination of these activities and, hence, they cannot be attributed to specific sectors in the input-output block. Since their magnitude and employment effects are considerable, they are specified as a separate "final demand" category.

Source: Authors' calculations based on input-output data, CBS.

CONCLUSION

> The whole world talks about the Dutch model, the Polder model, but here in the heart of the model, the SER, we simply talk about measures. "Corporatism," "model"—these words are not used in the SER.
>
> *—Klaas de Vries, chairman of the SER, in his opening remarks at the conference "Versterkte Samenwerking en Flexibiliteit na Amsterdam," January 27, 1998, The Hague*

The Polder model is not based on a theoretical framework or a blueprint, but rather a set of policies that have been implemented with some success. The main ingredients of the Dutch policy mix are:

- Wage restraint in an economy with a high integration in world markets;
- Working time policy;
- Active employment policy instead of passive transfers;
- Welfare state and tax reforms;
- Consensus-oriented, corporatist (wage) policy;
- Institutionalized development of rational expectations in the SER and the Labor Foundation.

The "Dutch model" was created in 1982 when, after a dramatic rise in unemployment and growing public deficits, a new government set out to change these trends. Unions and employers' associations negotiated the Wassenaar contract, and, in 1983, the guilder-mark exchange rate was fixed. Coupled with the Dutch policy of long-run wage restraint, the real value of the guilder depreciated relative to the mark. Because Dutch trade is so concentrated in Europe, the guilder's real depreciation led to a rise in net exports. The increase in exports improved employment directly in the industries producing the exported products, and also boosted employment in industries that fed export industries. A rising trade surplus has also stimulated production in the domestic economy, created income, and thus promoted economic growth through a multiplier process. However, the Dutch economy's extreme openness (about 50% of GDP is traded) and its high tax rates must also be taken into account. On the one hand, the Dutch economy's openness guarantees a strong impact on real depreciation of the guilder. On the other hand, it reduces the second-round effects because the openness reduces the multiplier.

As with the U.S.-Europe difference in employment growth, the Dutch-German difference in employment growth can only partially be explained by differences in GDP growth. The substantial difference is in the additional employment that a 1 percent increase in GDP creates in the Netherlands relative to Germany (**Table 11**).[26]

For example, in the 1970s, both the Netherlands and Germany had slightly negative employment elasticities measured in persons, but strong negative elasticities for working volume.[27] The U.S., however, had positive employment elasticities in the 1970s, and the elasticities with respect to employment and the volume of hours were similar. In the 1990s, U.S. elasticities for overall hours worked were actually higher than for employment in persons, reflecting the rise in average hours worked. In the 1980s, employment elasticities in the Netherlands moved closer to the United States' values, though the Dutch hours elasticity was still well below that of the United States.

However, most remarkable is the shift in the employment elasticities in the Netherlands to positive values in the 1980s. In Germany, by contrast, the employment elasticity remained low or negative.[28] In summary, the Netherlands seems to have managed to achieve a more labor-intensive growth path, and the decline in average

TABLE 11
Empirical values for employment intensity of economic growth

	Netherlands	United States	Germany
1973–84			
ln persons	-0.02	0.74	-0.14
ln overall hours worked	-0.61	0.71	-0.50
1984–90			
ln persons	0.66	0.68	0.41
ln overall hours worked	0.18	0.77	0.07
1991–95			
ln persons	0.59	0.56	-0.54
ln overall hours worked	0.20	0.65	-1.14

Source: Authors' calculations based on OECD data.

hours worked has magnified the effect. The expansion of part-time work reinforced the employment expansion.

The rise in employment elasticities points to a slowdown of productivity growth, which is not caused in tradable goods but rather by a shift to less productive service industries with lower productivity. Employment growth is concentrated in services with exceptionally high growth in retail and wholesale trade, business services, and health services. Employment growth in the Netherlands was almost entirely in part-time jobs (mainly voluntary, because part-time workers appear to be highly satisfied with their working-time arrangements) and flexible contracts. Flexible contracts cover a variety of situations ranging from fixed-term contracts to on-call work, hardly arrangements one would expect workers to find preferable. In addition, job growth is highly concentrated in industries where these contracts (part-time and flexible) seem to fit product demand conditions well. However, this does not mean that the industries experiencing growth create only part-time or flexible jobs. In business services, the fastest-growing industry, the lion's share of new jobs is in full-time work. Nevertheless, most employment growth (measured in full-time equivalents) has been in part-time and flexible jobs, and these jobs, on average, pay less than full-time jobs.

The Dutch minimum wage has fallen throughout the 1980s and 1990s relative to the average wage. At the same time, employment has risen in industries that pay a wage below average wages. This points to the importance of relative wage flexibility in employment generation.[29] This is the development that critics of the Polder model have stressed: full-time jobs in manufacturing (which pay about the average wage) are declining, but part-time, flexible employment at lower wages has increased. While part-time and flexible jobs, on average, pay less than full-time work, substantial variation exists. Not every new job is low paid. It would certainly be preferable for job creation to take place at the upper end of the wage and productivity structure, but that would make the Netherlands quite unique in that respect. The Netherlands has not broken up the trade-off between employment and productivity growth observed by Richard Freeman in 1988. Employment growth mainly takes place at the lower end of the productivity scale, which is different from the period of industrial development, when high-paying jobs were determining employment and wage trends (Appelbaum and Schettkat 1994, 1995). In this sense, the Netherlands is not a miracle at all. The Netherlands has not found a solution to the disappointing slow growth in high-wage jobs, nor has the country found the way to exceptionally high economic growth. Income per capita has grown mainly because labor input has increased. As Paul Krugman has pointed out, this is not a miracle per se, but it is, nevertheless, remarkable in the European context, where expansion in service industries has been slow. As mentioned earlier, in developed social welfare states increasing employment reduces transfers and thus lowers taxes and other social contributions. The reduction of social security contributions helped to increase private consumption capacity. If the Netherlands is a model, it is a model of a new contract, which combines support for the low end of the labor market in exchange for participation.

It is not simple deregulation but rather a combination of job growth—if necessary, in specially created jobs, so-called Melkert jobs (see Schmid 1997)—and the expectation, supported by adjustments in social security, that workers will take up job opportunities. In this sense, the Netherlands has experienced a "kultuuromslag," a change in the culture from passive welfare state transfers that reduced labor supply to an active welfare state that supports individuals' efforts to work but also expects "individual flexibility." The new social contract is based upon "flexi-curity," a successful combination of flexibility and security.

APPENDIX:
The Labor Foundation (Stichting van de Arbeid) and the Social Economic Council (Sociaal Economische Raad, or SER)[1]

The Labor Foundation was founded on May 17, 1945, shortly after the liberation of the Netherlands, as a private consultative and cooperative body incorporating Dutch employers' federations and trade union confederations. In the first few years of its existence, the foundation, in addition to advising on social and economic issues, also discussed the future structure of industrial organization. The intention was to foster cooperation between employers and employees in the various industrial sectors as a means of organizing the economy and ensuring that everyone involved in the production of goods and services would share responsibility.

The Industrial Organization Act of 1950 established the Social Economic Council (SER) as the central body of the new public law industrial organization and as a (new) advisory body to the government on social and economic matters. In addition to representatives from the employers' federations and trade union confederations, the SER also includes independent experts appointed by the government (known as 'crown members'). The SER has assumed a number of the advisory tasks formerly carried out by the Labor Foundation. The foundation has continued to serve as a platform for bipartite consultations on current issues in trade and industry, in particular those involving employment terms and industrial relations. In due course it has also become a forum for consultations between employers, employees, and the Cabinet.

The members of the employers' federations are individual firms/businesses and industry-level organizations of employers; the trade union confederations consist of individual trade unions active in a particular industrial sector. Their most important task by far was to consult on targeted wage and price movements. Today, the foundation's members discuss social security; standard and supplementary pension provisions; education and training; employment and industrial relations; employee recruitment and selection; equal treatment and the social and labor market position of certain groups of workers such as ethnic minorities and older employees; part-time employment, and so on.

Consultation is hence the "binding factor" in Dutch industrial relations. The process of consultation can therefore be seen as an indispensable component in the relationship between employers and employees (i.e., trade unions). Indeed, in the Netherlands a virtual "consultative culture' has developed over time, and the Labor Foundation has played an important role in shaping the Dutch consultative economy. As mentioned above, the foundation was created because both employers and employees were convinced that their cooperation was required to rebuild the postwar economy. Considered in this light, the foundation could provide an institutional framework to foster social peace and stable industrial relations.

A major factor in the spring and autumn consultations are the so-called "joint policy orientations" formulated by the SER. These are:

- balanced and sustainable economic growth;
- an increase in the number of people in employment;
- reasonable distribution of incomes;
- price stability.

Negotiations in the Labor Foundation led to the so-called "Wassenaar Agreement." In this agreement, the foundation recommended that employers and employees pursue a policy of moderate pay raises at the industry and company levels in order to improve performance in trade and industry. In addition, it recommended combining this policy with company-level measures intended to stimulate employment—for example, by introducing reductions in working hours. This agreement made it possible in the 1980s to shift the responsibility for setting wage policy from government to employers and employees acting jointly.

Initially, the new approach took the form of a general policy framework set out by the Labor Foundation for decentralized collective bargaining. The steady process of decentralization was reaffirmed in 1993 in a new agreement, entitled "A New Course," within the foundation. The agreement sets out an "agenda" for future consultations on settling employment terms in collective agreements concluded between employers and trade unions at industry or company levels (compare Visser/Hemerijk 1997 for details on industrial relations).

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1. This section is based on the Labor Foundation Information brochure.

ENDNOTES

1. The *New York Times,* the *Economist,* and even President Clinton have described the Dutch economy as "the third way," a "Dutch delight," and a "success story."

2. Crown members include, among others, the Nederlandse Bank and the Centraal Planbureau, a public economic research institute.

3. Critics of the Polder model argue that wage growth has been slow and that most of the new jobs are less secure and less desirable flexible jobs. They mainly argue that the current success will not last forever (Delsen and de Jong 1997).

4. In the 1970s, the Netherlands followed automatic price compensation similar to the Italian *scala mobile,* and the government formally had the right to intervene in wage setting.

5. Citation of Wim Kok in SER bulletin, December 1997, p. 6; Ruud Lubbers in SER bulletin, December 1997, p. 5. Economic Minister Hans Wijers argues strongly against the view that institutional arrangements like the Stichting van de Arbeid are the key explanation for Dutch economic development. He emphasizes that the Wassenaar agreement was the result of strong external pressure (SER bulletin December 1997, p. 12).

6. See, e.g., Marco Wilke (1997), a representative of the public sector union.

7. In theoretical discussions reference is often made to the so-called Pigou effect, i.e., the rising value of financial assets as the general price level falls.

8. Van Praag (1997) notes that wage restraint makes a country more attractive for foreign investment and at the same time reduces the incentive for domestic companies to invest abroad.

9. The divergence in the trends of Dutch and German unemployment rates cannot be ascribed to diverging trends in East and West Germany. The level of the unemployment rate in West Germany is lower than in East Germany, but both rates have increased since 1991 (see Sachverständigenrat 1997).

10. The correlation for the employment-to-population ratios between the U.S. and the Netherlands are: 1960-94: 0.14, 1960-86: -0.85, 1987-94: 0.24. The Netherlands-German correlation is 0.56 for the whole period.

11. The age-differentiated minimum wage starts at 30% of the basic rate for 15-year-olds and rises by age until it reaches 100% of the legal minimum wage at age 23.

12. Young workers made up more than 50% of those receiving the minimum wage in 1979 and about one-third of the total in 1994 (Salverda 1998, 4).

13. This is the average minimum wage using the employment weights.

14. The lowest collective-agreement wages are above the legal minimum wage but follow it in tendency.

15. Data on hours worked vary substantially between sources, and the figures displayed (from the OECD's International Sectoral Database) should not be taken at face value. But, nevertheless, they seem to indicate the trends well.

16. Part-time workers are covered by Social Security (Horst et al. 1996).

17. Part-time workers with low hours do not have active and passive voting rights in worker representation bodies, but employment protection is similar to that of full-time workers.

18. We refer to productivity growth only. Studies that emphasize productivity levels usually show the United States to have high productivity levels although, in some studies, the Netherlands and Germany have caught up (e.g., Madisson 1991; Ark and McGuckin 1997). Note that we define productivity as GDP per hour worked. Others often use GDP per employed person, but that measure is strongly influenced by hours worked.

19. For a discussion of the relationships between productivity per hour and per person and income per capita see Schettkat (1992).

20. The graph also clarifies the German problem. The public budget was balanced just before unification but rose dramatically afterward.

21. Excluding investment in housing.

22. Of course, wage and productivity together determine the wage effect on the price level.

23. Unfortunately, more detailed analysis is not available. Coen Teulings and Joop Hartog (1988) compared Krueger-type wage differential studies from several countries and found that the unexplained (not related to measured worker characteristics) variation in wages is higher in countries with decentralized bargaining systems but lower in "corporatist" bargaining systems.

24. Measured across 22 industries, log wages.

25. See *OECD Employment Outlook*, 1997, p. 13.

26. The difference is associated not with low GDP growth but rather with high productivity growth.

27. Of course, negative elasticities cannot be interpreted as presenting a causal relationship; they simply indicate that productivity growth was stronger than GDP growth.

28. The positive employment elasticity in terms of persons in Germany is an effect of the working time reductions.

29. The tax system shifted in favor of low incomes, specifically to make work at the low end of the pay scheme appear more attractive (Berndsen 1995). Income exempted from taxation has increased 35%, from 4,771 Hfl in 1990 to 6,440 in 1994. However, the top marginal tax rate (60%) starts around 90,000 Hfl. The Dutch tax reform approach is quite different from the tax reform discussed in Germany, for example, where the emphasis is on the reduction of the top rates rather than on the lower rates.

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