The Labour Market and Rising Living Standards in 1950s Western Europe: The Case of the Netherlands.

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Dissertation submitted to the University of London for the degree of Doctor of Philosophy, September 1999.

This thesis was funded by ESRC studentship R00429534344.

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Abstract.

This thesis looks at the rapid rise in living standards in western Europe during the 1950s. It argues that this rise occurred as a result of structural changes in the labour force, changes that were associated with the high growth rates and industrial expansion of the period.

The thesis looks specifically at the Netherlands, where rising living standards went side by side with wage control. The purpose of wage control was to enable funds to be made available for industrial expansion. The wage control system and industrialisation polices are described, along with critiques that have argued that wage control failed to hold down wage levels. This alleged failure is rejected as the explanation of the rapid rise in living standards.

A test of the effect of full employment on wage levels shows that wage rates in a number of industries where demand for labour was extremely high rose measurably by more than they otherwise would have done, but nowhere near enough to explain the rise in incomes during the period.

The effects of sectoral change on male incomes are also calculated. Manufacturing increased its workforce during the period by recruiting young workers, new entrants into the workforce, who received higher pay than they would have received working in other sectors. Earnings have a tendency to rise with age, and the combination of these factors resulted in a median rise in male real incomes of over a hundred percent across the 1950s. A contribution to this rise was also made by the movement of older male industrial workers into office work, and by the movement of self-employed craftsmen into industrial employment.

The rise in participation of unmarried women, particularly after 1952, increased the amount of earnings brought into households, with the result that household incomes rose even faster than male earnings.

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Chapter 1. Introduction

In the period following the Second World War, the standard of living of the western European population rose more rapidly than at any time in its previous history. The effect on people's lives was enormous. It had the result, according to Milward, that by 1968 the proportion of the western European population threatened by serious economic hardship had fallen from around three-quarters to about a fifth[1]

It was in this period that the mass of the western European population became part of the "consumer society". Milward claims that the rate of acquisition of cars, TVs, refrigerators, washing machines, furniture, clothing and so forth, rose to a higher level than ever before[2]. He gives no figures to substantiate this, but other studies seem to bear him out. Bowden and Offer show that the mass diffusion of household appliances, such as occurred in the USA during the 1920s, began in Britain during the 1950s[3], while Rostow's figures show the ownership of private automobiles in Britain, France, West Germany and Italy increasing more rapidly during that decade than previously[4]. The nature of consumer durables changed to reflect this new mass market. For example, by the end of the 1950s, the western European car market was dominated by the small, basic vehicle, such as the Volkswagen Beetle, the Citroen 2CV, the Renault 4CV, the Fiat 500 and the Morris Minor, designed merely to hold four people and their luggage[5].

Rising living standards were a consequence of rising wages. Rising living standards in this context means that people were buying more, and this they could only have done for a sustained period if their incomes had risen. The majority of the western European population in the 1950s relied on wages (and, to a lesser extent, salaries[6]) for their incomes[7]. Mass consumption therefore meant spending wages, and increased consumption can only have occurred when real wages were rising.

The rise in wages is not easy to explain. It is obvious that it is associated with the unprecedented growth in GDP during the period. Between 1950 and 1973, a period that has been termed the "European Golden Age", real European GDP per capita grew at an

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[1] Milward (1992) p. 21.
[2] Ibid. p. 21.
[3] Bowden and Offer (1994) p. 730.
[4] Rostow (1990) p. 171.
[5] Williams *et al* (1983) p. 223.
[6] While the distinction between wages and salaries can be important, usually it is not. Henceforth, unless otherwise specified, "wages" means "wages and salaries".
[7] ILO (1963), Table 4A. The only countries in non-Communist Europe where this was not the case were Greece and Turkey.

average annual rate of 3.8%, as against a rate of just one percent a year between 1913 and 1950[8], while cyclical fluctuations were, in general, mild[9]. But to state the connection is not to explain it.

Explanations at the time tended to assume that income was being redistributed towards the poorer sections of society as a result of government action. Crosland, for example, noted the existence of rising living standards in Britain as early as the beginning of the 1950s, pointing out that, while per capita consumption hardly rose between 1938 and 1950, average working class consumption did increase. He attributed this to the redistributionist effect of the policies of the post-war Labour government[10]. Myrdal also argued that government policies had led to redistribution, but the mechanism he proposed was indirect. Lecturing at Yale in 1958, he argued that "full employment" policies had strengthened the bargaining power of workers against that of their employers, enabling them to extract higher wages. He also argued that similar developments in other markets improved the bargaining position of other groups within the population that had normally not done particularly well, such as the farmers[11]. Both these analyses seemed to confirm a social-democratic analysis, implying, as they did, that poverty was being voted away, without serious social and economic upheaval.

However, the role of government in this process has to be queried. Rising material living standards were to be found in countries that experienced conservative and non-interventionist governments as well as ones governed by social democratic and interventionist parties.

Furthermore, it has been suggested that increased investment, not government policy, was responsible for full employment. Matthews, for example, considering the causes of full employment in the UK between the end of the Second World War and the 1960s, compares this period with the inter-war years. Of the possible factors that could have made a contribution to full employment, the biggest change was in the level of investment[12]. This created a demand for labour, and Matthews concludes that part of the reason for full employment was the trend increase in the scarcity of labour relative to capital[13].

Kindleberger suggests, in a related argument, that the state of the labour market permitted the high levels of investment. However, in contrast to Matthews, he bases his argument on

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[8] Crafts & Toniolo (1996) p. 2.
[9] Ibid. p. 3.
[10] Crosland (1956) pp. 44-45.
[11] Myrdal (1960) pp. 32-33.
[12] Matthews (1968) p. 568.

the abundance, not the scarcity, of labour. He argues that the major factor shaping the high levels of growth in the 1950s was the availability of a large supply of labour. This came from a variety of sources and differed between countries. It came from a high rate of natural increase (the Netherlands), transfers from agriculture into services and industry (West Germany, France and Italy), the immigration of refugees (West Germany), and the immigration of unemployed and underemployed workers from Mediterranean countries (France, West Germany and Switzerland). Those countries with no substantial increase in the labour supply (Britain, Belgium and the Scandinavian countries) grew, on the whole, more slowly than others[14]. He does not argue that the availability of excess labour determined the growth, but rather that the elastic supply of labour supported high levels of investment[15].

More recently Eichengreen has attempted to account for the "Golden Age" in terms of a relative redistribution of income *away* from wage earners. He argues, along with Kindleberger, that the proximate cause of high growth was investment, pointing out that the net investment rates in Europe during the 1950s and 1960s were nearly twice as high as before or since[16]. Such a high investment rate was possible, he maintains, for two reasons. Firstly, the opening-up of the western European economies and consequent export growth enabled investment to be made where it was most productive and where comparative advantages could be exploited. Secondly, wage moderation stimulated the supply of investment by making profits available to future investment, and stimulated demand for investment by making it profitable. (In this, he takes up a point made by Kindleberger[17].) He speculates that wage moderation can be explained as an expression of the desire on both sides of industry not to repeat the disasters of the inter-war years[18]. As examples of countries where wage rises were moderated, he gives the Netherlands, West Germany, Norway, Belgium and, perhaps surprisingly considering its reputation, the UK[19].

The relationship between the high growth rates and wages is therefore not clear. On the one side, Myrdal argues that full employment allowed trade unions to push up wages, while on the other Eichengreen and Kindleberger argue trade unions moderated their wage demands to allow investment. It is not possible for both these positions to be correct - although it is conceivable that they are both wrong.

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[13] Ibid. p. 568.
[14] Kindleberger (1967) p. 3.
[15] Ibid. p. 4.
[16] Eichengreen (1996) p. 38.
[17] Kindleberger (1967) pp. 33-34.
[18] Eichengreen (1996) p. 41.

This thesis argues that economic growth in the 1950s translated into wages growth because of the changes that it brought about in the structure of the workforce. These changes included, most importantly, an increase in the proportion of the workforce employed in manufacturing and an increase in women's participation in paid employment. This introductory chapter sets the scene. Section 1.1 defines what is meant by the various definitions of wages growth, and explains how wages growth can be affected by structural change to the workforce. Section 1.2 explains why the Netherlands has been chosen as an example. Section 1.3 explains the structure of the thesis.

1.1 Wages growth.

Eichengreen does not define what he means by "wage moderation". He appears to use it to refer to both wage costs and wage rates. Put another way, his argument seems to be that wage costs rose less than the increase in productivity, thereby enabling greater sums to be available for investment; the low rate of growth of wage costs was a consequence of the low rate of growth of wage rates. But the phrase "wage moderation" could also mean a relatively low rate of growth in the incomes of wage earners. Eichengreen also seems to use it in this sense, when he talks about workers agreeing to defer compensation[20].

This section attempts to make distinctions between the various meanings of the word "wages". The intention is not to indulge in word games, but to ensure that, when measuring wages growth in one form or another, it is clear what, in reality, is being discussed. The definitions are then used to suggest a mechanism by which economic growth could have caused disposable income to rise without wage rates eating into the funds available for investment.

The rate of growth of wages can appear very different depending on which definition of "wages" is used. The word can be used, from the point of view of the employer, to mean "wage costs". From the point of view of the wage earner, there are, broadly speaking, four major ways in which it is used. It can mean the wage rate at which the worker is employed, the worker's actual earnings, the income of the household to which the worker belongs, or the income that the worker receives after household expenses are paid and intra-household income transfers are made. The measurement of each of these is, in turn, in one respect or another, contentious and may well have to take further subjective factors into account.

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[19] Ibid. pp. 45-46.
[20] Ibid. p. 43.

The wage rate, or rate of pay, forms the basis on which earnings are calculated. This could be on the basis of the rate per hour or, for salaried staff, the rate per month or per year, or it could be on the basis of piece rates or commissions.

Earnings are what the worker is paid by the employer. These can include such things as overtime payments and bonuses. Earnings can be measured on a weekly or an annual basis - which will give different results in the case of, for example, seasonal workers - and can be measured before or after the deduction of tax and insurance contributions.

Household income is the total amount of income brought into the household. In a household with a single breadwinner, this will be the same as earnings, and is therefore sometimes confused with earnings. But it will vary with the number of earners in a household as well as with their earnings, and it can also contain non-wage components, such as when a household contains both wage earners and self-employed workers. Household income can be measured before or after housing costs.

Personal disposable income is what the individual receives. This is the result of income transfers within the household, after the payment of collective costs such as rent and food bills.

The rates of growth of these are not necessarily all the same. Each one is in part dependent on the structurally previous one but is also in part dependent on other factors. For example, earnings will vary as wage rates change, but will also vary with the amount of overtime worked.

Changes in the employment structure of the workforce will cause earnings to grow at a different rate than wage rates. A worker can increase his or her earnings by moving to a higher-paid job. Movement of large numbers of workers from a lower-paid to a higher paid sector - such as would happen as the lower-paid sector contracted and the higher-paid one expanded - will tend to cause earnings to rise independently of changes in wage rates. According to Pollard, for example, the movement of wage earners into higher-paid jobs accounted for about half the long-term increase in wages in Britain in the period before the First World War[21].

Changes in the age structure of the workforce will also affect the growth of average earnings. For example, since younger workers tend to earn less than older ones, a fall in the average age of the workforce will be accompanied, if wage rates are held constant, by a fall in the level of average earnings.

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[21] Pollard (1992) p. 151.

In the same way, changes in the makeup of household incomes will cause these to grow at different rates to the overall growth of earnings. A rise, for example, in the participation rate of women in paid employment will, *ceteris paribus*, increase household incomes independently of any changes in earnings levels[22]. In the same way, increased social security payments, such as old-age pensions or family allowances will also increase household incomes without an increase in earnings. On the other hand, changes in the relative costs of household expenditure will affect the amount available for personal incomes. For example, legal restrictions on rent rises in a period of rising household incomes will result in a greater proportion of household income being available for distribution as personal incomes.

Wage costs will not necessarily rise or fall at the same rate as any of these. On the face of it, wage costs might be thought of as directly related to earnings, since these are what the employer hands over to workers. But the cost of employing a worker includes other components - such as employers' insurance contributions and contributions to employees' pension schemes, as well as costs arising from provisions such as canteen facilities, which are incurred by the sheer fact of employing anyone - and the costs of these may well rise at a substantially different rate to those of earnings. But what might be of more importance to an employer is the relationship of the marginal cost of employing a worker to the worker's marginal product. Studies have suggested that, at least in the short run, these are not identical. For example, Kotlikoff and Gokhale's study of 300,000 employees working for a Fortune 1000 company between 1969 and 1983 concluded that, for most workers, their productivity exceeded the sum of their earnings and other compensation when young, but was lower when old. The exceptions were the sales personnel, whose earnings were partly based on commission[23]. An implication of this is that a firm's net wage costs will vary, *ceteris paribus*, not just according to variations in the actual earnings of its employees but also according to their age profile.

1.2 The case of the Netherlands.

This thesis looks at the case of the Netherlands. This country has been described by Eichengreen as "prototypical" in its combination of wage restraint - in the form of wage

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[22] Under the conditions, that is, of the 1950s, when women tended to be members of households whose main breadwinner was a man.

[23] Kotlikoff & Gokhale (1992) pp. 1235-42.

control - and high investment[24]. Its rate of growth of foreign trade over the period was typical, slightly lower than that of West Germany, slightly higher than that of France[25], while its rate of growth of national income between 1950 and 1962 was about the average for north-west Europe as a whole[26]. The object of the substantive chapters of the thesis is to use the case of the Netherlands to create an explanatory model which could then be of use in looking at rising living standards in other countries and in western Europe in general.

As with other western European countries, the Dutch economy grew at a historically remarkable rate following the recovery from the Second World War. The expansion of 1950-73 was the fastest and longest the Netherlands had experienced since the seventeenth century[27], an upward trend only interrupted in 1958 when real income per capita briefly fell[28]. The expansion of industry during the 1950s played a significant role in this growth. Between 1948 and 1962, industrial production more than doubled[29], with industry's contribution to national income rising from 31% in 1938 to 42.5% in 1960[30]. The growth of the export trade helped considerably in this. Between 1950 and 1973, Dutch foreign trade grew at an average annual rate of 9.26%[31], with industrial products becoming more important. Over the period 1949-60, the volume of industrial exports grew by 400%, rising from 55% of exports in 1949 to 62% in 1960[32].

Overall, there was an increase in prosperity during the 1950s. Between 1948 and 1962, real national income per capita rose by almost 60%, while consumption per capita by value was one-third higher in 1962 than in 1948[33]. The growth in consumption was also typical in the way that it involved widening ownership of consumer durables. The per capita quantity of consumer durables bought each year rose by more than sixty percent between 1953 and 1960[34]. By 1958, sixty percent of all households had the use of a washing machine - although not all of them fully-automatic - and by the end of the decade almost all households had a vacuum cleaner[35]. Ownership of televisions increased. When the Dutch television service began in 1951, there were only a hundred television sets in the entire

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[24] Eichengreen (1996) p. 45.
[25] Maddison (1991) p. 148.
[26] Denison (1967) p. 17.
[27] Griffiths (1986) p. 95.
[28] Van Zanden & Griffiths (1989) p. 210.
[29] *Achtste nota inzake de industrialisatie van Nederland* p. 4.
[30] Abert (1969) p. 8.
[31] Maddison (1991) p. 148.
[32] Abert (1969) p. 7.
[33] *Achtste nota inzake de industrialisatie* pp. 4-5.
[34] *Jaarcijfers voor Nederland 1959-1960* Table 357.
[35] Van Rossem *et al* (1993) p. 59.

country. Ten years later there were more than a million[36]. The ownership of motor vehicles expanded rapidly too. Between 1952 and 1958, the ownership of mopeds increased by more than three times, from 217 000 to 925 000, and the number of motor cars more than doubled from 170 000 to 425 000[37].

This thesis argues that the major factor behind rising disposable incomes was the changing structure of the workforce. This changing structure was, in turn, a consequence of increased industrialisation, which resulted in the expansion of employment in manufacturing, from about 25% of the workforce in 1947 to just over 30% in 1960[38]. The higher rates of pay offered in manufacturing would have meant that earnings rose as a consequence, an increase that would have been amplified by the increasing proportion of the manufacturing workforce in white-collar occupations, while increasing female participation in the paid workforce (including higher paid jobs than previously for teenagers) would have led to additional increases in household income.

The thesis attempts to evaluate how much structural changes to the workforce contributed to increasing household incomes. It looks at what structural changes occurred, and attempts to calculate the effect of these.

It confines itself to the period between 1945 and 1960. Rising living standards were an established fact of life by 1960, and there are a number of reasons why this particular year is a good breakpoint. The census of 1960 gives a good picture of the changes to the workforce since the first post-war census in 1947. The institutional context changed the previous year, with the break-up of the Labour-Catholic coalition that had ruled the Netherlands since the Second World War, while the labour market changed after 1961, with numbers of skilled workers going abroad to work, helping create a shortage of skilled labour that led to the collapse of wage control in 1963. The inclusion of the period of post-war recovery before the beginning of the "Golden Age" is justified on two grounds. Firstly, the availability of the data (e.g. the timing of the post-war census) sometimes makes it unavoidable. Secondly, a number of the trends that contributed to the rise in living standards, such as increased industrial employment, had their origins in the recovery from the chaos of the immediate post-war world.

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[36] Ibid. pp. 61-62.
[37] Ibid. p. 58.
[38] *13e Algemene volkstelling, 31 mei 1960 Deel 10A*, Table 2.

1.3 The structure of the thesis.

Chapter 2 gives an account of the economic development of the Netherlands between 1945 and the beginning of the 1960s. It explains the relationship between wage control and the government's industrialisation policy. It then goes on to explain the institutional background to changes in the Dutch economy, in particular those in the labour market. This includes a description of how wage control worked and why the trade unions backed it. The chapter ends by describing broadly the effects of industrialisation on the Dutch economy.

Chapter 3 considers the effectiveness of the wage control system. It looks at the arguments of Roberts in the 1950s, van Hulst in the 1980s, and Brander, van Hulst and Mieras in the 1990s, all of whom argued that wage control had little or no effect, together with the arguments of their critics. The chapter concludes that none of the arguments show that disposable incomes rose because of a failure of wage control to hold down wages.

Chapter 4 describes how the workforce changed its structure during the period. It identifies a number of significant changes, the most important being the growth of employment in manufacturing and the decline of employment in agriculture. It shows that there are important distinctions between the male and female workforces, and how these changed. The chapter also describes the pattern of unemployment over the period and how this changed over time.

Chapter 5 tests the hypothesis that real wages grew as a direct result of full employment. In particular, it takes up Myrdal's argument that full employment enabled trade unions to push up wage rates. The chapter concludes that, although some effects on wage rates of full employment can be found, these rises were not large enough to account for the rise in earnings.

Chapter 6 tests the hypothesis that changes in the occupational and sectoral structure of the workforce account for the rise in incomes. It looks at the effect of the increase in male employment in manufacturing on men's earnings. It finds that the major part of income growth can be accounted for by the increase in the number of young men employed in manufacturing.

Chapter 7 looks at the effect of structural change on household incomes. The reason for this is that earnings are not the same as disposable income. Disposable income is mediated through the household, and, *ceteris paribus*, the growth of household income can be used as a proxy for the growth of disposable income. The chapter measures the effects on

household incomes of the increased earnings of sons living in their parental homes and the increased participation of women in the paid workforce. It concludes that, by increasing household incomes, these boosted disposable income by an amount greater than their apparent magnitude, but that it is not possible to calculate a precise amount.

Chapter 8 sums up the results. It then briefly looks at data from a selection of other countries in western Europe to see if the Netherlands was an exception. It ends by discussing some implications of these results.

The thesis uses published sources throughout. The figures used are, to large extent, taken from census data and from reports and series published by the Dutch Central Bureau for Statistics (CBS). The publications of the CBS can often be found in libraries that contain statistical material generally, as well as in the *Koninklijke Bibliotheek*, the Dutch national library. They are also, usually[39], to be found in the libraries at the CBS offices in Voorburg and Heerlen, and many thanks are due to the staff in these libraries for their all their assistance in my search for the data used here.

[39] Unfortunately, some of the older publications are missing.

Chapter 2. Wage Control and the Industrialisation of the Netherlands.

This chapter explains the background to the Dutch labour market during the 1950s. It discusses two important features: wage control and the industrialisation policy. It explains what these were and the relationship between them.

The chapter begins by explaining the reasons for the industrialisation policy. It looks at the state of the Netherlands in the aftermath of the Second World War, both in terms of the immediate crisis and the problems it faced in the longer term. It explains why the industrialisation policy was adopted and how wage control was used to assist it. It also looks at how this policy related to political developments in the Netherlands.

The chapter then explains the operation of the wage control system. It describes the complex set of institutions used to control wages growth, and describes how the system changed over the period. It also explains why the system had the backing of the trade unions.

It ends by looking at the outcomes of industrialisation. It describes how the expansion of manufacturing played a major role in solving the post-war economic problems faced by the Netherlands - in particular, its role in the disappearance of unemployment and the appearance of full employment.

2.1 The Netherlands after the Second World War.

Wage control and industrialisation were a consequence of the economic and political situation the Netherlands found itself in following the Second World War. They were a practical response to the economic problems and became an integral part of the Dutch political consensus because of the way that the political system developed after the war.

The immediate problems faced by the Dutch economy in 1945 were those resulting from war and occupation. There is general agreement that war damage in the Netherlands was greater than in other western European countries[40], with industrial production in the third quarter of 1945 (the first full quarter after liberation[41]) only reaching 38% of the pre-war level[42]. The first post-war estimate of the Dutch Central Bureau of Statistics (CBS)

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[40] Van Zanden & Griffiths (1989) p. 185.
[41] The liberation of the Netherlands was completed on 5 May 1945.
[42] Ibid. p. 189.

suggested that, even if consumption were frozen at the minimum necessary for existence, economic recovery would take at least five years[43]. Per capita income, already lower in 1940 than in 1929, fell still further during the occupation, and, during the last stages of the occupation, in the "hunger winter" of 1944-45, consumption fell well below the level of subsistence. Funds were needed to raise consumption levels, which restricted those available for investment. Inflation threatened: taxation more than doubled between 1940 and 1945 but nonetheless failed to cover public expenditure, and there had been a five-fold increase in the monetary stock[44]. War damage to the Dutch capital goods stock amounted to over a quarter of its pre-war value[45]. The merchant marine was reduced to about half the pre-war tonnage and the railway rolling stock was devastated, with only five out of 300 electric engines fit to use. There was a shortage of 300,000 houses: out of a population of just under ten million, more than one million did not have proper living accommodation[46].

Recovery from these problems began almost immediately and was largely achieved by the end of the decade. By the autumn of 1945, the Dutch consumer was getting 2,200 calories a day, against between 400 to 600 in the occupied west of the country during the weeks immediately before liberation[47]. Industrial production reached the pre-war level in 1947[48], and per capita national income surpassed the 1929 pre-war peak in 1948[49]. Rationing was abolished in 1949 with the exception of coffee, which remained rationed until 1952[50]. The only sectors of the economy that had not reached their pre-war levels of production by 1950 were coal mining and ready-made clothing[51]. The period of recovery is generally regarded as having ended in 1950[52].

But, beyond the immediate crisis, the economy also faced serious structural problems. Indonesian independence, finally granted after five years of military struggle in 1949, meant the loss of between ten and fifteen percent of national income[53]. The end of colonial rule meant not just in the loss of the function of Amsterdam as a trade centre but also in the disappearance of a large protected market. And, perhaps most importantly in the

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[43] Ibid. pp. 186-187.
[44] Klein (1980) pp. 5-7.
[45] Van Zanden & Griffiths (1989). p. 186.
[46] Klein (1980) pp. 5-7.
[47] De Liagre Böhl, *et al* (1981) p. 144; van der Zee (1982) p. 224. These latter figures are not typing errors. A representative of the British Ministry of Food in the Hague reported, immediately after liberation, that there were some 20,000 cases of extreme starvation in that city alone - around five per cent of the population [van der Zee (1982) p. 300].
[48] Van Zanden & Griffiths (1989) p. 204.
[49] Klein (1980) p. 7.
[50] Van Zanden & Griffiths (1989) p. 202.
[51] Ibid. p. 204.
[52] Messing (1981) p. 25.
[53] Klein (1980) p. 8.

immediate post-war context of the "dollar gap", it meant the loss of the triangular trade flow which had brought dollars to the Netherlands as the result of East Indian trade with the USA[54]. Traditionally, Indonesia had supplied the Netherlands with a balance of payments surplus[55], and in the late 1940s a deficit appeared in the Dutch trade balance amounting to some 14% of GNP, the largest deficit, in terms of proportion of international trade, of any country within the dollar area[56]. Additionally, a rapidly growing population - its rate of increase averaged 1.3% per annum between 1950 and 1960[57] - raised the spectre of increasing poverty and unemployment. Rising population had led to a fall in per capita national income between 1929 and 1939[58], and had contributed to the growth of unemployment[59].

The government's industrialisation policy was a response to these structural problems. It was initially formulated by a civil servant at the Ministry of Economic Affairs, G. A. Kohnstamm, who defined the problem as being how to maintain full employment with a growing working population and how to get rid of the enormous balance of payments problem. He went on to argue that, since the Dutch economy was already strongly specialised in the tertiary sector and since agriculture needed to shed labour rather than increase it, it followed that industrialisation must be the only way to increase employment[60].

Economic development in the nineteenth century and in the first four decades of the twentieth century had left the Netherlands with a geographically uneven pattern of industrialisation. Industrial growth took off in the 1890s, dominated by "old" sectors such as food and textiles, with the "new" sectors, such as chemicals and the paper industry, becoming important only after 1910. By around 1930, the industrial picture of the Netherlands was characterised by a mosaic of regional specialisations. Labour-intensive industry had become concentrated on the periphery, in Twente and North Brabant, while capital-intensive industry was concentrated in Holland[61]. Elsewhere, development had been more differentiated, with brick-making in the river area, mining in South Limburg, and agricultural industry in the eastern part of Groningen and in western North Brabant[62].

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[54] De Smidt & Wever (1987) p. 6.
[55] Van Zanden (1988) p. 468.
[56] Van Zanden & Griffiths (1989) p. 192.
[57] Abert (1969) pp. 2-3.
[58] Van Zanden & Griffiths (1989) p. 129. Population rose by 12.9% between 1929 and 1939, while national income increased by only 10% in the same period.
[59] Ibid. p. 155.
[60] Ibid. pp. 242-243.
[61] "Holland" is used throughout this thesis in the strict sense of the provinces of North and South Holland, rather than in the colloquial sense of the Netherlands as a whole.
[62] De Smidt & Wever (1987) pp. 13-14; van Zanden & Griffiths (1989) p. 7.

Source: Jaarcijfers voor Nederland, 1950-1951

Figure 1. The Netherlands at the beginning of the 1950s.

Van Zanden and Griffiths argue that this distribution can be explained to a large extent by the modernisation in the nineteenth century of the two strong sectors of the economy: agriculture and international services. The modernisation of agriculture was coupled with the rise of industrial development: thus, at the heart of industrialisation in eastern Groningen and western North Brabant could be found sugar, potato meal, strawboard and milk factories. In the west of the country, the adoption of economies of scale in the service sector led to the rise of steam boat lines and railway companies in the 1860s, giving the country its first capital-intensive enterprises. These in turn played a decisive role as

suppliers of capital and as customers of modern shipbuilding and machine building in Holland after 1890[63].

Geographical factors also played a role. The Netherlands is poor in raw materials, which have to be imported and are therefore cheapest in port cities. These port cities, as centres of trade, they argue, possessed a capital-rich citizenry, a variety of occupational groups with specialised skills and a large, relatively prosperous market. Consequently, development here involved the industrialisation of traded goods, such as sugar refineries and beer brewing, the growth of luxury industries dependent on highly-skilled workers, such as the diamond and printing industries, businesses linked to the ports, such as shipbuilding and machine building, and businesses such as ready-made clothing, directed at the domestic market that employment resulting from this industrialisation created[64].

The growth of industry in Holland led to rural underemployment elsewhere. The process of geographical specialisation brought about the end of rural industry, and consequently the agriculturalisation of the countryside[65]. This in turn released labour for urban industry. Industrialisation in Twente, the Achterhoek and North Brabant was largely based on the supply of cheap labour released as a result of the decline of agriculture-related household industry[66].

The existing industry was adversely affected by Indonesian independence. Colonial rule had aided the growth of industry. The cotton industry in Twente grew on the demand for cotton goods from Java, while the Dutch machine tool industry specialised in building machines for the Javan sugar industry[67].

Much scope existed, therefore, for the further industrialisation of the country, and between 1948 and 1962, the government attempted to promote economic growth by encouraging industrial expansion. To this end, the Ministry of Economic Affairs issued eight *Industrialisation Notes*, the first in 1949. These were neither economic plans in the narrow sense nor rigid outlines, and the basis of the economy remained entrepreneurial production, based on private ownership of industry. Messing summarises the industrialisation policy as an attempt to shape a climate in which the entrepreneur dared to take risks[68], while Dercksen suggests that it should be seen as a Dutch example of

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[63] Van Zanden & Griffiths (1989) pp. 5-6.
[64] Ibid. p. 6.
[65] De Smidt & Wever (1987) p. 14.
[66] Van Zanden & Griffiths (1989) p. 6.
[67] Ibid. p. 7.
[68] Messing (1981) p. 26.

indicative planning[69]. The *First Industrialisation Note*[70] of September 1949 spoke of the need to expand the workforce in manufacturing by 215,000 by mid-1952, and the next two notes, published in 1950 and 1951, had the character of reports on the progress achieved. From the *Fourth Industrialisation Note* the plans were less specific, and the *Eighth Industrialisation Note* of 1963 brought the policy to a formal end[71].

Wage control was intended as a means by which the funds necessary to finance industrialisation were to be made available. The *First Industrialisation Note* declared that the success of the industrialisation policy depended on the Dutch people being prepared to use the expected rise in national income - flowing from increases in productivity and production in general - not in increased consumption, but instead to direct it towards increased industrial investment[72]. The wage control system was supposed to ensure that the rise in national income was not distributed in higher wages.

Wage control already existed at the time the industrialisation policy was decided on. Wages were originally frozen by the occupying power in 1941, although they had tended to increase through wage drift[73]. The wage freeze was left in operation after the liberation as an emergency measure, because the economy was threatened by an expanding money supply[74]. This threat of high inflation was drastically reduced by the currency reform of September 1945[75], but wage control continued during the period of economic recovery. Pen has described the thinking behind the initial retention of wage control as being that real wage levels in 1945 were higher than the economy could cope with, and that, with the setting of wages according to the minimum level of consumption, an advance was given on later improvements in productivity[76]. From this, it was just a short step to using wage control to aid industrial development. The prior existence of the wage control system meant that the instruments for ensuring that this redirection occurred were already in place.

Industrialisation needed additional labour as well as additional capital. For this reason, the government also expanded the technical education system. The *First Industrialisation Note*

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[69] Dercksen (1986) p. 27.
[70] Strictly speaking this was entitled the *Memorandum concerning Industrialisation in the Netherlands* (*Nota inzake de industrialisatie in Nederland*), its successors being the *Second Memorandum concerning the Industrialisation of the Netherlands*, etc. But since they are referred to in Dutch as *De eerste industrialisatienota*, *De tweede industrialisatienota*, etc. (a usage dating from, and given semi-official recognition by, the *Second Industrialisation Note*), they will be referred to in the text as the *First Industrialisation Note*, the *Second Industrialisation Note*, etc. References to their contents use their "correct" names, as does the bibliography.
[71] Van Zanden & Griffiths (1989) pp. 242-243.
[72] *Nota inzake de industrialisatie in Nederland* p. 39.
[73] Van Zanden & Griffiths (1989) p. 94.
[74] Windmuller (1969) pp. 116-117; van Zanden & Griffiths (1989) p. 187.
[75] Ibid. p. 188.
[76] Pen (1963) pp. 322-323.

claimed that the number of youths that got no further education after lower school was far too large. It saw this as being caused by ignorance of the higher wages that a skilled education could bring in later life, combined with the attractiveness of immediate higher earnings (between the ages of 14 and 22, the unskilled were higher paid, on average, than the skilled). Additionally, it claimed that too few of those that continued in education were educated for a job in industry[77]. This problem was solved by expanding the number of trade schools from 106 in 1946 to 187 in 1953, the number of students attending these increasing over the same period from 35,118 to 58,100. The Minister of Education reported in December 1952 that the proportion of youths that had left school for further education had risen from 60% in 1938 to 83% in 1952, two-thirds of the increase having been taken up by industrial education[78].

In addition, as a further measure to restrict unemployment, the government sought to encourage emigration, although in the long run this probably had little effect. The *First Industrialisation Note* stated that if industrialisation failed to increase employment, there would have to be large-scale enforced emigration of young job-seekers[79]. But it was believed in any case that industrialisation would be limited in its effects, and migration schemes were set up with a number of other countries outside Europe[80]. The majority of those emigrating under this scheme went to Canada, Australia, New Zealand, the USA and South Africa, the net migration to these countries totalling around 400,000 between 1946 and 1975. The scheme peaked in 1952, when 52,000 people emigrated, and emigration slowed with the growth in employment after 1955. In practical terms, the scheme ended with the extremely low rates of unemployment in the early 1960s[81].

These were all political decisions and took place in the context of an attempt to change the structure of Dutch political life. The pre-war system of political parties was based on the division of Dutch society into ideological blocs. This system grew up in the period between 1870 and 1920. Known as *verzuiling* - usually translated as "pillarisation" - it involved the population being grouped on religious and ideological grounds, with organisations such as political parties reflecting this division. The division of the population into these blocs, known as "pillars", permeated the whole of social life: the schools system, leisure activities,

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[77] *Nota in zake de industrialisatie* pp. 33-34.
[78] De Liagre Böhl *et al* (1981) p. 278.
[79] *Nota in zake de industrialisatie in Nederland* p. 6.
[80] Ministry of Social Affairs and Public Health (c. 1951).
[81] Hofstee (1981) pp. 95-96.

the mass media[82], cultural life, etc. By the inter-war years, the system had stabilised around four blocs - Protestant, Catholic, Liberal and Social Democratic - and the ideological and religious differences between these blocs were used by the various party élites to bind their supporters closer to them[83].

Immediately after the Second World War, the Dutch People's Movement (*Nederlandse Volksbeweging*, or NVB) was set up to try and "break through" this system. This movement had its origins during the occupation in discussions held in the internment camp at St-Michielsgestel, where a large proportion of the Dutch political élite was imprisoned. It aimed to prevent a return to the pre-war system of politics, based on religion and class, and proposed instead the founding of a "personalist-socialist" party, whose programme was envisioned as a third way between individualism and collectivism. In June 1945, Professor Schermerhorn, the leader of the NVB, was appointed Prime Minister[84].

The founding of the Labour Party at the beginning of 1946 was intended as part of the "breakthrough" process. The Labour Party was formed out of the coming together of two currents. One was the NVB. The other was a strand within the *Sociaal Democratische Arbeiders Partij* (SDAP), the existing social-democratic party, led by those like Willem Drees and Koos Vorrinck, the party chairman, who wanted to create a party of the centre-left that would attract other layers of the population as well as workers[85]. Together with a number of smaller organisations, the NVB and SDAP merged to form a party that they hoped would attract sufficiently broad support to gain an overall majority in parliament. The "breakthrough ideal" was expressed in the Labour Party's slogan in the May 1946 elections: "In service of the whole people"[86] (i.e. as opposed to a specific section, such as workers).

The "breakthrough ideal" was linked to a rejection of pre-war liberal economic policies[87]. The policies of the Colijn government during the 1930s had failed to solve the problems of the depression. The government had assumed that the key to recovery was the recovery of

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[82] This paragraph is written in the past tense and the system has faded away. But path dependency has its effects. Dutch television and radio programming, for example, is still based on a framework derived from this system - and, as a glance into any Dutch newsagents will confirm, echoes of the system can be seen amongst the Dutch radio and television guides. *Verzuiling* determined the course of high politics and it penetrated deep into the trivia of everyday life.

[83] Van Zanden & Griffiths (1989) pp. 10-11. Whether the Liberals should be defined as one of the pillars is a hotly contested subject [van Zanden (1998) p. 10], but the debate has no real implications for this study.

[84] Koole (1995) pp. 46-47; Dercksen (1986) pp. 13-14; van Zanden & Griffiths (1989) p. 184.

[85] Bleich (1986) pp. 15-16.

[86] Ibid. p. 27.

[87] There is, of course, no reason in the abstract why it was not possible to oppose both *verzuiling* and government intervention in the market. Indeed, this is what the Dutch liberals did believe, but they were a small minority at this time. The historical experience of the Netherlands thus far suggested to most who considered the issue that *verzuiling* and economic liberalism were intimately linked.

business confidence, and to that end had argued the necessity for balanced budgets[88]. But by 1936, there were half a million unemployed - amounting to one in five of the working population - with immense hidden unemployment[89]. In 1935, the SDAP, in a congress held together with its associated trade union confederation, the *Nederlands Verbond van Vakverenigingen* (NVV), adopted *The Plan of Labour*[90]. This was an attempt, according to Tinbergen, one of its authors, to be much more concrete about a solution to the depression than had traditionally been the case in Dutch socialist thought. It was much influence by Keynes, advocating the creation of increased demand by means of budget deficits[91]. It also identified increased industrialisation as a solution to the problem of the rapid growth of the Dutch population[92]. But a word much used in the document was "planning". By this, Tinbergen explains, it was meant that political intervention was necessary in order to end the depression[93].

Rejection of economic liberalism was not confined to the advocates of the "breakthrough". Catholic thinking during the decade also turned towards the idea of planning, although in this case government action was emphasised less. The emphasis here was on the notion of the "business organisation under law" (*Publiekrechtelijke Bedrijfsorganisatie*, known as PBO) advocated by J. A. Veraarts. Under this form of organisation, councils, involving both employers and employees and having the legal power to establish wage and price policy, were to be set up in each branch of business. The role of the state was to be restricted by the subsidiarity principle: no task was to be taken up by a "higher" organ, such as the government, if it could be fulfilled by a "lower" organ, such as a business council. Protestant thinking was less complete in its support for planning, but the *Christelijk-Historische Unie* (CHU), one of the main Protestant parties, had a strong pro-planning wing[94].

The idea that the market could not be left to its own devices was therefore part of the political "common sense" of the immediate post-war period. This affected government policy in two ways. One was that certain of the pre-war proposals were, to one extent or other, implemented in the post-war period, sometimes by those who had proposed them. For example, Hein Vos, director of the SDAP's scientific bureau and in charge of producing *The Plan of Labour*, became Minister of Trade and Industry in the first post-war

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[88] Tinbergen (1982) pp. 36-37.
[89] De Smidt & Wever (1987) p. 5.
[90] Commissie uit NVV en SDAP (1936) p. 6.
[91] Tinbergen (1982) p. 37.
[92] Commissie uit NVV en SDAP (1936) p. 133.
[93] Tinbergen (1982) pp. 38-39.

government. As such, he was responsible for creating the Central Planning Bureau[95], which had as its first director the economist Jan Tinbergen, another of the authors of the *Plan*[96]. But the other effect of this attitude was to focus political thinking on government intervention as a means of solving practical economic problems.

Thus, the idea that the economic renewal of the Netherlands could be achieved through government sponsorship of further industrialisation became the dominant political consensus. And, because wage control was integral to industrialisation, this too became part of this consensus.

Paradoxically, the failure of the "breakthrough" may have contributed to the stability of this consensus. Lijphart, in his 1968 study of the Dutch political system, argued that pillarisation had led to political stability as a result of the party élites having to make compromises[97]. The "breakthrough movement" regarded this stability as being part of the problem, and may have thought of it as stagnation rather than stability. But the supporters of the "breakthrough" had, in the eventuality, to work within the system they opposed. In the general election of May 1946, the Labour Party not only failed to get a majority of the votes; it got a lower percentage of the vote than its constituent organisations had received in total in the last pre-war election of 1937. By and large, voters stuck by the old system[98], and the Catholic People's Party became the largest party in parliament[99]. For the next nearly twelve and a half years or so, until December 1958, the Netherlands was ruled by a series of coalitions dominated by the Catholic People's Party and the Labour Party, the so-called "Roman-Red" coalition. Between 1946 and 1948, under the Catholic Beel, the cabinet consisted only of Catholic People's Party and Labour Party members. However, under the Labour politician Drees, the cabinets were formed on a "broad basis"[100]. This fact of coalition government may have itself generated consensus, by forcing political parties to concentrate on advocating those policies on which they could agree to work. As a result, until the end of the 1950s, all the major political parties were committed to the same general thrust of economic policy.

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[94] Buunk (1989) pp. 109-110.
[95] Griffiths (1980) p. 137.
[96] Messing (1981) p. 30.
[97] Van Zanden & Griffiths (1989) p. 10.
[98] The major exception was the size of the Communist vote, which is discussed below.
[99] *Nationale Rotterdamsche Courant Verkiezings Editie* 18th May 1946.
[100] Bleich (1986) p. 51.

2.2 The operation of the wage control system

Dutch wage control in this period did not mean that the government arbitrarily set a wage norm and attempted to impose it. The institutions of the wage control system contained elements of both consensus and control. The system was enforced by legal powers held by the government, in the person of the Minister of Social Affairs, but consent was achieved by the involvement of the employers' associations and the trade unions in a system of organisations unlike any other in post-war Europe. Nor did the system remain static. It changed its method of working over time in response to economic development.

The central institution in the system was the Foundation of Labour. This was set up during the occupation as an illegal forum for employers and the trade unions. In 1942 the occupation authorities disbanded the existing employers' and trade union organisations and set up the *Nederlands Arbeidsfront* (Dutch Labour Front). This organisation never attained any legitimacy, and both employers and the leaders of the now-illegal trade unions looked to a new framework of industrial relations once the occupations ended. Illegal contacts between employers and trade union leaders led to the creation of an arena within which they could discuss common issues and the idea of the Foundation of Labour came out of this[101]. It officially came into existence on 17 May 1945, when its constitution was notarised. From the beginning, it claimed the right to speak for the whole of the private sector, and the government agreed to take no action in any area of public policy relevant to the Foundation's tasks without consulting it[102].

Legal authority for controlling wages was vested in the Board of Public Mediators[103]. This body had its origins in the pre-war system of industrial relations. The Industrial Disputes Act of 1923 set up boards for each region, whose job was solely to mediate between employers and workers. These regional boards were merged in May 1940 by the occupation power into a national organisation to enforce centrally-specified wage levels and working conditions. The national Board was abolished in October 1942, but was set up once again

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[101] Messing (1981) pp. 29-30.
[102] Windmuller (1969) pp. 282-283.
[103] Known in Dutch as the *College van Rijksbemiddelaars*, there are several different versions of the English name of this organisation used in the literature. As far as authors cited in this chapter are concerned, Windmuller and Abert both prefer "Board of Government Mediators", while Pen uses "Board of Mediators" and the Dutch Ministry of Social Affairs calls it the "Board of Government Conciliators". This does not exhaust the list of translations. Van Zanden avoids the issue by using the Dutch name. The problem is the Dutch word *rijk*, for which there is no straightforward English equivalent. However, in this context, "government" seems to suggest that the Board's members were supposedly responsible to whichever coalition happened to be in office, while "public", like *rijk* gives a sense of a wider responsibility to Dutch society.

in May 1945, following the liberation[104] and was given its legal powers in the Extraordinary Decree on Labour Relations of October 1945 (*Buitengewoon Besluit Arbeidsverhoudingen*, generally referred to as the BBA). Originally intended as an emergency measure to deal with the desperate economic situation of 1945, the BBA gave the Board the power to scrutinise all wages and other conditions of employment, whether arrived at by individual or collective bargaining. It also gave the Board the duty to consult the Foundation of Labour before promulgating guidelines and making decisions[105]. The BBA contained two additional sections, one of which restricted the termination of individual employment and the other enforced a compulsory 48-hour working week. This latter provision only changed in 1961, when the working week was reduced to 45 hours[106]. The Board's powers were legally enforceable. Employers who paid too much or too little were subject to prosecution and, if convicted, to a fine of up to f10,000 or a prison sentence of up to six months. There were only about eighty-five wage inspectors covering the whole country, so there was ample opportunity for evasion[107], but, nonetheless, prosecutions were instituted, fines imposed, and even some employers sent to prison[108].

The process of determining wage rises usually involved a combination of collective bargaining and central control. Following consultations with the Foundation of Labour, the Minister of Social Affairs would issue a global directive on the allowable size of wage increases. The determination of a wage limit thus, by its very nature, involved negotiations within the Foundation. Once the directive had been issued, the employers and trade unions in each branch of business negotiated a new labour contract (*Collectieve Arbeidsovereenkomst*, usually referred to as a CAO). The Board of Public Mediators examined the CAO in order to see if the ministerial directive had been followed, and it was either declared to be binding or it was rejected. In the latter case, a new CAO had to be agreed[109]

There existed, throughout the whole period, methods of legally increasing rates of pay outside the restrictions of wage control. For one thing, not all wage and salary earners were covered by the BBA. Civil servants, teachers, the clergy and domestic servants were exempt in law, while managers and high-level administrators in the private sector were exempt in practice if their income exceeded a certain minimum[110]. For those industries that were covered by the BBA, the introduction of the "scientifically determined" job classification

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[104] Harmsen & Reinalda (1975) pp. 245-246.
[105] Windmuller (1969) pp. 116-117.
[106] Ibid. pp. 270-272.
[107] Ibid. pp. 315-316.
[108] Pen (1963) p. 319.
[109] Van Zanden & Griffiths (1989) pp. 94-95; Windmuller (1969) pp. 277-279.

system could be used to increase wage rates above the allowed level of rises. The intention behind this was to try and use wage differentials as a means of stimulating productivity growth. In the first period after the war, when wage rates were initially set, jobs were officially classified as being skilled, semi-skilled or unskilled, but this simple distinction proved too coarse. A new work classification system was initially introduced in 1948 and a uniform national system came into existence in 1952. From 1948, the Board of Public Mediators considered the existence of job classification as being a virtual precondition for favourable consideration of special treatment concerning wage increases. In 1950, a survey somewhat hastily carried out showed that it had been 100% introduced in the most important branches of industry, but this figure has to be taken with a pinch of salt. Another survey five years later showed that 60% of workers in industry as a whole came under work classification. Even this figure may not be accurate. The metal industry introduced its own system during the 1950s, claiming that the standard system was unusable: a survey in 1963 showed that 20% of businesses in the metal industry were still not covered by job classification[111]. The final method of increasing wages was the use of incentive pay schemes. Bonus schemes were allowed as a means of raising productivity and creating a greater differentiation in the wage structure. Because of fears that misuse could be made of these, the Board of Public Mediators restricted the wages that could be paid under these schemes to 20-25% above the amount that could be earned by payment by the hour. In a number of cases this figure was later raised. This happened, for example, with the construction industry at the time when house building became a priority, when the excess that could be earned by bonuses was raised to 35%[112].

These institutions formed part of wider system of organisations. The Central Planning Bureau (CPB) was set up in 1945 and given a statutory basis in 1947[113]. The main role of the CPB was to advise the government on policy, on the basis of its macro-economic predictions. To this end, it published an annual Central Economic Plan - not a plan in the sense of setting prescribed economic goals but more a prognosis of expected developments[114]. The Law on Industrial Organisation brought into existence the Social-Economic Council in 1950. This 45-member body - a third of its members appointed by the trade unions, a third by the employers' associations, and the remainder, described as independent experts, appointed by the government - had the task of advising the

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[110] Windmuller (1969) p. 272.
[111] Windmuller *et al* (1987) p. 175-176.
[112] Ibid. p. 175.
[113] Griffiths (1980) p. 137.
[114] Messing (1981) pp. 30-32.

government on social and economic affairs[115]. Although legally responsible for the wages policy, it turned the responsibility for all questions relating to the technical administration of wage control over to the Foundation of Labour[116]. The Law on Enterprise Councils, also dating from 1950, obliged any enterprise with more than 25 employees to set up an enterprise council, elected by the employees, with the authority to advise on the running of the enterprise[117]. The only post-war nationalisation was that of the Netherlands Bank, brought into state ownership in 1948[118].

A further element in the system was the maintenance of price control. The intention of price control was to keep the cost of living down, thereby reducing upward pressure on wage levels and making it easier to hold them down. Rents were also controlled, further reducing pressure on the cost of living[119].

Price controls were directed entirely from the centre. Their legal basis was the Price Escalation and Hoarding Act of 1939, which had been introduced, initially for a year, to combat price rises immediately preceding the Second World War, but continued to operate until it was replaced in 1961. The Ministry of Economic Affairs could - and did - fix maximum prices for goods and services, although from 1949 onwards, according to Windmuller, the law was applied somewhat flexibly, with most prices being decontrolled, the exceptions being those that had an immediate impact on the cost of living: foodstuffs, textiles, heating fuels, etc. The strategy the government used during this decade was known as "price surveillance", which meant that as long as prices were kept within the terms of ad hoc agreements between the Ministry of Economic Affairs and the various trade and industry associations, the government refrained from using its powers[120]. Rent control seems to have been extremely important in holding down the cost of living: it has been calculated that if rents had risen in line with the cost of living between 1938 and 1950, the cost of living would have risen at least 11% more[121]

The wage control system went through three phases, two under the Roman-Red coalition and the third under the Catholic-Protestant-Liberal coalition that took office in 1959. Between 1945 and 1954, the "wage stop" system operated, under which general wage levels were only allowed to rise in proportion to the cost of living[122], followed from September

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[115] Windmuller (1969) pp. 117-118.
[116] Ibid. p. 284.
[117] Buunk (1989) p. 144.
[118] Messing (1981) p. 32.
[119] Van Zanden (1988) pp. 469-470.
[120] Windmuller (1969) p. 335.
[121] Van Zanden (1988) pp. 469-470.
[122] Windmuller (1969) pp. 338-341.

1954 by the "prosperity wage rounds", under which workers were supposed to share in the new prosperity[123]. On two occasions, in 1951 and 1957, wage rates were deliberately allowed to fall behind rises in the cost of living. From 1959, under the new coalition, general wage rises were governed by a more differentiated system.

The stabilisation of wage rates, essential to begin operating wage control, was completed by October 1946. After failing to stabilise wages at 125% of the level of May 1940, and then at 132%, a new approach was introduced in the Autumn of 1945 based on the notion of the "social minimum budget". This minimum was derived from the results of a survey made by the Central Bureau of Statistics. These results were used to calculate the weekly minimum income that could maintain a working-class family of four. In larger cities, this figure was set at f35, while in smaller towns and the rural areas, where the cost of living was less, it was lower[124]. The principle followed was of equal real - not nominal - wages for equal labour. The Mediators established five wage zones altogether. They also set a uniform wage differential between skilled, semi-skilled and unskilled workers, with semi-skilled earnings 10% above the unskilled and skilled earnings 20%, a ratio that was maintained until 1959[125].

Following the stabilisation of wages, the government announced that no further rises in real wages would be allowed without increases in the productivity of labour. However, three general increases were allowed as a consequence of rises in the cost of living. In 1948, a wage rise of a guilder a week was allowed for all those with an annual income of less than f3700, as compensation for the reduction of subsidies on various foodstuffs. In September 1949, the guilder was devalued, and this was followed by the recommendation that all workers over 23 be allowed a wage rise of 5% from 1 January 1950 as compensation. The rise was later extended to certain categories of worker under 23. In September 1950 a compulsory rise of 5% was imposed for all workers over 23, as well as some under. This was aimed at helping those receiving lower earnings, the rise being limited to a maximum of f15 a month, f3.36 a week or 7 cents an hour, depending on the basis of the worker's pay[126].

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[123] Windmuller *et al* (1987) pp. 181-182.

[124] The "social minimum budget" was the reason for the compulsory 48-hour week. Since the minimum hourly rate was calculated on the basis one forty-eighth of the minimum weekly wage, a working week of less than 48 hours would reduce earnings below what was considered the minimum [Windmuller (1969) pp. 270-272].

[125] SER (1952) p. 7, Windmuller (1969), pp. 338-341.

[126] Ministry of Social Affairs (c. 1951). Van Hulst claims that there was an additional "off-the-record" wage increase of 6% in August 1947 [van Hulst (1984) p. 258].

It is perhaps useful to put these figures in context. In 1950, some fifty-eight percent of men who received incomes got f3000 or less[127], just under sixty guilders a week. The CBS were, at this time, conducting a continuing survey of families living on an income of between forty and sixty guilders a week, whose average size, during the first quarter of 1950, was about three people. These families spent an average of around three hundred guilders on food during the quarter: approximately f54 of this on bread and just over f40 on meat[128]. A guilder a week in 1950, therefore, was approximately a quarter of an average family's expenditure on bread or a third of their expenditure on meat.

At the beginning of 1951, real wage rates were deliberately cut as an anti-inflationary measure. This was a direct consequence of the outbreak of the Korean War. Import prices rose rapidly, while, at the same time, the Netherlands was faced with a large increase in defence spending due to its NATO commitments. Dutch foreign exchange reserves began to drop and balance of payments difficulties appeared. In February 1951, following a report on the situation by the Social-Economic Council, the government cut food subsidies by fifty percent, leading to a ten percent rise in the cost of living. As compensation, the trade unions accepted a compulsory rise of five percent in wage rates, effectively a cut in real wage rates of five percent[129].

This "consumption restriction" lasted until the beginning of 1954. A small one-time payment to workers was made in late 1951, followed by a wage rise of 2% in 1952 as compensation for the workers' contribution to the compulsory unemployment insurance scheme. The last general wage rise in this phase of wage control was a compulsory general rise of 5%, payable from January 1954, whose intention was to remove the effects of the 1951 wage cut[130].

Under the "prosperity wage rounds", wage increases were supposed to be tied, not to the cost of living, but to the need for an increase in the standard of living. The workers' share in rising prosperity was supposed to be ensured by keeping constant the "employees' share in the national income". This share was defined as the ratio of wage income per employee in the private sector and national income per head, at factor cost, of the working population[131], a definition that arose out of a series of debates within the Social-Economic Council on how to define "equitable" distribution of income[132]. The first pay rise granted

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[127] *Inkomensverdeling 1950*, table 4.
[128] *Maandschrift CBS* (1950) p. 1060.
[129] Abert (1969) pp. 80-81; Windmuller (1969) pp. 341-342.
[130] Windmuller (1969) pp. 341-342; Windmuller *et al* (1987) p. 180.
[131] Van der Marel (1964) p. 775.
[132] Abert (1969) pp. 20-21.

under this system, in September 1954, was a non-compulsory increase limited to a maximum of six percent. Because of a high level of profits and a scarcity of labour, employers tended to pay the full amount[133]. According to van Zanden and Griffiths this was the first major increase in real wage rates since the 1920s[134]. There was no wage rise granted in 1955, despite a rise in the price of milk and in rents at the beginning of the year, and the trade unions were restricted to seeking improvement in conditions, which could not amount to more than three percent of the annual wage[135], but in 1956, following a difficult session of the Foundation of Labour, a six percent increase was granted. This was composed of two parts: a compulsory rise of three percent and a rise to the maximum of three percent, to be negotiated within each branch of business. In practice, it has been suggested, levels of unemployment were so low that, as in September 1954, employers paid the full amount[136].

In 1957, for the second time, wage rates were deliberately cut as an anti-inflationary measure. Two wage rises were allowed for social purposes: a rise to compensate for the introduction of contributory old-age pensions, and a rise to compensate for a national rent rise[137]. But, in response to a report from the Netherlands Bank that a balance of payments deficit had appeared, the Social-Economic Council recommended that national expenditure be reduced by f700 million, half the cut in capital expenditure, half in consumption. The government accepted the report and, in response, cut public expenditure, raised taxes and the insurance premium, and raised rents and the guaranteed prices of farm products. As a consequence of these measures, the cost of living rose twelve percent, while wage rates rose by only eleven percent[138]. The result of this "second consumption restriction" was to worsen the 1957-58 recession[139]. Industrial production did not rise, unemployment rose by around three percent, and the trade unions began to express unhappiness about the situation[140].

It was under these conditions that the Labour Party fell from office. During 1958, the party suffered a rapid loss of membership, and it did badly in the provincial elections[141]. There was considerable criticism from within the Labour Party itself over government policy, and,

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[133] Windmuller *et al* (1987) pp. 181-182.
[134] Van Zanden & Griffiths (1989) p. 47.
[135] The decision as to whether or not any improvement in conditions broke this rule would, of course, be made by the Board of Public Mediators.
[136] Windmuller *et al* (1987) pp. 182-183.
[137] Ibid. p. 183.
[138] Abert (1969) pp. 80-81.
[139] Van Zanden & Griffiths (1989) p. 239. They cite a study showing that Dutch economic policy during the 1950s was - contrary to its popular image - generally pro-cyclical (p. 237).
[140] Windmuller *et al* (1987) p. 184.

in November, at a national rally of party members, Burger, the chairman of the party fraction in the Second Chamber[142], outlined a list of seven conditions for continuing the coalition. In protest at this, the Catholic People's Party found an excuse to break up the coalition[143]. In the subsequent, 1959, elections, the Labour Party lost seats, while the Catholic People's Party and the Liberals gained. A new coalition was formed under the Catholic De Quay, with the participation of the Liberals and the two main Protestant parties[144].

It was the failure of the De Quay government to satisfactorily reform the system that led to collapse of wage control in 1963. During the economic boom of the mid-1950s, there had increasingly been calls for the wage-control system to be reformed. Both the employers, on the one hand, and the confessional parties and trade unions, on the other, began to demand a more differentiated method of determining wages[145]. It was felt that the system did not allow the more prosperous branches of industry to attract labour by offering higher wages, while it put a burden on industries where productivity could not increase by forcing them to raise wages when they could not afford it[146].

The new policy introduced in 1959 stated that wage increases had to be justified on the basis of increases in productivity in individual industries rather than the economy as a whole[147]. This did not, however, lead to a restructuring of the labour force. There were two major problems. The first was that no one actually knew how to calculate the increase in productivity in a single branch of industry, since reliable data were hard to find[148]. The other was the flawed assumption behind the policy. This assumption was that the branches of business experiencing labour shortages were those in which productivity was increasing. In fact, there was little or no relation between increasing productivity in a given sector and the shortage of labour that it faced. For example, productivity was growing in agriculture, but this meant that it was able to shed labour, while, in the building industry, a slight increase in productivity coincided with heavy demand for labour[149]. During the boom at the

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141 Bleich (1986) p. 76.
142 The Second Chamber is the more powerful of the two parliamentary chambers, being the directly elected one. The First Chamber represents the provinces.
143 Koole (1995) p. 230.
144 Bleich (1986) p. 89; Koole (1995) p. 172.
145 Van Zanden & Griffiths (1989) p. 100.
146 De Wolff & Driehuis (1980) p. 41.
147 Abert (1969) p. 85.
148 Abert (1969) p. 86; de Wolff & Driehuis (1980) p. 41.
149 Van Zanden & Griffiths (1989) pp. 100-101. Indeed, this should not be unexpected. In general, in a period of general economic expansion, low-productivity sectors would have to have attract more labour than high-productivity ones if they are to maintain their share of output.

beginning of the 1960s, registered unemployment fell to one per cent[150], employers had trouble hanging on to workers, and "black wages" - illegally high wages - spread throughout the private sector[151]. In September 1963, the Amsterdam dry dock company ADM raised its wage rates. This rise was illegal, but the company desperately needed to attract labour, since the size of the workforce threatened to fall below the minimum level at which the company was able to function[152]. The rise at ADM led to strikes breaking out elsewhere as workers demanded similar increases, and industrial peace was only restored when the claim of the trade unions for a ten percent wage increase in 1964 was accepted[153]. In October 1963, the three major trade union confederations issued a joint statement that accused the government of following a programme that failed to contribute to the improvement of the social climate, and stated that the unions were no longer prepared to work with an "unrealistic" wage policy[154]. The loss of trade union support meant the end of the post-war system of wage control. As a kind of farewell echo, a form of wages policy continued in operation until 1967, but without involving wage control[155].

2.3 The trade unions and wage control.

Wage control was backed by the major trade union confederations as a means of generating jobs. There were three main confederations. The *Nederlands Verbond van Vakverenigingen* (NVV), formed in 1906, has already been mentioned in connection with *The Plan of Labour.* It was associated with the SDAP before the Second World War and the Labour Party afterwards. Confessional trade unions also existed. In 1909, Protestants created the *Christelijk Nationaal Vakverbond* (CNV) and the Catholics set up their own organisation the same year, giving it the name of the *Katholieke Arbeidersbeweging* (KAB) when they refounded it after the liberation[156]. The attitudes of these organisations were dominated by the fear of the return of unemployment on the scale of the 1930s. Job creation became a priority for

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150 De Wolff & Driehuis(1980) p. 41.
151 Windmuller (1969) p. 229.
152 *Nieuwe Rotterdamse Courant* 12 September 1963, 18 September 1963.
153 De Wolff & Driehuis (1980) pp. 41-42.
154 *Nieuwe Rotterdamse Courant* 5 October 1963.
155 Windmuller *et al* (1987) p. 172.
156 Buunk (1989) pp. 142-143. The division between secular and two confessional organisations was similarly to be found amongst the employers: the *Centraal Sociaal Werkgevers Verbond* (CSWV) associated with the Liberals, the Catholic *Nederlands Katholiek Werkgevers Verbond*, and the Protestant *Verbond van Protestants-Christelijke Werkgevers in Nederland.* There also existed a secular organisation of industrialists - the *Verbond van Nederlandse Werkgevers* - which had a considerable overlap in membership with the CSWV [Windmuller (1969) pp. 248-253]. Likewise, the split between secular, Catholic and Protestant was a feature of farmers' and small businessmen's organisations [Windmuller (1969) pp. 243-244].

them after 1945, and wage control was seen as an essential contribution to this. In 1964, a joint publication of the three confederations stated:

> "The lag in the wage level during the 1950s was accepted by design so that industry could earn profits which would pay for expansion and modernisation of the productive apparatus. From a social point of view, this policy was deemed necessary to create employment for a rapidly growing labour force."[157]

Wage control would not have worked without their cooperation. The system depended on an explicit acceptance by the majority of the trade unions that it benefited their memberships. On the other hand, the legitimacy of the system, in the eyes of trade union members, was probably enhanced by the participation of the trade unions in the Foundation of Labour and the Social-Economic Council, and by the fact that trade union objectives could be pursued through these organisations.

Early opposition to trade union acceptance of wage control effectively disappeared by 1950. It is often stated that the social harmony apparent in the Netherlands during the 1950s was due to the sense of national solidarity built up during the Second World War[158]. However, this does not seem to have been the case. The period that followed the liberation was a period of conflict, with the level of strike activity in 1946 and 1947 being well above that experienced in the 1950s. The figures are shown in Table 2. This conflict was reflected in the political arena, with the Communist Party massively increasing its share of the vote in the main industrial cities in the May 1946 general election: thirty percent of the vote in Amsterdam, as against less than thirteen percent in 1937, and eighteen percent in Rotterdam, versus four percent in 1937[159]. This vote held up in size in the provincial and municipal elections held in the following few weeks[160].

The opposition to wage control was associated with the Communist-led United Trade Union Confederation (*Eenheidsvakcentrale*, or EVC), an organisation that grew out of trade-union resistance activity during the occupation[161]. At the time of the liberation it was the largest trade union confederation, and was still the largest in 1946 in Amsterdam and the industrial area to the north of the city[162]. The EVC was not just opposed to wage control but also to trade union involvement in the Foundation of Labour[163], in other words, to trade union involvement in what was to become the post-war consensus. The size of the

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[157] Cited in Windmuller (1969), pp. 350-351.
[158] For example, Windmuller *et al* (1987) p. 205.
[159] *Nationale Rotterdamsche Courant Verkiezings Editie* 18 May 1946.
[160] *Nationale Rotterdamsche Courant Verkiezings Editie* 31 May 1946; *Nationale Rotterdamsche Courant* 17 July 1946.
[161] Harmsen & Noordegraaf(1973) pp. 791-852.
[162] Harmsen & Reinalda (1975) p. 282.
[163] Ibid. p. 283.

Year	NVV	KAB	CNV
1946	242645	182821	93994
1950	381554	296410	155627
1952	420776	321478	174750
1953	435683	334714	182295
1954	453949	347268	191138
1955	463121	360986	199693
1956	468047	381733	206283
1957	500332	411991	215956
1958	486249	395047	218683
1959	476894	395869	218449
1960	486743	400396	219019
1961	506964	411785	223789
1962	507666	417780	224865

Sources: *Jaarcijfers voor Nederland, 1943-1946*, Table XVII.2
Jaarcijfers voor Nederland, 1947-1950, Table XXIV.2
Jaarcijfers voor Nederland, 1951-1952, Table 355.
Jaarcijfers voor Nederland, 1953-1954, Table 347.
Jaarcijfers voor Nederland, 1955-1956, Table 347.
Jaarcijfers voor Nederland, 1957-1958, Table 373.
Jaarcijfers voor Nederland, 1961-1962, Table 387.

Table 1. Membership of the main trade union confederations, 1946-1962.

EVC's support in the main industrial centres suggests that there existed a strong minority of the post-war Dutch population who initially did not go along with the major political leaderships.

The EVC was opposed by a broad spectrum of opinion. The Catholic Church issued a letter on observances forbidding Catholics to join the EVC, a report of the Dutch Reformed Church advised its members to keep their distance[164], and the NVV, KAB and CNV all brought pressure on employers not to negotiate with the EVC[165]. Within the EVC itself, there was growing tension between Communists and others, culminating in a split in 1948, in which the syndicalist-led opposition took away the EVC's support amongst the Rotterdam dockers to form a new organisation (the *Onafhankelijk Verbond van Bedrijfsorganisaties*, or OVB)[166]. Following the split, both the EVC and the OVB withered, and swiftly became irrelevant to the wider story.

By and large the rank and file of the trade union movement seemed to approve of the action of the mainstream trade unions. There are three things that point to this: the failure

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[164] Ibid. p. 255.
[165] Ibid. pp. 270-271.
[166] Ibid. pp. 292-293.

of the EVC to hold its membership, the growth in membership of the trade unions that supported government policy and the low level of strikes.

The demise of the EVC was probably a result of the growth in membership of NVV and confessional trade unions rather than a cause of it. Communists in other western European countries managed to retain the leadership of substantial sections of the trade union movement despite Cold War opposition and despite any reservations that large numbers of non-Communist trade unionists may have had concerning Communist politics. In any case, the Communist vote, although it declined from its post-liberation high, did not collapse at the same rate as the EVC's membership figures. In the June 1956 general election, for example, the Communist Party still received nineteen percent of the vote in Amsterdam[167].

This suggests there must have been positive reasons for the support that Dutch workers gave to the NVV, KAB and CNV, whose affiliated unions they joined in increasing numbers (see Table 1). This growth was not just a reflection of the growth in the size of the working population. Until the 1958 recession, trade union membership grew as proportion of the workforce, from slightly more than a third of the workforce in the late 1940s to forty per cent in 1957[168].

The number of working days lost through strikes remained low, by international standards, throughout the 1950s and early 1960s[169]. They were also low when compare with the standards of the Netherlands during the late 1940s. For example, as can be seen from Table 2, the number of workers who went on strike in 1957 was less than two percent of the equivalent number in 1946.

Nonetheless, there were years in which the number of working days lost through strikes was comparable to the numbers experienced in the late 1940s. The number of working days lost began to rise as unemployment fell rapidly during 1955 and 1956, while the number of workers involved in industrial action in 1960 was actually more than in 1946. It was in 1960 that the first major official strike of the postwar period took place, when the building workers were called out over the refusal of the employers to sign a new CAO[170], and the number of working days lost per thousand workers was actually higher than the equivalent number in the U.K. that year[171]. The strikes that broke out in the autumn of 1963 that broke the wage control system have been already mentioned.

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[167] *Nieuwe Rotterdamse Courant* 14 June 1956.
[168] Windmuller (1969) pp. 128-129.
[169] ILO (1963) p. 400.
[170] Van Zanden (1999) p. 83.
[171] ILO (1963) p. 400.

	Number of strikes/lockouts	Number of workers involved	Number of working days lost
1946	270	74800	681600
1947	272	62590	203400
1948	183	18660	131400
1949	116	14935	289353
1950	79	20822	162485
1951	85	15260	66740
1952	40	3793	31237
1953	58	11326	29852
1954	91	21203	59283
1955	63	24018	132805
1956	80	38102	212805
1957	37	1629	7214
1958	73	5310	37300
1959	48	8091	13997
1960	121	84810	467391
1961	43	9500	24656
1962	24	2383	9084
1963	104	30406	37757

Sources: *Jaarcijfers voor Nederland, 1947-1950*, table X.6.
Jaarcijfers voor Nederland, 1955-1956, table 348.
Jaarcijfers voor Nederland, 1963-1964, table 406.

Table 2. The numbers of industrial disputes in the Netherlands, 1946-63.

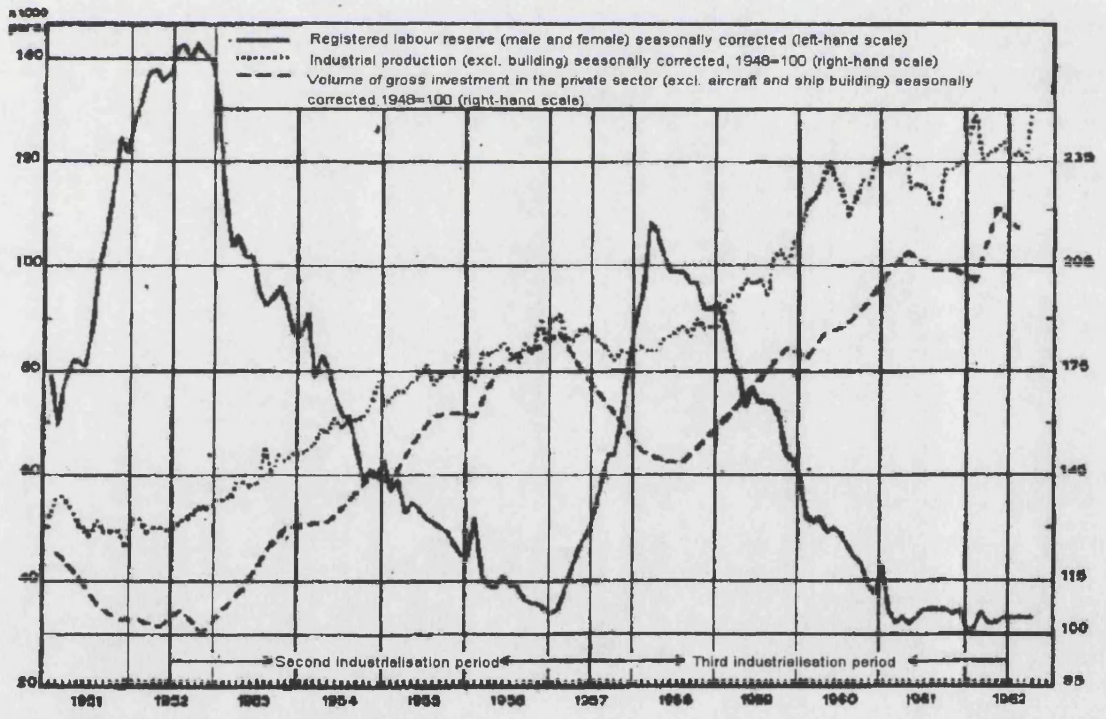
The existence of brief periods of militancy suggest that there may be positive reasons for the longer periods of peace. It has been suggested that the absence of widespread industrial unrest is consistent with the stable nature of Dutch society[172], but it is clear that Dutch workers - or at least, some of them - are prepared to go on strike, vote Communist, etc. Even taking into account these were always a minority, it is also the case that there were long periods when these workers were not prepared to go on strike. Differences in national conditions might be able to explain, broadly, differences between countries over a period of time, but what they cannot do is to explain variations in behaviour in a single country. The low propensity to strike of a traditionally militant group of workers such as the Amsterdam dockers over much, but not all, of this period suggests that conditions, over much but not all of this period, were such as to make militancy unnecessary.

[172] Roberts (1958) p. 134. In fact he is making the same point as is being made here: that the relevant comparison for looking at workers' satisfaction is not with the strike level of other countries, but rather how the Dutch strike figures vary from year to year. But as is noted in Chapter 3, because of the date of his study, he makes the point in the defence of the opposite conclusion.

2.4 The industrialisation of the Netherlands.

By the time that the industrialisation policy came to an end in 1962, the Dutch economy had improved its position considerably. The *Eighth Industrialisation Note* announced that, as a result of the magnitude of economic growth, the fear of structural problems had disappeared and there was therefore no need of further industrialisation plans[173]. GNP in 1962 was about twice that in 1948, while the volume of exports was about five times the level[174]. The balance of payments had been in deficit in 1949, 1950 and 1951, and had only been covered by the receipt of Marshall Aid[175]. The deficit disappeared in 1952, and the balance of payments was in continual surplus for the rest of the industrialisation policy, with the exception of 1956 and 1957, when deficits occurred due to pressures from increased consumption[176].

The expansion of industry played an important part in this. Figure 2 shows the relationship between investment, industrial production and employment over the period. As can be seen on the graph, the *Eighth Industrialisation Note* identifies three phases of industrialisation[177]. The first industrialisation period lasted from 1948 to 1952, and formed



Source: *Achtste nota inzake de industrialisatie van Nederland*

Figure 2. Unemployment, investment and industrial production, 1950-62.

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[173] *Achtste nota inzake de industrialisatie van Nederland* p. 113.
[174] Ibid. p. 4.
[175] van der Eng (1987) p. 166. Van der Eng argues the effect of Marshall Aid was to enable the deficit to be maintained.
[176] *Achtste nota inzake de industrialisatie van Nederland* p. 5.

	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Index of industrial production 1)	100	112	116	117	127	141	150	157	161	161	177	199
Manufacture of earthenware, glass, etc	100	109	121	121	121	129	134	139	148	138	148	156
Chemicals 2)	100	121	128	121	130	143	152	160	173	178	189	199
Leather and rubber	100	106	97	100	111	119	128	133	139	134	152	160
Mining	100	106	108	108	108	108	109	110	113	119	122	130
Metal industries	100	113	119	121	137	165	184	190	188	189	225	273
Paper manufacture	100	116	132	120	142	156	165	168	185	183	204	224
Textiles	100	108	114	114	129	138	141	143	144	139	144	152
Gas, electricity and water	100	113	119	128	140	155	164	182	193	197	211	231
Food processing	100	109	110	114	119	123	129	134	138	140	143	156

Notes: 1) Excluding building & construction
2) Excluding petroleum products

Sources: *Jaarcijfers voor Nederland, 1953-1954* table 180
Jaarcijfers voor Nederland, 1959-1960 table 204

Table 3. Indices of industrial production, 1949-60.

the initial phase of industrial growth. It was characterised by a rapid increase in the volume of industrial production, with the volume of industrial exports rising by 180%[178]. During this period, the basic industries expanded[179] and an industrial infrastructure was built up in the less-industrialised regions outside the west of the country[180]. Between 1952 and 1957, industry developed at a slower rate that in the previous period[181], but the growth in employment was much greater than expected[182] (shown in Figure 2 as a rapid fall in registered unemployment). In the third period, between 1957 and 1962, investment, production and the productivity of labour all exceeded their growth targets, but the increase in employment occurred in the service sector, not in industry[183].

The pattern of industry, both in terms of the relative importance of specific industries and in terms of its geographical pattern, changed as the result of industrialisation. The changing relationship between industries can be seen in Table 3. Production increased in industry as a whole, but was considerably higher in the "new" industries, such as metalworking and chemicals, than in the "old" industries, such as textiles. Higher growth still was found in the branches of industry producing the basics for expanded industrialisation: iron and steel production doubled between 1955 and 1960. The growth of the paper industry, one of the faster-growing branches, was also highest where it produced capital goods. The production of paper for writing and typing rose by 180% between 1949 and 1960, roughly correlating with the growth of the white-collar labour force, while the production of packaging and

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177 Ibid. p. 3.
178 *Vierde nota inzake de industrialisatie van Nederland* p. 1.
179 Ibid. p. 11.
180 Ibid. pp. 5-6.
181 *Zesde nota inzake de industrialisatie van Nederland* p. 1.
182 Ibid. p. 10.
183 *Achtste nota inzake de industrialisatie van Nederland* p. 6.

	Age group						
	Under 20	Under 25	Under 40	Under 50	Under 65	Under 70	Total
Agriculture	25.31%	19.71%	17.61%	17.86%	18.72%	19.21%	19.72%
Mining	1.53%	1.70%	1.90%	1.91%	1.79%	1.76%	1.74%
Manufacturing	38.83%	32.12%	30.78%	29.94%	28.82%	28.61%	28.40%
Building & construction	6.01%	5.54%	7.51%	7.99%	8.46%	8.48%	8.44%
Public utilities	0.35%	0.43%	0.72%	0.88%	1.02%	1.00%	0.99%
Trade, banking and insurance	10.06%	9.37%	11.94%	12.75%	13.11%	13.18%	13.20%
Transport & associated industries	5.70%	6.20%	7.90%	8.58%	9.10%	9.02%	8.95%
Services	3.44%	5.68%	9.94%	10.41%	10.60%	10.52%	10.45%
Unknown	0.06%	0.07%	0.07%	0.06%	0.06%	0.06%	0.05%
Temporarily unemployed	8.71%	19.17%	11.64%	9.61%	8.31%	8.16%	8.05%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: *12e volkstelling, 31 mai 1947, Serie A Deel 2* table 3.

Table 4. The percentage of the male workforce in each age group, by sector, on 31st May 1947.

cartons, essential for marketing the output from production, rose by 146% over the same period[184]. The major part of the expansion of industry took place outside the already-industrialised west. Of 796 industrial establishments founded in the Netherlands between 1953 and 1956, some seventy percent (558 of them) were set up outside the west[185], and this "other Netherlands" received eighty-two percent of the total increase in industrial employment between 1950 and 1962[186].

For most of the period, there was full employment. At the beginning the outlook was not good. Table 4 shows male employment by age group in 1947. Eight percent of the male workforce was unemployed, but employment was skewed towards older men, and almost twenty percent of under-25s were unemployed. This latter figure may well understate the problem. The high proportion of under-25s working in agriculture looks suspiciously as if there was also a shortage of jobs for young men in the countryside, with - particularly teenagers - getting casual work on farms. In other words, for the under-25s, the employment picture in 1947 looked remarkably like the picture for the workforce as a whole in 1936. It would not have been unreasonable at the time to have assumed that, once the demand for labour resulting from post-war reconstruction had subsided, the situation would worsen for the over-25s as well. The unemployment rate fell to 1.2% in 1948, but the *First Industrialisation Note* refers to this figure as unusually low and as being due to abnormal factors[187].

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[184] *Jaarcijfers voor Nederland, 1953-1954*, table 190; *Jaarcijfers voor Nederland, 1959-1960*, table 216.
[185] *Jaarcijfers voor Nederland, 1959-1960*, table 134.
[186] *Achtste nota inzake de industrialisatie van Nederland* p. 62.
[187] *Nota in zake de industrialisatie in Nederland* p. 7.

Between 1948 and 1952 unemployment rose, for two reasons. Up until 1951, the number of jobs increased, but not at a rate sufficient to match the increase in the working-age population[188], and between 1951 and 1952 the number of jobs actually fell[189]. Registered unemployment rose to more than three percent of the working population[190], exceeding the two percent level, considered the definition of "full employment", for the first time since 1947[191]. The actual proportion of the workforce without jobs was not high, but the fact that it was growing, and had crossed a psychological threshold, seemed threatening.

From 1952, the employment situation brightened considerably. In fact, it brightened so much that the government feared it would cause the economy to overheat. Between 1952 and 1957, the working population grew more rapidly than can be accounted for by demographic factors alone. The *Sixth Industrialisation Note* attributes this to the extremely high demand for labour drawing numbers of workers into the labour market who would have otherwise remained outside - particularly women[192]. Half the increase in industrial employment between 1948 and 1962 took place in these five years[193]. This all ended with a rise in unemployment in 1957 to 1959, associated with the second consumption restriction, which, while not great, took three years to disappear[194]. The growth in employment in the years 1957-62 occurred in the service sector, particularly in the medical and health sectors, the professions, hotels and catering, and entertainment. The traditional areas where the Dutch service sector had been strong - commerce and finance - showed no spectacular growth. The professions, however, expanded in areas like accountancy, economic advice, and engineering and architectural bureaux - areas connected with industrial expansion[195].

2.5 Conclusion.

The industrialisation policy, therefore, seems to have achieved its aims. The policy was a political response to the problems facing the Netherlands following the Second World War, and its two objectives were attained: the balance of payments deficit disappeared and there was full employment. This success was apparently achieved through a broad political consensus, involving not just the major political parties but also the employers and trade

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[188] *Derde nota inzake de industrialisatie van Nederland* p. 7.
[189] *Vierde nota inzake de industrialisatie van Nederland* p. 9.
[190] Windmuller, de Galan & van Zweeden (1987) p. 210.
[191] Ibid. p. 180.
[192] *Zesde nota inzake de industrialisatie van Nederland* p.10.
[193] *Achtste nota inzake de industrialisatie van Nederland* p. 26.
[194] Ibid. pp. 8-9.
[195] Ibid. pp. 28-29.

unions. Wage control formed a central part of this consensus, being necessary in order to ensure that the fruits of economic growth went to investment rather than consumption.

But this still leaves the apparent contradiction between the success of wage control and the growth in consumption unresolved. This is not something that can be resolved by looking at the institutional framework, but by investigating the wage control system in quantitative terms.

Chapter 3. Wage Control and Incomes Growth.

This chapter considers the argument that wage control had little or no effect on wages growth. Three arguments, all different, are considered: that of Roberts in the 1950s, that of van Hulst in the 1980s, and that of Brander, van Hulst and Mieras in the 1990s. A section of the chapter is given to each of their arguments and those of their critics.

The chapter concludes that none of the studies show that incomes rose because wage control failed to control the growth of wage rates.

3.1 Critics of wage control: Roberts.

Roberts' study of wage control in the Netherlands forms part of a wider study that he makes of wages policy in general. Writing two-thirds of the way through the 1950s, Roberts defines the "problem of our day" as being to find an appropriate wages policy that will ensure that national income rises, that a fair share of the nation's wealth goes to working people, and that full employment, stable prices and a healthy balance of payments with the rest of the world are maintained[196]. He looks at the cases of the UK, the USA, Australia, Sweden and the Netherlands. These countries are chosen because, he argues, the government of each, after its own fashion, has interfered with the freedom of collective bargaining - the least interference in the UK, the most far-reaching in the Netherlands[197]. He concludes from his study that a centralised form of wage control is "ill-fitted" to cope with the complexities of a developed industrial economy[198].

He treats the Dutch wage control policy as being primarily concerned with holding down inflation. This is perhaps a consequence of his overall approach to his question. Having identified a common policy - or, at least, broadly common - amongst the five governments, he treats them as having a common motive for having adopted it. He does not consider in his study the possibility that policies similar in appearance might have been adopted for very different reasons. Therefore, rather than discussing the specific historical and economic background of Dutch wages policy, he formulates its objectives in a somewhat abstract manner. He states two of these: the maintenance of economic stability by

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196 Roberts (1958) p. 11.
197 Ibid. p. 24.
198 Ibid. p. 172.

controlling the general level of wages, and the establishment of equitable and satisfactory wage differentials between occupations[199]. He gives no reference for either of them[200].

On this basis, he argues that Dutch wage control policy was unsuccessful. The elaborate system of wage controls, he states, did not save the Netherlands in the 1950s from rates of inflation similar to those found in other countries. The reason he proposes for its failure in this respect is that preventing wage increases builds up tremendous pressure. When the pressure is released, it creates an explosion. This, he argues, is precisely what happened in 1950-51, 1953-54 and 1956. On each of these occasions a restocking and investment boom was underway. There was rising demand for resources, stimulated by an active monetary and budgetary policy. This created pressure under which the price of labour could easily be pushed up by the unions. When it became absolutely necessary to check economic expansion because of the deterioration in the balance of payments, investment was curbed and stocks were reduced. If this had not happened, Roberts argues, there would have been no fall in demand for labour, and wage regulation would have been ineffective. This, he says, is proved by the way that regulation collapsed when stocks had to be rebuilt[201]. All this occurred under conditions of relative industrial peace. The number of industrial disputes fell sharply after 1951, and it might be tempting, Roberts suggests, to attribute this to wage control. However, he points out, a similar thing happened in the 1930s, while, in 1955 and 1956 there seemed to be evidence of a growing dissatisfaction with the system. Over these two years, the average number of working days lost in strikes was over 172000, as opposed to 88000 a year over the whole period 1951-56[202]. In any case, the record of social stability in the Netherlands, as indicated by figures on divorces, suicides, alcoholism, crime and drug addiction, led him to expect a relatively low strike rate[203].

Haas criticises Roberts' assessment of the wage control system on the basis of Roberts' interpretation of the policy's objectives. Haas argues that the practical objective of avoiding excessive wage increases did not reflect a specific Dutch dislike of a continuing decline in the value of money, but rather reflected the basic characteristics of the Dutch economy. It had an extremely high dependence on foreign trade, with Dutch exports f.o.b. in 1957 being larger than those of Japan, and larger than those of Australia and New Zealand combined. Since it was essential for the Dutch to keep exports competitive, it was

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[199] Ibid. p. 121.
[200] The second objective may in fact refer to the principle used in setting uniform wage differentials between municipalities and between skilled, semi-skilled and unskilled workers in the immediate post-war period.
[201] Roberts (1958) pp. 130-131.
[202] Ibid. p. 133.
[203] Ibid. p. 134.

therefore necessary, he goes on, that export prices rise not more - and preferably less - than those of other countries. The Netherlands also had a rapidly expanding population, with a density exceeding that of Japan by forty percent, and that of England and Wales by fifteen. The annual rate of population increase was 1.2%, the same as Japan's and three times that of the UK. Haas concludes that emphasis on wage control can be explained by the need, on the one hand, for competitive exports and, on the other, for heavy investment to provide jobs for the increasing population, explains the emphasis on wage restraint[204]. The success or failure of wages policy has to be judged on its effect on the economy as a whole, and to this end he makes a series of comparisons between Britain and the Netherlands. These comparisons suggest that the Dutch economy did rather better than the British. Between 1953 and 1957, gross domestic capital formation amounted to 23% of GNP in the Netherlands, compared to just 14.6% in Britain. Between 1950 and 1956, Dutch real GNP rose an average of 4.3% a year, as against a British rate of growth of 3.8% a year, Dutch exports at constant prices grew at 10.1% a year while Britain's grew 2%, and Dutch prices rose by 3.8% a year against an annual rise of 4.9% in Britain. Haas also believes that wages policy proved helpful in avoiding excessive wage increases and therefore enabled the economy to grow rapidly - including a rapid growth of exports - without bringing about serious inflationary strains[205].

Haas also argues that the increase of earnings at a faster rate than regulation wages was not inconsistent with wage control. The index of actual earnings rose faster than the index of wage rates, and Haas notes that there are a number of ways that this might happen without wage control being breached. These ways include shifts in employment from lower to more highly-paid occupations - with more skilled jobs, relatively fewer female workers, shifts from agricultural to industrial employment, etc - or changes in the pattern of working practices, such as increasing piece work, higher piece-rate earnings as productivity increases, increasing shift work and increasing overtime. Haas argues that, in the Netherlands, some of these factors have been more important than others, and were deliberately encouraged in order to foster increased productivity. During the period 1951-55, the proportion of industrial workers working on piece rates rose from forty-five to fifty-four percent and there was a rapid increase in the application of merit rating and job evaluation systems[206]. What Haas does not do, however, is to give any figures that back up his argument. He merely leaves the explanation as a possibility.

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[204] Haas (1960) pp. 178-179.
[205] Ibid. p. 196.
[206] Ibid. p. 199.

In addition to Haas' objections, it should be noted that Roberts' argument is factually flawed: the "wages explosions" on which he partly bases his case did not occur. Their inclusion in his argument is, most likely, the result of his looking at wage index figures without investigating what they represent. It should also be said that his description of economic stop-go reads more like a description of the British economy in the period than the Dutch. In fact, in a functioning wage control system, where wages are successfully held down and raised from time to time when it is deemed necessary by the authorities, the wage index would be expected to remain more or less constant over the medium term, its level changing by means of sudden rises occurring over a very short period. Roberts' "wages explosions" can be seen to be the result of the normal running of the wage control system. His "wage explosion" of 1950-51 was the result of the compulsory 5% pay rise in September 1950, while that of 1953-54 was the consequence of the compulsory wage increase introduced in January 1954. Neither of these was the result of the breakdown of the system. The wage rises of 1956 might be considered to be a little different, in that a high demand for labour in the context of extremely low unemployment turned a six percent maximum increase into a six percent norm. Wage drift also increased during this period, as will be discussed later. He is also correct about the rise in strike activity in 1955 and 1956, but his date of writing prevented him from seeing a subsequent dramatic fall in this, with the number of working days lost in 1957 totalling just three percent of the 1956 number[207].

3.2 Critics of wage control: van Hulst

A similar critique to Roberts', although more quantitative in its methods, was made by van Hulst in 1984. Like Roberts, van Hulst is concerned in his work with wage control in general, looking at its operation in the United Kingdom, the USA and the Netherlands. In the case of the Netherlands, he looks not just at wage control during the 1950s, but at all the periods of wage control between the end of the Second World War and 1980. This means that he lumps wage control during the period of the industrialisation policy together with the later periods of wage control, when the objective was to reduce the rate of inflation.

As with Roberts, he does not look to the historical reasons why wage control policies were adopted in specific instances but proposes general motives. He lists five possible theoretical

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[207] See Table 2.

arguments for wage control. The first three he describes as neo-classical in nature: it can lower the natural rate of unemployment, it can weaken inflationary expectations and it can break through wage rigidity. The last two are post-Keynesian: it can break through the "Prisoner's Dilemma" and it can break through the "target real wage" strategy[208]. These last two reasons perhaps need some explanation. The "Prisoner's Dilemma" he defines as a problem of whether an employee should moderate his wage demands or not. It is in the interest of an employee to moderate his wage demands to achieve such ends as full employment and wage stability, but it is also in his interests to better his own position in the wage hierarchy. He therefore has, on the one hand, no interest in moderating his wage demands if others are not going to do so, nor, on the other, in moderating his wage demands if others actually do moderate theirs[209]. By "target real wage" strategy van Hulst means the tendency for trade unions, when in a negotiation, to strive to reach a defined level of achievable wages[210].

He concludes from the empirical evidence that, in the countries studied, wage control had very little effect. He finds the theoretical arguments for wage control are not backed up by any evidence[211], and explains this by claiming that employers in a western economy possess innumerable means of evading wage norms[212], the methods used depending on the concrete circumstances[213].

Van Hulst tested the effectiveness of Dutch wage control using an econometric model based on the VINTAF-II model of the Dutch economy, developed by the Dutch Central Planning Bureau. This states that

$$l = f\left(pc, {}^{y}/_{a}, w, d\right) + c$$

where

l = the percentage annual change in wages paid per employee in the private sector;

pc = the annual percentage change in the consumer price level;

${}^{y}/_{a}$ = the annual percentage change in the productivity of the private sector (measured as its income divided by the number of workers employed);

w = the rate of unemployment;

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[208] Van Hulst (1984) p. 63.
[209] Ibid. pp. 80-82.
[210] Ibid. p. 59.
[211] Ibid. pp. 274-279.
[212] Ibid. p. 280. "Employers" here is not a misprint for "employees".

d = the percentage change in income tax and insurance deducted from income;

c = a constant term;

Two variations on this model were used:

$$l = \alpha_1 pc_{-\frac{1}{2}} + \alpha_2 \left(y/a\right)_{-\frac{1}{2}} + \alpha_3 w_{-\frac{1}{2}} + \alpha_4 d + \alpha_5$$

and

$$l = \beta_1 pc_{-\frac{1}{2}} + \beta_2 \left(y/a\right)_{-\frac{1}{2}} + \beta_3 \left(1/w\right)_{-\frac{1}{2}} + \beta_4 d + \beta_5$$

where the subscript of $-1/2$ indicates a half-year delay[214]. The first equation specifies the Phillips effect as linear, the second as curved[215].

The crucial question, as van Hulst sees it, is whether the coefficients of the explanatory variables are so stable as to be uninfluenced by wage control. He achieves this by splitting the period under study into two sets of periods he calls "policy on" and "policy off"[216] and running a separate regression for each set. If the results of the "policy on" regressions are significantly different from the "policy off" ones, then wage control can be said to have had an effect. Two different versions of this division were used:

policy on (PON): 1951-59, 1971, 1974, 1976, 1980

policy off (POFF): 1960-70, 1972-73, 1975, 1977-79

and

policy on (PON'): 1951-62, 1971, 1974, 1976, 1980

policy off (POFF'): 1963-70, 1972-73, 1975, 1977-79

the difference between these being whether or not wages in the period 1960-62 - the period when the De Quay government attempted to set wage control norms by branch of industry - can be considered to have been controlled[217]. The calculations begin in 1951 because it is only from that date that data for income tax and social insurance payments become available[218].

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[213] Ibid. p. 281.
[214] Ibid. p. 233.
[215] Ibid. p. 234.
[216] Ibid. p. 237.
[217] Ibid. p. 242. Presumably van Hulst treats 1962 as the last year of post-war wage control since this was the last complete year it was in operation. He uses annual totals for his wage figures.
[218] Ibid. p. 235.

By using two definitions of when wage control was in operation and two variations on the basic model, van Hulst creates four pairs of results to compare. In addition, he gives the result for the entire period. All ten results are given below, for reference. The point of the exercise, for van Hulst, is to see if the results structurally differ between periods when wage control was in operation and periods when it was not.

The results obtained for the first model were[219]:

$$1951\text{-}80:\ l = \underset{(2.789)}{2.843} + \underset{(9.286)}{0.930}\,pc_{-\frac{1}{2}} + \underset{(5.432)}{0.859}\left(y/a\right)_{-\frac{1}{2}} - \underset{(3.587)}{0.717}\,w_{-\frac{1}{2}} + \underset{(2.199)}{0.361}\,d$$

$$\bar{R}^2 = 0.85$$

$$PON:\ l = \underset{(1.567)}{1.557} + \underset{(10.579)}{0.893}\,pc_{-\frac{1}{2}} + \underset{(7.951)}{1.177}\left(y/a\right)_{-\frac{1}{2}} - \underset{(3.043)}{0.631}\,w_{-\frac{1}{2}} + \underset{(3.138)}{0.401}\,d$$

$$\bar{R}^2 = 0.95$$

$$POFF:\ l = \underset{(2.565)}{4.314} + \underset{(5.137)}{0.992}\,pc_{-\frac{1}{2}} + \underset{(1.816)}{0.509}\left(y/a\right)_{-\frac{1}{2}} - \underset{(2.625)}{0.859}\,w_{-\frac{1}{2}} + \underset{(1.120)}{0.417}\,d$$

$$\bar{R}^2 = 0.73$$

$$PON':\ l = \underset{(1.750)}{1.526} + \underset{(10.479)}{0.916}\,pc_{-\frac{1}{2}} + \underset{(7.757)}{1.087}\left(y/a\right)_{-\frac{1}{2}} - \underset{(3.063)}{0.590}\,w_{-\frac{1}{2}} + \underset{(2.979)}{0.392}\,d$$

$$\bar{R}^2 = 0.93$$

$$POFF':\ l = \underset{(2.554)}{6.246} + \underset{(4.151)}{0.939}\,pc_{-\frac{1}{2}} + \underset{(1.228)}{0.414}\left(y/a\right)_{-\frac{1}{2}} - \underset{(2.681)}{1.059}\,w_{-\frac{1}{2}} + \underset{(0.273)}{0.127}\,d$$

$$\bar{R}^2 = 0.66$$

(t-statistics in brackets).

The results of the second model were[220]

$$1951\text{-}80:\ l = \underset{(1.145)}{-1.083} + \underset{(8.963)}{0.914}\,pc_{-\frac{1}{2}} + \underset{(6.251)}{0.961}\left(y/a\right)_{-\frac{1}{2}} - \underset{(3.297)}{3.401}\left(1/w\right)_{-\frac{1}{2}} + \underset{(1.990)}{0.340}\,d$$

$$\bar{R}^2 = 0.84$$

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[219] Ibid. p. 238.
[220] Ibid. p. 240.

$$\text{PON: } l = \underset{(2.802)}{-2.371} + \underset{(11.158)}{0.906}\,pc_{-\frac{1}{2}} + \underset{(8.501)}{1.186}\left(y/a\right)_{-\frac{1}{2}} - \underset{(3.326)}{5.160}\left(1/w\right)_{-\frac{1}{2}} + \underset{(2.293)}{0.298}\,d$$

$$\bar{R}^2 = 0.95$$

$$\text{POFF: } l = \underset{(0.217)}{-0.421} + \underset{(4.644)}{0.945}\,pc_{-\frac{1}{2}} + \underset{(2.515)}{0.709}\left(y/a\right)_{-\frac{1}{2}} - \underset{(2.124)}{3.328}\left(1/w\right)_{-\frac{1}{2}} + \underset{(1.220)}{0.482}\,d$$

$$\bar{R}^2 = 0.69$$

$$\text{PON': } l = \underset{(1.932)}{-1.800} + \underset{(9.944)}{0.914}\,pc_{-\frac{1}{2}} + \underset{(8.104)}{1.156}\left(y/a\right)_{-\frac{1}{2}} - \underset{(2.757)}{3.259}\left(1/w\right)_{-\frac{1}{2}} + \underset{(2.591)}{0.361}\,d$$

$$\bar{R}^2 = 0.92$$

$$\text{POFF': } l = \underset{(0.000)}{-0.001} + \underset{(3.562)}{0.918}\,pc_{-\frac{1}{2}} + \underset{(1.945)}{0.670}\left(y/a\right)_{-\frac{1}{2}} - \underset{(1.968)}{3.837}\left(1/w\right)_{-\frac{1}{2}} + \underset{(0.643)}{0.324}\,d$$

$$\bar{R}^2 = 0.58$$

On the face of it, there seem to be large differences between these. The value of $\bar{R}^2$ varies enormously, as does the significance of the change in income tax and insurance payments. The contribution of productivity increases also shows differences. But van Hulst argues that the results of a Chow test show that the results are not structurally different[221].

He also recalculates the regressions using a dummy variable for each period of wage control. These took the form:

$$l = \alpha_1 pc_{-\frac{1}{2}} + \alpha_2\left(y/a\right)_{-\frac{1}{2}} + \alpha_3 w_{-\frac{1}{2}} + \alpha_4 d + \alpha_5$$

$$+\alpha_6 D_1 + \alpha_7 D_2 + \alpha_8 D_3 + \alpha_9 D_4 + \alpha_{10} D_5 + \alpha_{11} D_6 + \alpha_{12} D_7$$

and

$$l = \beta_1 pc_{-\frac{1}{2}} + \beta_2\left(y/a\right)_{-\frac{1}{2}} + \beta_3\left(1/w\right)_{-\frac{1}{2}} + \beta_4 d + \beta_5$$

$$+\beta_6 D_1 + \beta_7 D_2 + \beta_8 D_3 + \beta_9 D_4 + \beta_{10} D_5 + \beta_{11} D_6 + \beta_{12} D_7$$

where

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[221] Ibid. p. 244.

D_1 is a dummy for the years 1951-54,

D_2 a dummy for 1955-59,

D_3 a dummy for 1960-62,

D_4 a dummy for 1971,

D_5 a dummy for 1974,

D_6 a dummy for 1976,

and D_7 a dummy for 1980.

As with the previous regressions, estimates were made twice, once treating 1960-62 as years of wage control and once treating them as not. This was achieved by omitting D_3 from the second regression. In no case are the t-statistics for any period of wage control significant, thereby showing, van Hulst concludes, the insignificance of the wage policy. He also notes that the sizes of the dummies are small[222]. The exception to this is the dummy for the period 1951-54, which shows a small, though not statistically significant, downward pressure on wages of between 0.1%-0.5% per year, which van Hulst suggests shows that a more substantial moderation of wages in 1951-53 was undone in a wages explosion in 1954[223]. He concludes that this implies that wage control can have an effect on the timing of wage increases, but not on their growth in the middle-to-long term[224].

Van Hulst argues that the imposition of wage control merely led to the growth of illegally high wages - the so-called "black wages". He argues that there was no effective enforcement of the policy, with only 85 civil servants to run the system nationally and a maximum of ten percent of transgressions noted by them resulting in prosecutions, mostly small fines[225]. As an example of how wage levels exceeded norms he cites the period of the "general wage norm", between 1948 and 1953. During this period, he suggests, the growth in wages paid per employee should have been in step with the consumer price index (since under this policy wage rises were only supposed to be given as compensation for price rises, keeping real wage rates fixed), but in fact exceeded them by around 1.5% per year[226]. He cites Windmuller, de Galan and van Zweeden as stating there was sizeable black wage formation in the mid-1950s[227], and quotes them as stating that, for the period 1945-63, wages were generally 2%-3% above the legal wage level, and 10% in certain sectors (such as

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[222] Ibid. pp. 245-246.
[223] Ibid. p. 247
[224] Ibid. p. 253.
[225] Ibid. p. 199.
[226] Ibid. p. 215.

the building industry) and regions with temporary large shortages of labour. He cites a different study by Hessel which estimates that wages in this period averaged 3%-7% above the prescribed level[228].

Dercksen and Woltjer criticise van Hulst's thesis on several grounds. Appearing as a review of van Hulst's book, their critique confines itself to discussing his comments on the Netherlands. In this, they criticise the way in which he compares wage levels with the goals of wage policy, and they recalculate his regressions in a different manner and obtain very different results.

They argue that van Hulst's interpretation of wage control is too restricted, not just in his analysis of its goals but also in its methods. They argue that wage control can have other purposes than those suggested by van Hulst - it can be an instrument for the management of economic cycles, an instrument to create space for investment and an instrument to compel a more just distribution of income - and its effectiveness has also to be judged on these grounds[229]. Furthermore, they accuse van Hulst of seeing wage control as being only a "mechanical instrument of coercion", which is why he emphasises avoidance and possible ineffectiveness, rather than seeing it as a symbolic expression of a global agreement between participants in the labour market concerning the control of wages growth. This element of consensus can be seen, they argue, by the way that wage control in the 1940s and 1950s was primarily only possible through the support of the employers' and workers' organisations; when this support fell away in the 1960s, it meant the end of wage control[230].

They further argue that the way in which van Hulst compares earnings growth with the goals of wage policy is wrong. Van Hulst, they note, operationalises wages growth as the growth of the sum of wages per employee. The goals of wage control he operationalises in three ways, depending on the period in question. He defines wage control between 1945 and 1953 as granting wage rises according to rises in consumer prices, and from 1954 to 1958 as granting wage rises according to rises in consumer prices and rises in productivity. Wage control from 1959 to 1962, he defines as being like that of 1954 to 1958, but with the addition of compensation for rent rises in specific years.

They find two things wrong with this. Firstly, they believe van Hulst's translations of the goals of wage policy are too crude: for 1951-3 and 1957-8, van Hulst's norms are too high, because of the consumption restrictions; in the years following the consumption

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[227] Ibid. p. 219.
[228] Ibid. p. 222.
[229] Dercksen & Woltjer (1985) p. 129.

restrictions his norms are too low, because they do not take account of undoing the effects of the consumption restrictions; and for 1945-62 as a whole his norms are too low since he takes no account of the upward movement of wages due to considerations of justice and the promotion of performance-related pay.

Secondly, they criticise his use of the growth of the sum of wages per employee as a measure of wages growth, in that it hides a number of important facts. First, not all wages came under the jurisdiction of wage control. Between 1945 and 1962 about 20% of all employees fell outside. Second, in the immediate post-war years, one goal of the policy was a more egalitarian wage structure, with agricultural workers in particular benefiting. And third, wage rises were allowed where they were due to the introduction of piecework systems based on official "scientifically-measured tariffs". The effects of a more just wage structure and the introduction of piecework are difficult to measure[231]. Nevertheless, using growth in the wages of male industrial workers to represent those who came under the wage control system, they argue that it can be seen that wage rates and weekly wages did not move in parallel between 1949 and 1962: for the first ten years wage rates rose more strongly than weekly wages, while between 1959 and 1962 weekly wages rose more strongly[232]. They also suggest that using annual changes in wages is likely to give a distorted picture, since, although wage increases were always allowed in one specific year, they were seldom incorporated into all wage rates in that same year[233].

Dercksen and Woltjer's recalculation of van Hulst's regressions in a different form allows them to argue that wage control was effective. From van Hulst's figures they conclude that, in periods of wage control, wage growth appears to average some 0.5% lower than in periods of no wage control, making wage growth some 6% lower over the period 1951-62 than it otherwise would have been[234]. But in order to create a sharper test than van Hulst attempted they recast his equations into a single regression that distinguishes the effect of wage control on all the coefficients, not just the constant terms. The results of this are:

$$l = \underset{(3.1)}{6.25} + \underset{(5.1)}{0.94}\,pc_{-\frac{1}{2}} + \underset{(1.5)}{0.41}\left(y/a\right)_{-\frac{1}{2}} - \underset{(3.3)}{1.06}\,w_{-\frac{1}{2}} + \underset{(0.3)}{0.13}\,d$$

$$- \underset{(4.0)}{4.72}\,d1 - \underset{(0.2)}{0.02}\,pc'_{-\frac{1}{2}} + \underset{(3.5)}{0.67}\left(y/a\right)'_{-\frac{1}{2}} + \underset{(1.4)}{0.47}\,w'_{-\frac{1}{2}} + \underset{(1.5)}{0.27}\,d'$$

$$\bar{R}^2 = 0.84$$

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[230] Ibid. pp. 129-130.
[231] Ibid. pp. 131-133.
[232] Ibid. pp. 133-134.
[233] Ibid. p. 134.
[234] Ibid. p. 136.

where

d1 = dummy for the wage control years

$$pc' = d1 \times pc$$

$$\left(y/a\right)' = d1 \times \left(y/a\right)$$

$$w' = d1 \times w$$

$$d' = d1 \times d$$

The first line shows the effect of the independent variables in the years when wage control was not in operation, and the second line shows the difference in the effect during the years when it was. The effect of any variable during the years of wage control can be obtained by adding the value of its coefficient reported in the first line to the coefficient of its equivalent in the second.

Dercksen and Woltjer point out two features they see as significant. The first is that the sum of the intercept term and the effect of the dummy variable - what they term the autonomous component of wage growth - is lower in the years of wage control (6.25% - 4.72% = 1.53%) than in the years when it is not in operation (6.25% - 0%). This, they argue, would suggest that wage control was effective in holding back the tendency of wages to rise autonomously - i.e. to "drift". The second is the greater significance of the contribution of productivity increases to wage formation in the years of wage control than in the years of no control. They suggest these two features together can be interpreted as meaning that, in years of wage control, the lower autonomous component of wage rises defined a space for wages to increase on account of rises in the productivity of labour[235].

Van Zanden's critique of van Hulst, like Haas' critique of Roberts, revolves around the international competitive position of the Netherlands during the 1950s. He argues that this improved due to the post-1945 wage policy, price policy and exchange rate policy[236], and that this has to be judged in the context of the structural problems facing the Dutch economy[237]. By means of the offensive devaluations of 1944 and 1949, and by keeping the cost of living low - enabling wage levels to be kept low - he argues the Netherlands became

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[235] Ibid. pp. 136-137.
[236] Van Zanden (1988) p. 464.
[237] Ibid. p. 468.

a land of relatively low wages and prices, instead of what he describes as its previous state as an island of dearness[238].

By comparing Dutch wages with those of those of a number of other countries, he shows that wage control did have an effect. He makes two comparisons: he compares nominal hourly wages against their relative levels in 1938, and he estimates the relationship between hourly wages, prices and growth. The first comparison is an attempt to see whether Dutch wages moved in the same manner as those of the Netherlands' major competitors. He compares Dutch nominal hourly wages with those of West Germany, Belgium, France, Denmark, the UK and the USA[239]. He demonstrates that, relative to these other countries, Dutch hourly wages fell sharply between 1948 and 1953, but that this fall was largely undone in 1954; thereafter wages followed the cost of living[240].

The relationship between hourly wages, prices and growth over the period 1948-62 was compared using data from Belgium, West Germany, the UK, Denmark, Norway, Sweden, Italy, Switzerland and the USA. Two regressions were made, the first of prices and growth on wages, the second identical but with a dummy for the Netherlands:

$$\text{wages} = \underset{(0.02)}{0.04} + \underset{(2.26)}{1.18} * \text{prices} + \underset{(2.59)}{0.48} * \text{growth}$$

$$R^2 = .631 \quad F = 5.99$$

$$\text{wages} = -\underset{(0.06)}{0.90} + \underset{(2.80)}{1.30} * \text{prices} + \underset{(2.92)}{0.48} * \text{growth} - \underset{(1.72)}{23.48} * \text{dummy}$$

$$R^2 = .753 \quad F = 6.10$$

Van Zanden notes that these show a significant contribution from prices and growth on wages, with the addition of a dummy for the Netherlands increasing the value of R^2 and the F-statistic. Plotting the actual values against the fitted value of the first equation shows that only in the Netherlands and the UK was the increase in wages less than expected[241]. He concludes from all this that changes in wages in the Netherlands between 1947 and 1953 cannot be explained by reference to the labour market[242].

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[238] Ibid. pp. 473-474. This is a reference to the exchange rate policy of the Colijn government before 1936, as a result of which wages and prices rose sharply leading to a fall in the Dutch share of the world market. Even though the competitive position of the Netherlands improved after the devaluation of the guilder, van Zanden argues that it remained "unfavourable" [Ibid. p. 468].

[239] Ibid. p. 468.

[240] Ibid. pp. 470-471.

[241] Ibid. pp. 472-473. Van Zanden explains the results for the UK as being due to there being a form of wage control in operation there between 1948 and 1951.

[242] Ibid. p. 473.

3.3 Critics of wage control: Brander, van Hulst and Mieras

Brander, van Hulst and Mieras are also concerned with the effectiveness of wage control in general, but deal only with the Dutch experience. Their intention is to look at incomes policy as a potentially powerful tool of macroeconomic policy, and their purpose is to assess whether the Dutch government has succeeded in making wage control work when governments such as the British have failed [243]. They conclude that "the alleged success of Dutch incomes policy is more myth than reality"[244].

They make their assessment by the use of a bargaining model of wage determination. They give two reasons for using such a model. The first is a theoretical point. Any model for wage determination in a developed industrialised country needs to take into account that wage determination is the result of negotiation. Since they are interested in the outcome of bargaining, it is necessary for them to model the process. Their second reason is empirical. Their examples suggest that a bargaining-augmented Phillips curve is a good empirical fit for Dutch wage development in the post-war period[245]. In their bargaining model, changes in wage rates are determined by wage claims by employees and wage offers by employers. This gives the equation

$$W = (1-b)W_c + bW_o$$

where

W = the annual change in the wage rate

W_c = the annual change in the wage claim

W_o = the annual change in the wage offer

b = the relative bargaining power of the employers.

Wage claims are defined as being dependent on changes in consumer prices, annual productivity growth, and the social security contributions and taxes paid by employees, while wage offers are determined by changes in producer prices, annual productivity growth (again) and social security contributions by employers. The relative bargaining power of employers is defined as a function of the level and change in the previous year's employment, and the number of strikes in the current year.

Putting these together gives

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[243] Brander *et al* (1996) p. 899.
[244] Ibid. p. 905.
[245] Ibid. p. 902.

$$W = P_c + a_1(P_y - P_c) + a_2H + a_3dtt + a_4U_{t-1} + a_5\Delta U_{t-1} + a_6\delta + a_7$$

where

P_c = the percentage change in the inflation rate relevant to employees (consumer prices)

P_y = the percentage change in the inflation rate relevant to employers (producer prices)

H = annual productivity growth

dtt = the sum of the social security contributions paid by employers, and social security contributions and taxes paid by employees.

U = the level of employment

δ = the number of strikes.

The regression gives a good fit for the period 1953 to 1990, with an adjusted R^2 of 0.949. All coefficients are significant and have the sign that the authors expect, and the Durbin-Watson coefficient does not flag for auto-correlation[246].

The model is used to compare periods when an incomes policy was in operation and periods when it was not. They define an incomes policy as a policy whereby the government proclaims a limit to the allowed outcome of wage negotiations. Any resulting wage restraint is therefore essentially involuntary. An effective incomes policy is therefore one that keeps the nominal rise in wage rates below what would have been the case in conditions of unrestricted wage formation[247].

They make two sets of comparisons. First, they check if wage control generally had any effect on the regression, and, following this, they check if specific periods of wage control had an effect.

They use two methods to check the effect of wage control generally: the dummy variable method and the split estimation method. The dummy variable method involves multiplying all variables by a dummy, set to one for years in which wage control was in operation and zero for years in which it was not. This is the same technique as used by Dercksen and Woltjer in their discussion of van Hulst's 1984 study. Brander *et al* found no effect using this technique. None of the dummies created by this method was significantly different from zero and a Chow test could not reject stability. They conclude from this that there

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[246] Ibid. pp. 903-904.

was no structural shift in the wage equation as a result of wage control. The split equation method involves running separate regressions for periods of wage control and no wage control. They find no difference between the two regressions, suggesting there was no difference between the two sets of periods[248].

To check if specific periods of wage control had an effect, they use an additive dummy for each period of what they consider to be more or less homogenous policy. These periods are 1953-54, 1955-59, 1960-62, 1971, 1974, 1976, 1980-81 and 1982. They find the dummies insignificant except for the periods 1955-59 and 1980-81, and a dummy added for the "wages explosion" of 1964 also proves significant. They feel that this sudden increase in wage rates was a direct consequence of the preceding wage control, and so they calculate the net effect of wage control between 1955 and 1959, and the 1964 wage explosion. They find this was equal to a wage restraint of 0.6% between 1955 and 1959. They conclude that the effect of wages policy in this period was therefore "very moderate"[249].

There are two problem with this argument. The first is a methodological problem, the second concerns their confusion about the objectives of wage control.

The methodological problem concerns the way in which they construct their counterfactual. What they attempt is a comparison between, on the one hand, what happened to wage rates under wage control and, on the other, what would have happened to them had wage control not been in operation. As a counterfactual - what would have happened had wage control not been in operation - they use the model defined above, describing the long-term path of wages growth. The problem here is that the model includes the periods of wage control, and it is not certain that this model would have been such a good fit had wage control been entirely absent. This question hinges on whether or not the operation of wage control in one specific year would have had an effect on the longer-term development of the economy, or whether its effects would merely have been confined to the year it was in operation. Brander *et al* implicitly assume that the latter is the case, and that the long-term growth of wage rates is unaffected by the short-term presence or absence of wage control. Because they build this assumption into their model, it is not surprising that their results show that wage control had no long-term effect.

Secondly, they confuse the immediate aim of wage control with its long-term objective. What any wage control system must do, as they note, is to hold wage rates below what they

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[247] Ibid. p. 899.
[248] Ibid. pp. 904-905.
[249] Ibid. p. 905.

otherwise would have been. This is not, however, the same thing as aiming to hold down wages in the long run. In the case of Dutch wage control in the 1950s, the objective, as we have seen, was to make funds available for investment in industry. It would be perfectly legitimate to argue that, in this case, the success of the policy in the long run should be measured according to whether average wage rates were *higher*, once the investment took effect, than would otherwise have been the case. This is because the increased economic activity resulting from increased investment should have created new higher-paying jobs. The creation of these jobs would have caused the average wage rate to rise - even if the rates offered in these jobs were lower than they would have been in the absence of wage control. In this scenario, the amount by which wages were held down in the years 1955 to 1959 can be considered as a loan made by wage earners to investors. It can be considered a voluntary loan, because it was made with trade union participation, and the higher wage rates expected to be available as a consequence of increased investment can be considered the interest that workers receive from the loan. What Brander *et al* show, from this perspective, is that the actual interest on the loan was, albeit to a small degree, negative. This is presumably a considerably better rate for investors than was available to them from banks during the period. The conclusion could be drawn from their study, therefore, that wage control in this period was unsuccessful, not from the point of view of government policy, but from the point of view of wage earners.

3.4 Wage rates and income growth.

None of the studies show that incomes rose because wage rates rose. It might be argued that this is an unfair comment because none of them intended to show such a relationship. But some sort of relationship between the two is nonetheless assumed in the studies. In the case of Roberts and van Hulst, income growth is used as a proxy for the growth of wage rates, while Brander *et al* see workers' desire for increasing disposable income as the basis for demands for higher wage rates[250]. On the other hand, Brander *et al* seem to demonstrate that wage rate growth was held down in a period (1955-1959) in which consumption increased dramatically, which would suggest that the relationship between the growth in wage rates and the growth in disposable income is rather more complex than the earlier studies allow.

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[250] Ibid. p. 902.

There are theoretical reasons for not assuming that earnings and wage rates will grow at the same pace. These reasons are particularly strong in the case of the Netherlands during the 1950s. Earnings - what the worker takes home at the end of the week or month - are, at the basic level dependent on wage rates. Wage rates are the rate of pay per hour or month, or the rate of pay for a piece of work, etc. *Ceteris paribus*, earnings will move up and down as wage rates move up and down. But it is likely that the economic changes associated with Dutch industrialisation had an effect on this process. Manufacturing output increased faster than the output of other sectors and, within manufacturing, some industries expanded more than others. It is inconceivable that this left the occupational structure of the workforce unchanged. As industries expanded, some would have demanded more additional labour than others, due to different rates of expansion, different levels of productivity and differing rates of productivity growth. Some declining industries may have even contracted their employment. This process will have been reproduced within each industry. Job structures will have changed as technical processes changed, and demand for old skills declined as demand for new ones expanded. Wage rates differ between occupations. A change in the occupational structure of the workforce will therefore have altered the average wage rate, which will in turn have altered average earnings. This will have happened not just in industry as a whole, but also in each industry. If the proportion of the workforce in higher-paying occupations increased, then earnings will have risen independently of wage rates. As Haas notes, structural change can have its own effect on earnings.

There are also theoretical reasons for believing that disposable incomes will not grow at the same rate as earnings. Disposable income - what people have to spend - is mediated by the household. The workforce is not composed of isolated individuals, and for the most part workers live in households with others. They bring their earnings, to a greater or lesser extent, into the household, which usually contains one or more people with no income of their own. A household can also contain, of course, more than one person receiving an income, and not every income brought into the household may result from wages or a salary. It could, for example, derive from a pension. There are common expenditures associated with living in a household, such as rent, and personal disposable income is what people have once common household expenses have been paid and the rest of the income distributed amongst the household.

It is the level of disposable income that determines the level of consumption. The rate of growth of consumption is therefore dependent on the rate of growth of disposable income not the rate of growth of earnings. The rate of growth of disposable income is itself not a

straightforward thing to measure, since disposable income is a complex function of both household income and personal disposable income. Household income is used to pay for common expenditures relating to the household. Rent has been already been noted as one such expenditure. Food is another item that is usually paid for as a common expenditure, but, at certain times or under certain conditions, can also be an item of individual expenditure. It is also normal (but again not in every case) for consumer durables such as washing machines and vacuum cleaners to be a household item, and therefore their purchase can be considered as part of household expenditure. Personal disposable income is what is left over. But it may be that certain items of household expenditure take the form of purchases by individuals. Food purchases, for example, may take the form of payments from the wife/mother's purse.

It follows that the relationship between the growth of wage rates and increased consumption is a complex one. It involves, at a first approximation, two stages: the relationship between the growth of wage rates and the growth of earnings, and the relationship between the growth of earnings and the growth of household income. It also, strictly speaking, involves the relationship between the growth of household income and the growth of disposable income.

The relationship between the growth in wage rates and the growth in earnings can be simply stated. Earnings can rise even if wage rates do not. It is the case that if wage rates rise generally, earnings will rise *ceteris paribus*, but even if wage rates remain constant, an increased proportion of the workforce in higher-paying occupations will lead to an increase in average earnings.

Likewise, it is possible for household incomes to rise, even if the level of earnings remain static, although the relationship is slightly more complex. It depends on changes to the occupational structure of the household. The occupational structure of the household is defined here as the proportion of household members, by their position in the household, working for wages or a salary. This is, then, the proportion of heads of household that brings earnings into the household, plus the proportion of sons that earn wages, plus the proportions of daughters, wives[251], etc (e.g. other relatives, lodgers) who do the same. The occupational structure of the household changes when one or more of these proportions changes. It can change in two ways: economic or demographic. An economic change to the relationship can occur when certain changes to the structure of the workforce, such as an

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[251] The way the Dutch data for this period are summarised, it is not possible for a man to have been the husband of a head of household.

increase (or decrease) in female employment, increases (or decreases) the proportion of household members bringing in earnings. A demographic change, on the other hand, can happen when, for example, the proportion of sons and daughters of working age increases (or decreases), and therefore increases (or decreases) the proportion of household members earning wages or a salary[252].

Changes to other sources of household income also play a role. The most common other source in wage-earning families is probably a pension of one sort or another, but it could also be income from self-employment or profit from ownership of a business. If any one of these incomes increases or decreases, or if the proportion of household members receiving these increase or decrease, then this too will have an effect on disposable income.

But the fact that these mechanisms determining the relationship between wage rates and household incomes can be identified means that it is possible to calculate, at least approximately, the effects that developments in the labour market had on disposable incomes. In order to do this, it is necessary to look at the growth of wage rates, changes in the occupational structure of the labour force and changes in the occupational structure of the household.

3.5 Conclusion.

It is possible, therefore, that earnings rose despite wage control. But this, in itself, does not indicate that wage control was ineffective. Van Zanden, in particular, shows that Dutch wage rates, at least during the first years of the 1950s, rose less rapidly than the Netherlands' competitors.

But structural change produces its own effects on earnings. An increase in the proportion of the population employed in higher-paid occupations will, in itself, cause earnings to rise. This, then, suggest the direction that this study should follow. The next chapter establishes how the structure of the workforce changed. The subsequent chapters then attempt to establish the extent to which wage rates rose - and by how much this rise can explain the rise in male earnings - the effects of the changing structure of the workforce on earnings,

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252 This ignores, of course, second order effects. In the example of economic change to the occupational structure of the household, average earnings will actually fall, *ceteris paribus*, while average household income increases, because women are paid less than men. This will also happen, *ceteris paribus*, in the example of demographic change, since younger workers are paid less than older ones. But, in this latter example, the increase in the number of younger workers in the labour market will also most probably have an effect on wage rates, unless demand increases along with supply. However, the point here is to emphasise the immediate effects of such changes.

and by how much household income changed as a result of the changing structure of the workforce.

Chapter 4. The Changing Structure of the Workforce.

This chapter investigates the changes in the structure of the Dutch workforce during the 1950s. It uses census data to describe the sectoral changes over the period as a whole. It establishes that the major part of employment growth was in manufacturing, and that the pattern of employment and employment growth of men and women differed. It looks at the pattern of supply and demand of labour, before going on to look at the growth of manufacturing employment in more detail. It also looks at the changing structure of women's participation in the workforce.

Once the pattern of changes to the structure of the workforce over the period has been established, it will then be possible, in principle, to calculate the effect of these changes on earnings.

4.1 How the structure of the workforce changed, 1947-60.

Changes to the structure of the workforce, looked at in terms of their effect on incomes, can be of three kinds. There are those changes that produce a net movement into higher-paying occupations, those that produce a net movement into lower-income occupations and those that, for all practical purposes, are neutral in their effects. These will, naturally, each produce a different outcome. In the first case, there will be upward pressure on incomes, in the second, downward pressure and in the third case, there will be no net pressure either way. Changes to income as a result of such structural changes will, of course, only be one of the factors that affect whether incomes rise or fall. It is entirely possible, in a given circumstance, that one or more of these other factors could be more important than structural change in determining how income changed. For example, a change in the real value of money, affecting all incomes, may dominate in a particular historical case. Structural change will only determine the development of income if it is strong enough to dominate the other potential pressures on income growth.

A broad outline of how the workforce changed its structure between 1947 and 1960 can be obtained from census data. Censuses were taken on 31 May of each of these years, and the census reports give data on, amongst other things, the structure of the economically-active population at each of these points in time. These data are categorised by branch of economic activity and, within each branch, by position in the business. Each of these

categories is divided by gender. Comparing the number of people in equivalent categories in 1947 and 1960 reveals the broad outlines of the structural changes that occurred.

There are five different positions in the business reported in the census: head of business, either employing others or self-employed; assisting in the family business[253]; white-collar worker; manual worker[254]; or temporarily unemployed. Two broader categories are also used here: the paid workforce and the employed workforce. These were created by adding the numbers in various of the published categories. The paid workforce is defined as being composed of those bringing in income from outside the family as a result of their economic activity, and comprises heads of businesses, white-collar workers and manual workers. Alternatively, it can be thought of as the entire economically-active population with the exception of those working in the family business and those temporarily unemployed. The employed workforce consists of white-collar workers and manual workers - i.e. those employed for pay by someone else[255].

The 1947 figures used for comparison in this section are taken from the reworked figures in the 1960 census report. This is necessary because the branches of economic activity given in the 1947 census report are categorised differently to those in the 1960 census, which used the 1958 version of the International Standard Industrial Classification[256]. The 1947 figures were reworked by the CBS to conform to the 1958 ISIC categories and the results were published in the 1960 census report[257].

These census data confirm that the economically-active population increased in size. Table 5 shows the crude figures, giving some sort of ideas of the magnitudes involved. It should be noted that these figures in themselves do not confirm that government policy was successful in creating new jobs, since the temporarily unemployed are included in the economically-active population. If the attempt to create jobs had failed, in other words, the figures would still have shown a rise. What the table does, however, demonstrate is a

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253 This can be a wife, son or daughter assisting in the family business. The way the data are reported, it is impossible for a husband to assist in the family business, although it seems inconceivable that there was not at least one married woman who owned her own business and whose husband worked alongside her.

254 The terms "white-collar worker" and "manual worker" are here used as the translations of *employé* and *arbeider* respectively. These are not strictly literal translations, since in the English language one could conceivably do a manual or white-collar job within the family business (e.g. a farmer's wife might take responsibility for her husband's account books). What the terms mean in this context are those employed in the wider jobs market for wages or a salary. The terms "salary earners" and "wage earners" were considered as an alternative, but these are equally vulnerable to the accusation of being less than one hundred percent accurate as a translation.

255 It is possible that those assisting in the family business were also paid for their efforts, but this is regarded here as being a transfer of income within the household.

256 *13e Algemene volkstelling Deel 10B* pp. 7-8.

	1947			1960		
	Men	Women	Total	Men	Women	Total
Agriculture, fishing & hunting	558789	168909	727698	406381	40558	446939
Mining and quarrying	50844	1240	52084	59536	1160	60696
Manufacturing	816964	159832	976796	1065330	205111	1270441
Building & construction	293508	2574	296082	399868	5476	405344
Public utilities	37730	1238	38968	47664	2152	49816
Commerce, banking & insurance	357657	171756	529413	428288	220242	648530
Transport & communications	225767	17718	243485	267729	21144	288873
Services	547787	415230	963017	549112	430049	979161
Unknown type of business	33796	5106	38902	16603	2223	18826
Total	2922842	943603	3866445	3240511	928115	4168626

Source: *13e Algemene volkstelling, Deel 10 A*, table 2.

Table 5. The Dutch workforce in 1947 and 1960.

noticeable gender difference in the rises in numbers, with the economically-active male population increasing by almost eleven percent, while the number of economically-active women - perhaps surprisingly at first sight - fell slightly.

As expected, the proportions working in each sector changed, with the workforce becoming more industrial. Table 6 shows that the proportion of the population working in manufacturing increased, by more than five percentage points, more than matched by a fall in the proportion working in agriculture of more than eight percentage points[258]. This fall was not caused by agriculture expanding less than other sectors, but in fact represents a fall in the actual numbers working in the sector - the only branch of economic activity where this happened.

The paid workforce expanded more than the economically-active population as a whole. While the number of economically-active men[259] increased by nearly eleven percent, the paid workforce increased by almost seventeen percent. In the case of women, the difference was even greater. A slight fall in the number of economically-active women disguised a rise of over twenty percent in the number of women in the paid workforce. In part, these differences were due to a fall in the proportions recorded as temporarily

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[257] The comparative data are published in *13e Algemene volkstelling Deel 10A*, table 2. All figures in this section are taken from this table, unless otherwise stated.

[258] The 1947 figure given here differs slightly from that given by some authorities. Messing (1981) p. 13 gives it as 19.3% of the economically-active population, as do de Liagre Böhl *et al* (1981) p. 277. They both quote the CBS's 80-year survey *Tachtig jaren statistiek in tijdsreeksen*, which reproduces the figures from the relevant censuses. One of the differences between the 1947 and 1960 censuses is that the former does not include conscripts as part of the economically-active population while the latter does, under "Services". The figures give in Table 6 include conscripts as members of the economically-active population in both years.

[259] The words "men" and "women" are used in this study in the sense of "male members of the population" and "female members of the population". In other words, the terms include minors.

	1947			1960		
	Men	Women	Total	Men	Women	Total
Agriculture, fishing & hunting	14.45%	4.37%	18.82%	9.75%	0.97%	10.72%
Mining and quarrying	1.32%	0.03%	1.35%	1.43%	0.03%	1.46%
Manufacturing	21.13%	4.13%	25.26%	25.56%	4.92%	30.48%
Building & construction	7.59%	0.07%	7.66%	9.59%	0.13%	9.72%
Public utilities	0.98%	0.03%	1.01%	1.14%	0.05%	1.20%
Commerce, banking & insurance	9.25%	4.44%	13.69%	10.27%	5.28%	15.56%
Transport & communications	5.84%	0.46%	6.30%	6.42%	0.51%	6.93%
Services	14.17%	10.74%	24.91%	13.17%	10.32%	23.49%
Unknown type of business	0.87%	0.13%	1.01%	0.40%	0.05%	0.45%
Total	75.60%	24.40%	100.00%	77.74%	22.26%	100.00%

Source: *13e Algemene volkstelling, Deel 10 A*, table 2.

Table 6. Structure of the Dutch workforce, 1947 and 1960.

unemployed - in the case of men a fall from nearly three to less than half a percent of the economically-active population, and, in the case of women, from nearly two to around a quarter of a percent. But an even bigger contribution was made by the decline in family working. The proportion of economically-active men assisting in the family business fell by more than a half, from nearly six to just over three percent, while the proportion of economically-active women fell even more - from over twenty-three percent to little more than ten.

Within the paid workforce, the proportion of those employed by others - both as white-collar and manual workers - increased. As can be seen from Table 7, there was a rise in the proportion of the paid workforce who were employed as white-collar or manual workers of five percentage points, the largest increase in manufacturing. The number of people who were heads of businesses fell in all branches of economic activity, the total falling by over

	1947		1960	
	Heads of businesses	Employed workforce	Heads of businesses	Employed workforce
Agriculture, fishing & hunting	53.81%	46.19%	63.60%	36.40%
Mining and quarrying	1.91%	98.09%	0.48%	99.52%
Manufacturing	13.01%	86.99%	7.49%	92.51%
Building & construction	18.53%	81.47%	12.16%	87.84%
Public utilities	0.16%	99.84%	0.07%	99.93%
Commerce, banking & insurance	38.87%	61.13%	27.66%	72.34%
Transport & communications	14.94%	85.06%	8.80%	91.20%
Services	9.83%	90.17%	9.35%	90.65%
Unknown type of business	0.55%	99.45%	1.11%	98.89%
Total	21.38%	78.62%	16.29%	83.71%

Source: *13e Algemene volkstelling, Deel 10 A*, table 2.

Table 7. The paid workforce in 1947 and 1960.

	1947		1960	
	White-collar workers	Manual workers	White-collar workers	Manual workers
Agriculture, fishing & hunting	2.53%	97.47%	4.33%	95.67%
Mining and quarrying	9.66%	90.34%	15.91%	84.09%
Manufacturing	15.29%	84.71%	23.45%	76.55%
Building & construction	6.53%	93.47%	9.20%	90.80%
Public utilities	28.11%	71.89%	35.10%	64.90%
Commerce, banking & insurance	72.51%	27.49%	79.01%	20.99%
Transport & communications	29.31%	70.69%	35.58%	64.42%
Services	43.83%	56.17%	54.81%	45.19%
Unknown type of business	50.88%	49.12%	13.43%	86.57%
Total	29.43%	70.57%	37.53%	62.47%

Source: *13e Algemene volkstelling, Deel 10 A*, table 2.

Table 8. Employees by branch of economic activity, 1947 and 1960, as a proportion of the total number of employees.

ten and a half percent. The only branch in which the proportion of heads of businesses was higher in 1960 than in 1947 is agriculture - which is the only branch in which the number of white-collar and manual workers fell over the period.

The growth in size of the employed workforce means two things. First, the fact that this was greater than the growth in size of the paid workforce means that there was a net movement of the economically-active population into being employed by others, rather than employing others or being self-employed. Second, its growth being greater than that of the economically-active population means that economic growth did not just provide jobs for the expanding population. It confirms that, as was reported in the *Industrialisation Notes*, that it provided these jobs and more.

The number of those employed in white-collar work increased more than the number employed in manual work. White-collar workers still formed a minority of the employed workforce in 1960, but a larger minority than in 1947. As Table 8 shows, in 1947 there were three white-collar workers for every seven manual workers, but by 1960 this ratio had increased to three for every five manual workers. This increase did not affect all branches of economic activity equally. The largest increase occurred in manufacturing, where the number of white-collar workers increased from fifteen to twenty-three percent of the employed workforce in the sector. This rise was not, however, at the expense of manufacturing's manual workforce, which rose in size as a proportion of the manual workforce from thirty-seven to forty-three percent.

By far the largest increase in the number of jobs - that is, the number of those employed in white-collar and manual work - occurred in manufacturing. Manufacturing as a whole was

	Male	Female	Total
Agriculture, fishing & hunting	-12.00%	-1.30%	-13.30%
Mining and quarrying	1.52%	0.00%	1.52%
Manufacturing	43.73%	8.18%	51.91%
Building & construction	17.41%	0.50%	17.91%
Public utilities	1.51%	0.14%	1.65%
Commerce, banking & insurance	12.90%	11.20%	24.10%
Transport & communications	9.35%	0.49%	9.84%
Services	0.88%	5.21%	6.09%
Unknown type of business	0.42%	-0.13%	0.28%
Total	75.72%	24.28%	100.00%

Source: *13e Algemene volkstelling, Deel 10 A*, table 2.

Table 9. Net increase in employment in each branch of economic activity, 1947-60, as a proportion of the total net increase in employment.

responsible for over half the increase in jobs in the workforce as a whole, and almost three out of every five new male jobs. The other branches where large net increases occurred, as can be seen from Table 9, were amongst male workers in construction, and amongst both men and women in commerce, banking and finance.

The rise in manufacturing employment was concentrated in just a few industries. This is perhaps not surprising, since, as we have seen, certain industries - notably chemicals and

	Men	Women	Total
Food processing (except beverages)	3.12%	1.42%	4.53%
Beverages	0.36%	0.09%	0.45%
Tobacco	-0.25%	0.16%	-0.09%
Textiles	3.30%	0.88%	4.18%
Footwear, other clothing apparel	0.55%	0.09%	0.63%
Wood industry (excluding furniture)	0.60%	0.08%	0.68%
Furniture	0.08%	0.18%	0.26%
Paper and paper products	1.63%	0.28%	1.92%
Printing, publishing etc	1.60%	0.59%	2.19%
Leather and leather goods (excl. shoes)	-0.06%	0.07%	0.01%
Rubber products	0.81%	0.08%	0.89%
Chemicals and chemical products	4.84%	0.85%	5.70%
Petroleum & coal products	1.30%	0.17%	1.47%
Stoneware, glass and pottery	1.97%	0.17%	2.14%
Basic metal industries	2.23%	0.19%	2.42%
Manufacture of metal products	5.12%	0.45%	5.57%
Manufacture of machinery	5.15%	0.47%	5.61%
Manufacture of electrical machinery	6.33%	1.47%	7.80%
Vehicle manufacture	4.97%	0.47%	5.44%
Miscellaneous manufacturing	0.08%	0.02%	0.10%
Total	43.73%	8.18%	51.91%

Source: *13e Algemene volkstelling, Deel 10A*, table 2.

Table 10. Net increases in manufacturing employment, 1947-60, as a proportion of the total increase in manual and white-collar jobs.

	1947			1960		
	Men	Women	Total	Men	Women	Total
Food processing (except beverages)	17.29%	9.43%	15.93%	14.23%	11.63%	13.79%
Beverages	1.43%	0.56%	1.28%	1.25%	0.70%	1.16%
Tobacco	1.92%	2.69%	2.06%	1.17%	2.48%	1.40%
Textiles	8.41%	15.16%	9.58%	8.15%	13.93%	9.12%
Footwear, other clothing apparel	5.05%	46.68%	12.26%	3.91%	34.03%	8.99%
Wood industry (excluding furniture)	3.49%	0.43%	2.96%	2.85%	0.58%	2.47%
Furniture	4.12%	0.83%	3.55%	2.94%	1.20%	2.64%
Paper and paper products	2.03%	2.22%	2.06%	2.54%	2.57%	2.55%
Printing, publishing etc	5.85%	5.16%	5.73%	5.19%	5.72%	5.28%
Leather and leather goods (excl. shoes)	1.27%	1.12%	1.24%	0.84%	1.05%	0.88%
Rubber products	0.80%	0.45%	0.74%	1.12%	0.61%	1.03%
Chemicals and chemical products	4.84%	4.72%	4.82%	6.72%	6.31%	6.65%
Petroleum & coal products	0.43%	0.05%	0.37%	1.20%	0.62%	1.10%
Stoneware, glass and pottery	5.50%	1.23%	4.76%	5.20%	1.47%	4.57%
Basic metal industries	2.71%	0.26%	2.28%	3.43%	0.81%	2.99%
Manufacture of metal products	8.25%	1.74%	7.12%	9.29%	2.80%	8.20%
Manufacture of machinery	6.46%	0.95%	5.50%	8.06%	2.26%	7.08%
Manufacture of electrical machinery	5.09%	4.18%	4.93%	7.91%	8.01%	7.93%
Vehicle manufacture	13.23%	0.95%	11.11%	12.67%	2.30%	10.92%
Miscellaneous manufacturing	1.82%	1.20%	1.71%	1.33%	0.94%	1.26%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: *13e Algemene volkstelling, Deel 10A*, table 2.

Table 11. The proportion of the employed workforce in each industry, 1947 and 1960.

the metal industries - showed dynamic growth, while other industries did not. Productivity growth will certainly have made a contribution to output growth, but some contribution from an expanding workforce is also to be expected. Table 10 shows that a number of industries actually contributed very little to employment growth, with the number of men employed in the tobacco industry and in the leather goods industry both actually falling slightly. Most of the increase in employment occurred in the chemical and metal industries, where the output growth was largest. The increase in male employment in these industries accounted for twenty-nine percent of the increase in all jobs, amounting to three-eighths of the net increase in all male jobs and two-thirds of the net increase in male jobs in manufacturing.

The industries that experienced the largest increases in employment were not necessarily those that employed the most workers. As can be clearly seen in Table 11, employment in some of the industries with the largest workforces fell during the period. The industry that employed the largest number of men in both 1947 and 1960 was food processing, but its employment share fell between the two dates. More than half of all women employed in manufacturing worked either in textiles or in footwear and clothing in 1947. In 1960, these

	Actual numbers		The 1960 figure as a percentage of the 1947 figure
	31 May 1947	31 May 1960	
Total agricultural workforce			
Male	535850	390748	72.92%
Female	168340	40123	23.83%
Total	704190	430871	61.19%
Farmers			
Male	234222	216063	92.25%
Female	13790	5464	39.62%
Manual workers			
Male	186961	108197	57.87%
Female	12337	3374	27.35%
Working on the family farm			
Wives	81440	17470	21.45%
Children: male	110502	61265	55.44%
Children: female	60526	13212	21.83%

Note: This table omits those working in forestry, hunting and fishing.

Source: *13e Algemene volkstelling, Deel 10 A*, table 2.

Table 12. Changes in the structure of the agricultural population, 1947-60.

industries employed fewer than half of the female manufacturing workforce, although they still took the largest shares of any industries. Conversely, the fact that an industry provided one of the largest increases in employment did not, of course, mean that its share of employment rose. Vehicle manufacture provided some five and a half percent of the net increase in jobs, yet its share of manufacturing employment fell. The reason is that this industry was already a large employer in 1947, and its growth in the subsequent thirteen years was not enough to maintain the proportion of jobs it supplied.

The only branch of economic activity that experienced a fall in numbers was agriculture. Table 6 shows the proportion of the economically-active population working in the sector falling from just under nineteen percent to just under eleven, and, as was pointed out, this represents an absolute, as well as a relative, fall in numbers. The largest falls in numbers are to be found in two areas. Amongst men, the largest falls took place in the numbers of manual workers and of sons working on the family farm. Amongst women, numbers fell across the entire sector. Table 12 shows a small decline in the number of male farmers, but the size of the decline is around the same magnitude as the size of the decline in heads of businesses in general. In contrast, the number of employed male agricultural workers and working sons nearly halved, but this fall was considerably less than the magnitude of the

	Age:								
	14-19	20-24	25-29	30-39	40-49	50-59	60-64	65&+	Total
Food processing (excluding beverages)	14.75%	11.97%	12.31%	12.45%	14.45%	15.02%	16.04%	14.99%	13.61%
Beverages	0.76%	1.36%	1.40%	0.94%	1.00%	0.89%	1.18%	1.35%	1.05%
Tobacco industry	1.01%	0.92%	0.92%	0.92%	0.89%	1.37%	2.35%	1.80%	1.08%
Textile industry	7.83%	7.46%	6.98%	7.79%	7.94%	8.77%	7.92%	2.71%	7.75%
Shoes & clothing	4.38%	4.53%	4.17%	4.53%	5.27%	6.42%	6.94%	13.75%	5.18%
Wood products (excl. furniture)	3.60%	2.79%	2.66%	2.41%	2.79%	3.15%	4.30%	4.62%	2.92%
Furniture	4.34%	3.86%	3.28%	2.73%	3.43%	3.46%	3.00%	7.44%	3.43%
Paper industry	2.24%	2.29%	2.17%	2.50%	2.40%	2.51%	2.23%	1.35%	2.36%
Printing and publishing	6.04%	4.70%	5.35%	4.03%	4.93%	5.11%	6.66%	8.34%	5.02%
Leather (excl. shoes)	0.95%	0.85%	0.77%	0.84%	0.83%	0.77%	0.81%	1.13%	0.83%
Rubber	0.90%	1.21%	1.17%	1.25%	1.16%	0.98%	0.73%	0.34%	1.10%
Chemicals	3.13%	5.04%	5.75%	6.59%	6.81%	5.29%	5.08%	3.16%	5.66%
Petroleum & coal products	0.28%	0.93%	1.56%	2.08%	1.57%	1.33%	0.45%	0.34%	1.38%
Stoneware, glass, pottery	3.79%	5.37%	4.81%	4.22%	5.28%	5.99%	5.85%	5.52%	4.96%
Basic metal industries	1.25%	2.29%	2.66%	3.99%	3.88%	3.44%	3.29%	0.68%	3.15%
Manufacture of metal products	11.06%	10.29%	9.86%	10.17%	8.88%	8.48%	8.73%	8.79%	9.64%
Manufacture of machinery	8.75%	8.90%	8.47%	8.51%	6.83%	6.19%	6.09%	5.52%	7.73%
Manufacture of electrical machinery	6.49%	9.10%	9.49%	8.74%	6.61%	5.66%	3.69%	1.01%	7.39%
Vehicle manufacture	15.42%	13.59%	13.74%	12.87%	12.97%	12.77%	11.61%	12.51%	13.26%
Other	3.04%	2.55%	2.48%	2.44%	2.07%	2.40%	3.05%	4.62%	2.51%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: *13e Algemene volkstelling Deel 10A*, table 4.

Table 13. Employment in manufacturing, by age, 1960.

contraction in the number of women working in all roles in the sector. Here, the reported number dropped by about four-fifths, whatever the position on the farm, with the exception of the small number of female farmers, whose number only fell by three-fifths.

Some of the fall in the number of women reported as working in agriculture may be an artefact of the figures: the consequence of a standardisation of the definition of "working in the family business". The 1960 census excluded all those worked fewer than fifteen hours a week, making the category more uniform than in previous censuses, where the definition was left to local discretion. However, in 1960, only 25000 people were excluded from the workforce as reported in the census, mainly in agriculture and retail, as a result of having worked too few hours to qualify. It is not possible to calculate what effect this had with regard to comparisons with 1947, but the CBS notes that more pensioners and students were included in the workforce in that year's census than in 1960[260]. But even if all the 25000 excluded were women working on the family farm, this would still mean a fall in numbers over the period of nearly two-thirds.

The age structure of the male workforce in 1960 bore signs of the changes to its sectoral structure. This is an important element in the changing structure of the workforce as a whole, since, as is shown in Chapter 6, income is affected by age. The major changes in the structure of the workforce seem for the most part to have affected those at the younger end. Almost sixty percent of the manufacturing workforce in 1960 was under the age of

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260 *13e Algemene volkstelling Deel 10B*, p. 7.

forty, as opposed to less than fifty percent of those in agriculture[261]. This effect was more marked in some industries than others, as can be seen from Table 13. The largest industry as regards employment, at all ages, was food processing, but the proportion working here was lower amongst those aged between twenty and thirty-nine than amongst those older, consistent with the notion that the decline in employment took place mainly amongst younger workers[262]. There were other "old" industries in which an older workforce can be seen, such as shoes and clothing, but this did not apply to all the industries that declined. Likewise, not all industries that expanded their workforces had disproportionately young workforces. There are those where this was the case, such as the metal industries - metalworking and the manufacture of machine tools, electrical machinery and vehicles - but the workforce in chemicals was a little older.

The male workforce, then, changed in three major ways. It showed a rise in the number and proportion of men working in manufacturing, it showed an increase in the number and proportion in paid employment and it showed an increase in the number and proportion of those employed as white-collar workers. All three aspects of this have potentially important effects on men's incomes. The increase in the proportion of men employed as white-collar and manual workers is the corollary of a decline in the proportion of men owning businesses and the proportion of those working in the family business. To put this another way, there was a change in the structure of where men's incomes came from. A greater proportion of men in 1960 received their incomes from wages and salaries than did so in 1947, a lower proportion from profits and from self-employment. The effect of this on the sizes of men's incomes was not likely to be neutral. The increase in the proportion of men working in manufacturing would also probably have affected the income structure, as would the increase in white-collar working.

The female workforce had a different structure to the male. The most important difference was in the age structure, with half the economically-active female population being under the age of 25. This proportion grew over the period from fifty percent in 1947 to fifty-three in 1960[263]. The other crucial difference was that manufacturing was not as important a source of employment for women as for men, with the commercial and financial sector

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261 *13e Algemene volkstelling Deel 10A*, table 4.

262 This may seem to be contradicted by the relatively high proportion of the fourteen-to-nineteen year-old age group working in the industry, but this is likely to be an effect of a relatively high proportion of the industry's workforce being unskilled. Unskilled workers tend to have left school at an earlier age than skilled workers, and so will be over-represented amongst the youngest age group. This is particularly the case in a country like the Netherlands, where large numbers of the skilled are educated in trade schools rather than given on-the-job training.

263 *13e Algemene volkstelling Deel 10A*, table 4, p. 25.

	1947		1960	
	Working family members	Economically-active outside the family	Working family members	Economically-active outside the family
Agriculture, fishing & hunting	15.05%	2.85%	3.31%	1.06%
Mining and quarrying	0.01%	0.12%	0.00%	0.12%
Manufacturing	0.45%	16.49%	0.32%	21.78%
Building & construction	0.06%	0.21%	0.03%	0.56%
Public utilities	0.00%	0.13%	0.00%	0.23%
Retailing in shops	7.12%	7.07%	4.64%	12.41%
Commerce (excluding retail in shops), banking & insurance	0.39%	3.62%	0.23%	6.45%
Transport & communications	0.15%	1.73%	0.23%	2.04%
Domestic service	0.00%	18.88%	0.00%	12.29%
Services (excluding domestic service)	1.95%	23.18%	1.35%	32.70%
Unknown type of business	0.00%	0.54%	0.00%	0.24%
Total	25.18%	74.82%	10.11%	89.89%

Source: *13e Algemene volkstelling, Deel 10 A*, table 2.

Table 14. The female workforce by sector, 1947 and 1960.

employing about the same proportion of the economically-active female population, and services[264] employing considerably more. In 1960, some twenty-two percent of women were economically-active in manufacturing, twenty-four percent in commerce, etc and forty-six percent in services.

A greater proportion of economically-active women worked for pay in 1960 than in 1947. As Table 14 shows, the fall in the number of women working on the family farm, together with a large fall in the number working in family retail businesses, altered the composition of the female workforce. About a quarter of all economically-active women worked in the family business in 1947. By 1960, this proportion had fallen to a tenth[265].

The growth areas also differed from the growth areas of male employment. The net increase in employment in manufacturing amounted to only a third of the total net increase in women's jobs between 1947 and 1960, with greater increases in commerce and in services. The net increase in commercial, banking and insurance jobs amounted to forty-six percent of the total increase- the increase in women's jobs in retail work in shops alone amounting to almost thirty percent - while the net increase in service jobs exceeded sixty percent. Of equal importance was the decline in the number of domestic servants, equal to about forty percent of the total net increase in women's employment.

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[264] "Services", here, does not mean the service sector in general, but covers those classes of business within the service sector that are not included within commerce, banking and insurance, and transport. It covers such things as work in the public sector, teaching, social work, religious occupations and domestic service.

[265] Even if all those excluded from the census because they worked fewer than fifteen hours a week were women working in the family business, this proportion would still have fallen almost as dramatically, from a quarter to an eighth of the female workforce.

4.2 The Supply and Demand of Labour.

The changed structure of the employed workforce is in one sense merely the product of the satisfaction of employers' demand for labour. The Dutch workforce in this period was expanding. Therefore, those branches of economic activity that experienced increases in the proportion of the workforce that they employed were either those where a greater than average demand for labour was satisfied or, alternatively, were those branches whose demand for labour was satisfied by a greater than average amount. In other words, they obtained more labour than average because they wanted more, and got what they wanted, or they wanted the same as other branches, but were more successful at getting it. On the other hand, those branches whose proportion of the workforce declined were either those which had a lower than average demand for labour, or those whose demand for labour was satisfied by a lower than average amount.

The changing pattern of the supply and demand of labour should therefore reveal one aspect of how the structure of the workforce developed. The data given in the census reports show the state of play at two points in this process, but to get a full understanding of how the workforce changed, we need to know what happened between these two years in more detail. Two points seldom give a clear indication of a trend. We need to know how each of the components of the workforce's structure changed over time, and at which points in the process - early in the period, later, at a constant rate throughout, or whatever - since the interaction between the changes in the structure of the workforce was also an important component of those changes. For example, the *Industrialisation Notes* state that industrial employment grew rapidly during the middle years of the 1950s[266], but that after 1957 industry declined in importance as a source of additional jobs[267]. From 1957, the growth in service sector employment became more important[268]. To calculate the effect on incomes of net movements of labour between occupations, it is necessary to know about the growth of industrial employment in the mid-1950s and the growth of service sector employment in the late 1950s in more detail. It is also necessary to know about the growth of industrial employment in the late 1950s. This may have been more important than the crude trend suggests if the low growth in numbers after 1957 is accounted for largely by the failure of low-wage industries to expand their employment. Analysis of the pattern of supply and demand of labour contributes to understanding this process.

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[266] *Zesde nota inzake de industrialisatie van Nederland*, pp. 19-20.
[267] *Achtste nota inzake de industrialisatie van Nederland*, p. 6.
[268] Ibid. p. 28.

Changes in the supply and demand of labour will have had two effects on the structure of the workforce. First, it will have had an effect on the aggregate supply and demand of labour, influencing the overall labour market. And second, it will have had differential effects on each branch of economic activity.

Monthly data on the supply and demand of labour are straightforward to obtain. They were assembled by the CBS[269], and showed the registered demand for labour by employers and the numbers registered as seeking work at the end of each month. The numbers registered as seeking work include all those seeking work, not just the unemployed, with those employed in the public works programmes being included. The data are broken down by branch of economic activity - the categories not being strictly comparable with those used in the 1960 census - and by gender.

The immediately striking feature revealed by these figures is the difference between the male and female labour markets, confirming the impression given by the census data. Figure 3 shows the development of employers' demand for labour as a percentage of the number seeking work, for both male and female labour. The x-axis is positioned where this ratio is equal, with one person registered as looking for work for every job offered by an employer. Points on and above this axis therefore indicate a labour market in which the demand for labour is equal to or greater than its supply.

For much of the period, the supply of male labour exceeded employers' demand. This occurred despite the level of unemployment being extremely low. Figure 3 shows a strong seasonal cycle in the relationship between supply and demand, with a decline in relative demand during the winter months, and a rise during the summer. During 1947 and 1948 this seasonal cycle dominated, with the demand for labour exceeding its suply during the summer months. But from thenceforth, the overall development of unemployment dominated. Between the winter of 1948 and September 1954, employers' demand for male labour was less than the number of men seeking work. Until 1952 the trend was downward, with the highest ratio in that year lower than the low points in the winter of 1951-52. This is the point in time when an actual fall in the number of jobs combined with the demographic increase in the number of workers entering the market to raise unemployment over the three percent mark. But unemployment cleared extremely rapidly from the beginning of 1953, with the number of men seeking work in the September of that year having fallen to less than forty percent of the figure in January and sixty percent

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[269] These data were published in *Maandschrift CBS* until the end of 1952. From January 1953, they were published in *Sociale maandstatistiek*.

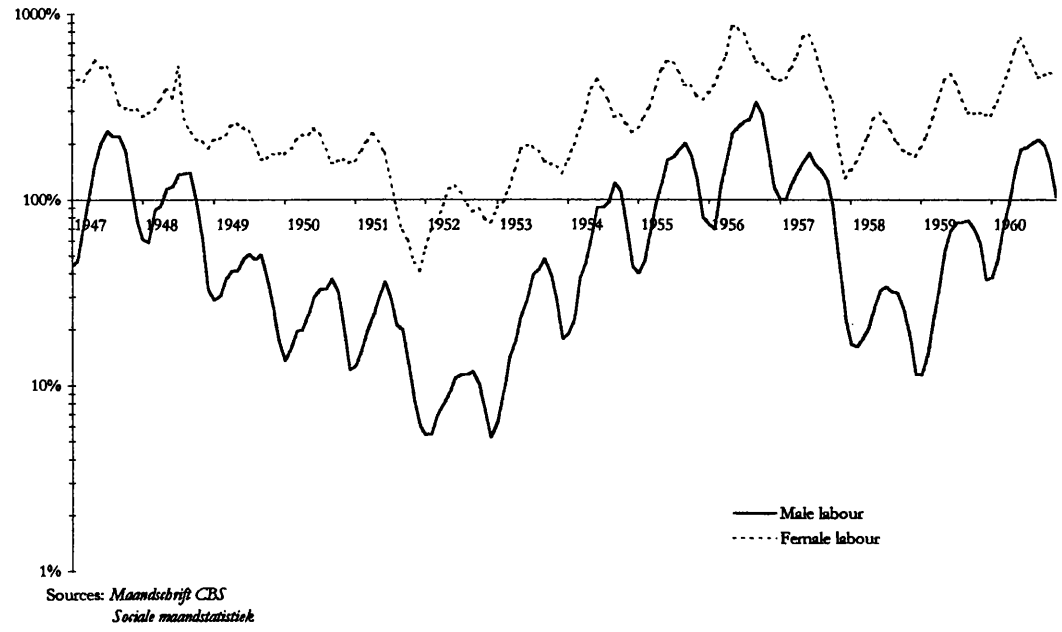

Figure 3. Employer's demand for labour, 1947-60, as a proportion of the number seeking work.

of the September 1952 figure. The number continued to fall in 1954. The number seeking work in October 1954 - the lowest figure that year - was less than a third of the January figure and little more than a third of the number in October 1952.

During the middle years of the decade, demand for labour generally exceeded its registered supply. Between September 1954 and October 1957, the only months in which this was *not* the case were the mid-winter months of 1954-55 and 1955-56. Registered demand for labour actually remained greater than registered supply during the winter of 1956-57. But the situation changed rapidly. The graph clearly demonstrates the sharpness of the onset of unemployment in the recession of 1957-58. The number of men seeking work in February 1958 was nearly three times the October 1957 figure. The slowness of employment to recover from the effects of the recession can also be seen. The number seeking work in January 1959 was actually higher than in January 1958, which in turn was higher even than January 1950 or 1951. Registered demand for labour did not exceed its supply again until May 1960.

The demand for female labour, on the other hand, exceeded its supply for almost the whole period. The level of employers' demand for female labour did not differ as much from the level of demand for male labour as might be expected, the number exceeding seventy percent of the male number in seven years out of the fourteen reported. On occasions during these years, more women than men were sought, and, in the winter of 1958-59, demand for female workers reached 140% of the demand for male workers.

		1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Manufacture of earthenware, glass, etc	a	68	144	261	278	911	359	141	76	27	107	192	67	28
	b	1357	431	322	240	198	623	777	1380	1800	998	411	823	1543
Diamond industry	a	14	75	121	124	270	369	164	59	41	22	87	14	23
	b	58	7	9	3	1	25	13	46	23	19	8	14	5
Printing and publishing	a	102	155	195	305	373	283	145	121	59	82	169	140	98
	b	561	406	466	124	80	254	379	502	584	607	251	470	617
Chemical industries	a	62	111	173	176	214	129	91	75	58	70	120	81	57
	b	242	133	108	118	75	299	722	880	1089	835	267	276	757
Manufacture of wooden, cork & straw goods	a	290	791	619	1383	2542	858	453	267	73	130	463	186	98
	b	1778	804	875	33	405	1464	2346	2910	3215	2298	635	1752	2727
Clothing and cleaning	a	248	360	557	1916	3010	1855	834	461	148	250	980	368	169
	b	919	513	401	202	182	353	465	623	829	538	635	342	514
Leather, oilcloth and rubber industries	a	177	459	528	771	1123	697	357	201	60	93	254	126	60
	b	1102	460	396	168	343	658	1149	1672	1650	1425	515	1142	1711
Metal industries	a	2595	4486	6228	7548	12134	6642	3254	2384	1406	2743	8493	3165	1519
	b	13775	7160	4730	5833	4388	9023	17999	26262	30313	19849	6700	14807	26116
Paper industries	a	51	97	88	138	390	129	58	50	200	18	38	9	7
	b	266	148	123	56	60	170	245	438	410	324	138	231	519
Textile industries	a	179	255	327	1357	1983	722	370	240	68	200	794	308	138
	b	1830	1455	1245	507	442	1160	1867	2061	3096	2408	632	1545	2373
Food processing	a	1331	1583	2327	2688	3623	2296	1286	732	264	333	838	428	181
	b	1521	1135	649	565	543	1315	1867	3028	3098	1991	656	1591	2604
Total manufacturing	a	5117	8516	11424	16684	26573	14339	7153	4666	2404	4048	12428	4892	2378
	b	23409	12652	9324	7849	6717	15344	28406	39802	46107	31292	11008	22993	39486
Professional and office staff	a	8267	8443	10264	9706	10101	8434	6314	5365	3340	3948	6388	4685	3485
	b	2173	966	815	796	764	1641	1877	2390	2489	2273	1190	2060	3086
Total male labour force	a	32413	49657	57143	77158	108554	64867	42922	33326	22775	41485	69539	52327	31555
	b	45328	25123	21331	15359	12938	30960	52611	66960	76089	52579	21891	40157	66473

Key: a) Number of male workers registered as seeking work
b) Employers' demand for male labour

Sources: *Maandschrift CBS*
Sociale maandstatistiek

Table 15. Men registered as seeking work and registered demand for male labour from employers, 1948-60.

During the boom years of the mid-1950s, relative demand for male workers was higher, with the demand for women being only seventy percent and less of the demand for men.

However, the numbers of women registered as seeking work were small when compared to the equivalent numbers of men, generally amounting to only between ten and twenty percent of the male figure. Only during the summer months of the mid-1950 boom did this ratio exceed twenty percent.

The male labour market was dominated by manufacturing. Taking the September data as a proxy for the annual figures[270], demand for manufacturing workers formed between fifty and sixty percent of the employers' demand for male labour throughout more or less the

[270] Annualised data are used in order to eliminate the seasonal cycle, and September data are used because they reflect the state of the labour market at the point in time when the annual wages surveys were taken. The two sets of data - labour exchange figures and wage rate survey results - are compared in Chapter 5.

whole period. The supply of manufacturing workers was not, however, of the same magnitude. They formed only about ten to twenty percent of men registered as seeking work, declining from slightly more than twenty percent in the early 1950s to slightly less than ten percent in 1960 - with a sharp rise in the proportion in 1958, suggesting that manufacturing may have been harder hit by the recession than other sectors of the economy.

By and large, demand for manufacturing workers exceeded their supply throughout the period. The only years in which employers' demand for male labour in manufacturing was less than the number of men registered as seeking work in the sector were 1950, 1951, 1952 and - just lower - 1958. In 1956, by contrast, there were more than twenty jobs offered by manufacturing employers for every man who was looking for one of them.

In contrast, employers' demand for male professional and office staff remained lower than its supply. However, the trend was one of increasing demand for these workers from employers. The numbers involved were considerably lower than is the case for manufacturing, but the slack in the labour market lessened steadily from 1952, as demand, measured as a proportion of the number seeking work in the area, grew steadily. This growth was only briefly interrupted by the 1957-58 recession.

Within manufacturing, there were differences between the various industries. As can be seen from Table 15, the male labour market in manufacturing was numerically dominated by the metal industries. Employers' demand for men in this sector was never less than half the total demand for men in manufacturing. At the beginning of the period, up until 1953, this demand varied somewhat wildly between a half and three-quarters of the total, but, from 1953, the variations became steadier, fluctuating between about sixty percent and two-thirds. Likewise, the proportion of male manufacturing workers looking for jobs in the metal industries differed between the first and second parts of the 1950s. Until 1956, it varied between forty-five and fifty-five percent of the total, but from 1957 it rose and remained steady at around two-thirds. Because of these high proportions, the relationship between supply and demand for labour in metalworking was roughly identical to that of manufacturing as a whole. Other industries where a similar pattern can be found are food processing, textiles, and clothing and cleaning, but the numbers involved in these cases are not of a comparable magnitude.

There existed industries where demand for additional labour did not fall below its supply in 1957-58. These were of two kinds. There were those industries that experienced a relatively rapid growth of output, such as chemicals and the paper industry, where it might be

		1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Manufacturing	a	569	821	906	1954	1559	1306	864	670	461	659	1022	802	654
	b	11626	9537	8924	4048	5520	10643	15103	18226	20251	18912	11123	14792	17935
Commercial staff	a	1047	1256	1337	1952	2010	1387	1406	999	728	983	1500	1381	1097
	b	603	553	544	376	548	969	1486	1928	2219	1905	1408	1736	2766
Professional and office staff	a	3111	3509	3351	3739	3944	3615	3319	2781	2290	2877	3679	2924	2393
	b	1892	993	1184	1159	1358	2699	3217	3261	3865	3427	2832	4144	5222
Domestic service	a	2992	3766	3982	4993	4942	4311	2958	2139	1308	1687	2305	1959	1469
	b	4595	4586	4633	3572	3689	5025	6759	7274	7234	5615	5153	5619	7039
All female workers	a	8987	10775	10969	14931	14597	13616	10586	8316	6761	8515	11714	10285	8288
	b	20583	17589	17175	10095	12520	21792	29488	34595	37469	33814	23479	30083	37668

Key: a) Numbers of female workers registered as seeking work
b) Employers' demand for female labour

Source: *Maandschrift CBS*
Sociale maandstatistiek

Table 16. Women registered as seeking work and employers' demand for female labour, 1948-60.

expected that the conditions for employment growth remained strong even in a recession. And there were those industries that experienced a relative decline in output, such as earthenware, the manufacturer of goods from wood, cork and straw, and the manufacture of leather and rubber goods. Here it would seem that decline was associated in some way with an inability to attract sufficient labour.

Somewhat misleadingly, the figures concerning the female labour market are also dominated by manufacturing. Table 16 shows the employers' demand and numbers registered as seeking work in the main areas affecting women. Manufacturing formed around fifty percent of total demand for women's labour throughout the entire period, but only around six to eight percent of the number of women seeking work. Unlike the case of men, the numbers involved in the supply and demand of manufacturing labour never approached one another, with most years seeing ten or twenty jobs being offered for every one sought. The consequence is that the female labour market appears as though employers faced a permanent shortage of workers..

But the figures also show a rise in the demand for female commercial and office staff, reflecting the shift in the nature of female white-collar work. Over the same period there was a large decline in the numbers seeking domestic work, while the demand for commercial and professional and office staff grew both absolutely and as a proportion of the total demand for female labour. The demand for commercial staff, as a proportion of total demand, rose from some three percent at the beginning of the 1950s to around seven percent in 1960. The demand for office and professional staff also more than doubled in proportion, from less than six percent in 1948 to twelve to thirteen percent during the last

years of the 1950s. The gap between supply and demand for these workers lessened, and then became negative, over the period. Until 1954, the numbers seeking work were considerably greater than the demand from employers, with, in 1952, almost four women seeking commercial work for every job offered, and three after every office or professional job. But from 1954, with the exception of 1958, employers' demand exceeded the supply. Even in 1958, the demand for commercial staff barely exceeded its supply. By 1960, the situation had changed dramatically, with the ratio of jobs offered to jobs sought being five to two in commerce, and four to two in professional and office work.

In domestic service, on the other hand, with the brief exceptions of 1951 and 1952, demand for labour continuously exceeded supply. The decline in the number of domestic servants was therefore a consequence of unsatisfied demand for labour. The gap between supply and demand expanded, with demand growing by fifty percent between 1948 and 1960, and the number of women registered as seeking domestic work falling by fifty percent over the same period.

4.3 The growth of manufacturing employment.

The relative growth of employment by industry reveals yet more about the changing structure of the workforce. The census data show that the major growth in employment occurred in manufacturing, and the data on the supply and demand of labour are also dominated by manufacturing. These latter data also show that the relationship between the supply and demand of labour changed over time. But data on the supply and demand of labour do not tell the whole story. For example, they show the highest demand for labour in industries in which output grew the most, such as chemicals and paper, but they also show the same phenomenon in some industries in which a relative decline in output occurred. In order to make more sense of this, these data need to be complemented by data on how employment in industry actually changed.

Information about the growth of industrial employment can be obtained from the *Algemene industriestatistiek*. This series is composed of data gathered quarterly from a questionnaire sent out by the Ministry of Economic Affairs, and concerns, with certain exceptions, industrial enterprises with ten or more personnel, including working owners and partners. The exceptions are that it does not include the building industry nor gas, electricity and water businesses purely engaged in distribution[271], and it excludes home workers and those

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[271] CBS (1952) p. 902.

on temporary military service[272]. As with the data on the supply and demand of labour, the series was published in the *Maandschrift CBS* until 1952; from January 1953, it was published in the *Sociale maandschrift.*

Using figures from this source, a number of series were constructed that traced the growth of employment in mining and manufacturing. These series begin in the first quarter of 1948 and they run up to and including the second quarter of 1960, when the census was taken. It is not possible to start them earlier because the manner in which the various industries were categorised changed. Gas, electricity and water businesses were left out of these series, but mining was included, since the data for mining include figures for various peripheral industries. Separate series were constructed for total employment, for men's and women's employment as a whole, and for manual and white-collar employment, by gender, as well as for each industry, broken down by gender and type of labour.

There were a couple of difficulties that presented themselves in the construction of the series. The first difficulty was technical, but the second involved the underlying basis of the data. Neither problem, however, appears to create major difficulties in the interpretation of the data.

The first difficulty was created by the change in the basis of the survey in the first quarter of 1952. Enterprises that had not previously been included in the survey were now included, for several reasons. There were a number of enterprises that had increased their personnel to ten of more since the start of the post-war survey. There were also a number of enterprises that, although employing more than ten people, had previously escaped the notice of the CBS. And there were enterprises that belonged to the metal industry, where the rules for inclusion had changed. Under the previous rules, metal enterprises were included only if they included ten or more *manual* workers; now they followed the general rule[273]. However, the figures for the first quarter of 1952 are given on both bases. Growth from the fourth quarter of 1951 to the first quarter of 1952 was calculated using the first quarter of 1952 data on the old basis, and growth from the first quarter of 1952 to the second quarter of 1952 was calculated using the first quarter 1952 data on the new basis.

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[272] Ibid. p. 904.

[273] Ibid. p. 902. The other industries that did not conform to the "ten personnel" rule, were baking, where inclusion was dependent upon the amount of flour used, and sugar, where the whole industry was covered. Both these come under the general category of food processing, and do not concern the discussion in this section.

The two series were simply put together, one after the other, and since no spurious structural break appeared, it was assumed that the resulting single series was accurate[274].

The second difficulty concerns the proportion of the workforce included in the survey. The "ten personnel" rule means that not all manufacturing workers were included in the figures. The CBS calculated, from a comparison with the *Algemene bedrijfstelling* of October 1950 (which surveyed all businesses in the Netherlands) that the *Algemene industriestatistiek* covered about seventy percent of industrial workers[275]. This would not have been a problem if the proportion had remained constant. But the decline in the number of businesses, noted from the census data, also involved growth in the size of businesses. The crude figures show that while, in 1950, some twenty-six percent of industrial workers were employed in enterprises comprised of ten workers or less[276], this figure had fallen to sixteen percent by 1963[277]. This raises the possibility that trends may be distorted slightly, as small businesses disappeared from different industries at differing rates, but there is no reason to suppose that this potential distortion makes a serious difference to the conclusions drawn.

On top of all this, the figures for the food processing industry were omitted from the constructed series. As we have seen from the census data, food processing was the industry employing the largest number of workers, although the numbers were declining. What the *Algemene industriestatistiek* shows is that employment in this industry had a strong seasonal element, with numbers peaking in the third quarter and falling to their lowest in the first. Because the numbers employed were so large compared to industry as a whole, these seasonal fluctuations overwhelmed year-on-year trends on occasion, and the industry was therefore omitted from the totals. This does not give an inaccurate picture of the trends, however, since the construction of annual series including food processing data and using one quarter as a proxy for the entire year give approximately the same results.

The overall employment figures display the same pattern as shown by the data on the supply and demand of labour. Figure 4 shows the quarterly percentage increase in the employment of men and women in mining and manufacturing. From the middle of 1949, five distinct periods can be seen: the initial burst of growth at the end of the 1940s, and

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[274] It was assumed that the "stitching together" of the series in this way did not hide a structural break on the grounds that such a break would have been remarked on in the literature or have been obvious from other sources.

[275] CBS (1952) p. 902.

[276] *2e Algemene bedrijfstelling, 16 Oktober 1950, deel 2* p. 23. The phrase "crude figures" is used because they suggest that some seventy-four percent of the industrial workforce was covered by the *Algemene industriestatistiek*. Presumably, therefore, the CBS did some preliminary processing before making its comparison.

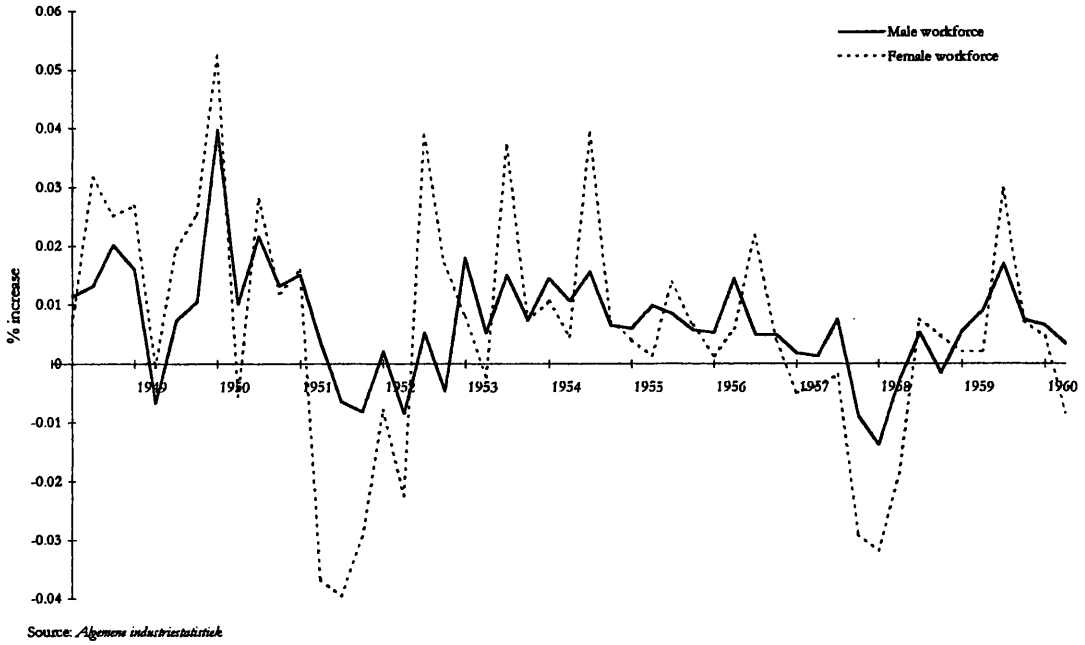

Figure 4. Quarterly changes in employment in mining and manufacturing, 1948-60.

through 1950; the slowdown and job losses associated with the first consumption restriction; the period of consistent employment growth in the boom of the mid-1950s; the period of stagnation in 1957-1958, associated with the second consumption restriction; and the strong growth in employment at the end of the 1950s.

The growth of women's employment differed from that of men. During periods of fast growth, the female workforce increased more strongly than the industrial workforce as a whole, and during periods of slower or negative growth, it grew more slowly or sustained a higher rate of job losses. It also shows a more strongly seasonal character during the mid-1950s boom. This suggests, in apparent contradiction to the data on the supply and demand of labour, that women's employment in industry had a more temporary character than men's, with women being more likely to be hired or fired in line with economic fluctuations. The explanation for this apparent contradiction disappears when the figures for the employment of manual and white-collar female workers are looked at separately. The fluctuation in employment is more or less confined to manual workers. The figures for the supply and demand of labour do not distinguish between manual and white-collar workers, but the implication here is that the unsatisfied demand for women in manufacturing was largely for white-collar staff.

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[277] *3e Algemene bedrijfstelling, deel 2*, table 3. This figure does not, however, include enterprises employing exactly ten workers, so we would expect it to be lower than the 1950 figure, although perhaps not by quite so much.

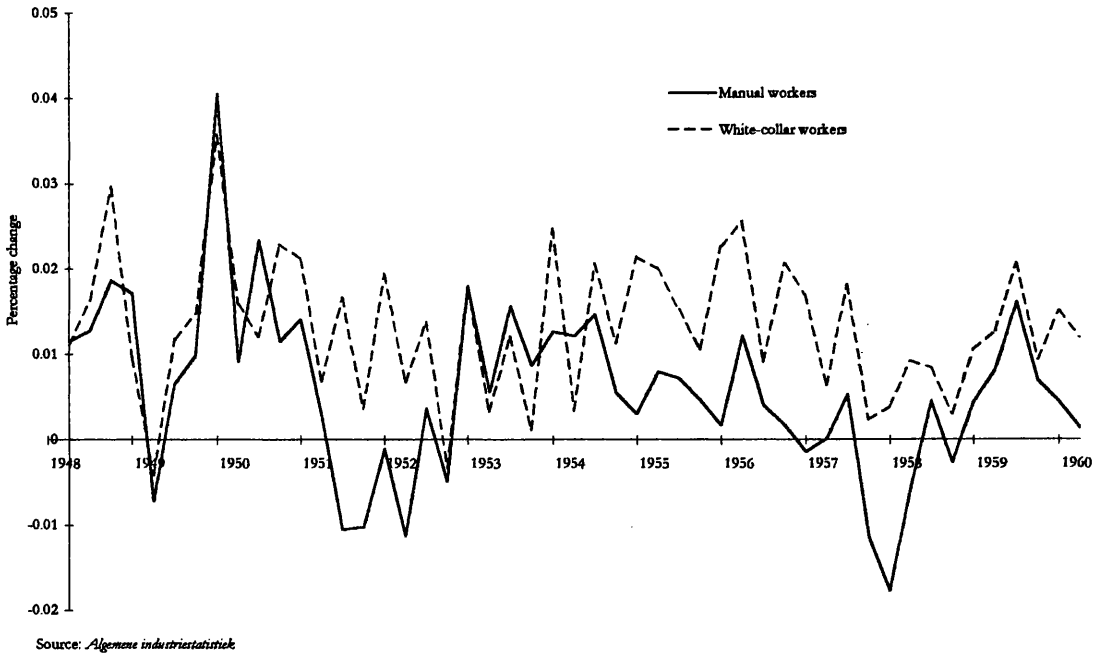

Figure 5. Quarterly changes in male employment in mining and manufacturing (excluding food processing), 1948-60.

Within the male workforce, the pattern of quarterly changes in manual and white-collar industrial employment also differed from each other, white-collar employment showing stronger long-term growth. Male manual workers formed the majority of the industrial workforce, and Figure 5 shows the quarterly growth rate in their numbers varying in more or less the same way as the industrial workforce as a whole. Over the longer term, as Figure 6 shows, their numbers grew at a slightly lower rate than the industrial workforce as whole. In contrast, the white-collar workforce all but continually expanded. It grew along with the manual workforce between 1948 and the end of 1950, but with the fall in manual employment during the first consumption restriction the gap in the long-term growth rates began to widen. The consumption restrictions slowed down the growth of white-collar employment, but did not, except briefly, reduce the numbers of white-collar workers: the only occasions on which negative growth occurred were in the second quarter of 1949 and the fourth quarter of 1952.

The pattern of growth also differed between industries. The metal industries, employing thirty percent of the industrial workforce at the beginning of 1948, expanded their employment more rapidly than industry as a whole during the early and middle 1950s. From just over thirty percent in the first quarter of 1950, their share of the industrial workforce rose rapidly to nearly 33% by the first quarter of 1952, and reached nearly 35% of the industrial workforce by 1956. They held this share through the 1958 recession, and it exceeded 35% from the fourth quarter of 1959. The absolute number of workers in the

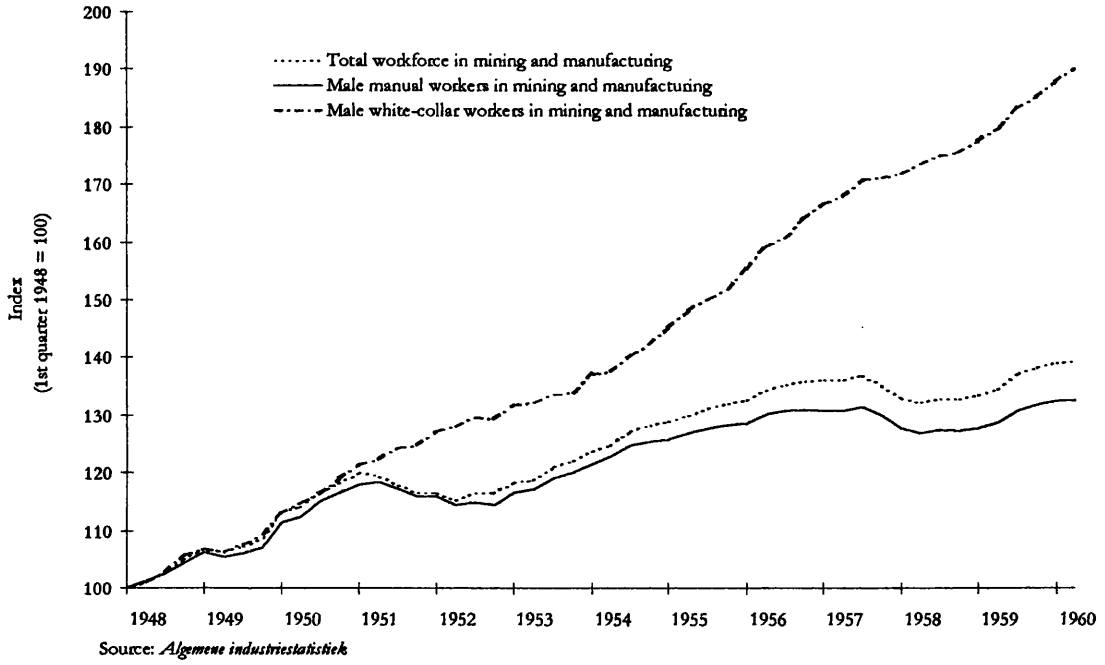

Figure 6. The growth of employment in mining and manufacturing (excluding food processing), 1948-60.

metal industries rose almost continuously from the start of comparable data until the third quarter of 1957, with only two small falls during the first consumption restriction. Numbers fell from the end of 1957, only recovering their absolute level during the third quarter of 1959; the number of manual workers only recovered to its previous peak during the fourth quarter of the same year.

The chemical industry, on the other hand, experienced continuous growth in its workforce, with not a single fall in the total number employed during either of the recessions. But there were variations on this pattern within the chemical workforce as a whole. The number of manual workers in the industry fell, by a small amount, during the first consumption restriction, but, unlike the number of manual workers in the metal industries, kept rising during the second. These falls in employment occurred within the female section of the workforce: male manual employment kept rising, with the exception of a couple of occasions when it remained more or less static, throughout the entire period. The chemical industry's share of industrial employment rose from just over five percent in the third quarter of 1949[278] to almost seven percent in the second quarter of 1960.

[278] No comparison can be made with earlier data, since, from the *Algemene industriestatistiek* of the third quarter of 1949, the chemical works belonging to the State mines was classified under the chemical industry. Previous to this it was included under mining [*Maandschrift CBS*, (1950) p. 21]. This does not affect the figures for any other industry, since the works were included in the overall figure for the whole period.

Employment growth in the textile industry remained very flat during the 1950s. Following a rise in employment during the recovery, numbers working in the industry fell during the first consumption restriction. Although there was a recovery in employment, it did not grow during the mid-1950s boom, the peak number of employment in the fourth quarter 1956 not being much higher than the number employed in the fourth quarter of 1954; for female manual workers, employment numbers peaked during the third quarter of 1954. Overall employment in the industry was also flat during the recovery of the late 1950s, and had not recovered its third quarter 1957 level by the second quarter of 1960.

A similar story can be seen with the clothing and cleaning industries, where employment numbers fell during both consumption restrictions. Employment was slow to pick up after 1958, and numbers had not recovered to their previous peak by the second quarter of 1960.

4.4 Women's participation in the workforce.

The participation rate of women in the workforce in the workforce was considerably lower than for men. In 1947, twenty-seven percent of women aged 14 and over were economically-active, as against eighty-five percent of men. The ratio of economically-active women to men fell during the period, with the proportion of women classed as economically-active only twenty-three percent in 1960[279]. But this overall figure disguises important differences between married and unmarried women.

Overall, the participation rate of married women fell, but this was the result of two contradictory tendencies. Over the period, the number of married women in the paid workforce rose - from 47000 to 108000 - while the total number of married women classed as economically-active fell - from 198000 in 1947 to 173000 in 1960, a fall in numbers from ten percent of all married women down to seven percent. The reason for the fall in the overall figure was a decline in the number of married women working in the family business, from 152000 to 64000, which more than compensated for the rise in the number working for pay[280].

The rise in married women's employment outside the home occurred in the context of the easing of restrictions on married women's work. Traditionally, the Netherlands was a religious, family-oriented society, in which work outside the home was regarded as

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[279] *13e Algemene volkstelling Deel 10A*, p. 17.
[280] Ibid. p. 39.

belonging to the husband's role. Attitudes were, however, changing, and the way they were changing can perhaps best be seen reflected in the way that the rules of public sector employment changed. In 1904, a Royal Decree established that female civil servants who married should be sacked[281], but in 1942, because of a shortage of personnel - the result of men being sent to work in Germany - the rule was temporarily suspended. Under the conditions of the postwar recovery, and also because of political objections, the ban was only partially reinstated, bit by bit[282]. But in 1955 the Second Chamber passed a motion, proposed by the Labour member Corry Tenderloo, opposing the ban, which was abolished in 1957[283].

In the private sector, meanwhile, the employment of married women was increasing. This trend can be observed on an annual basis from the number of labour cards issued. Under the 1919 Labour Code, all married women working in an enterprise outside the home had to be in possession of a labour card issued by the local mayor (as did all those, both male and female, under the age of 18)[284]. This regulation, according to the CBS, was not always observed, which makes the reported figures on labour cards issued an underestimate of the actual number of married women working outside the home. However, the CBS suggests that the trend they reveal is more accurate[285]. During the ten years, 1947-57, the percentage of married women who possessed a labour card almost doubled[286].

Nonetheless, despite these changes, the participation rate of married women in the paid workforce was still extremely low in 1960. Table 17 calculates it as less than four percent of all married women living with their husbands, less than five percent of married women under the age of 65[287].

The participation rate of married women in the paid workforce was, in general, highest amongst those with husbands receiving average or less than average incomes. Table 17 shows the proportions of husbands, by occupation, who had wives in paid employment in 1960. With the exceptions of professionals and the small number of married sons working in non-agricultural family businesses[288], the only categories in which the percentages of wives in paid employment were above average are manual and white-collar workers earning

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281 Blok (1989) p. 119.
282 Ibid. pp. 122-124.
283 Ibid. p. 8.
284 Ibid. p. 100. The practice was abolished in 1971.
285 CBS (1960) p. 282.
286 CBS (1957) p. 276.
287 Blok (1989) p. 105.
288 Fathers working in the family business are categorised as self-employed.

Occupational category of the husband	Male heads of household	With wives in the paid workforce
Head of agricultural of horticultural business	193301	693 (0.36%)
Other heads of business with personnel:		
Shops	38839	328 (0.84%)
in industry with		
10 or more employees	15696	163 (1.04%)
5-9 employees	14126	178 (1.26%)
1-4 employees	50258	792 (1.58%)
other businesses	62434	933 (1.49%)
Heads of businesses with no employees		
Shops	28406	426 (1.50%)
Industry	35200	1131 (3.21%)
Other businesses	72423	2457 (3.39%)
Scientific professions	17971	774 (4.31%)
Other professions	8518	881 (10.34%)
Higher employees	96410	3702 (3.84%)
Other white-collar workers:		
income of f7,500 p.a. and over	165115	6132 (3.71%)
income of f5,500 - < f7,500 p.a.	212348	11415 (5.38%)
income of f3,750 - < f5,500 p.a.	140339	10961 (7.81%)
income of < f3,750 p.a.	20841	1879 (9.02%)
Agricultural workers	72452	1669 (2.30%)
Other manual workers:		
income of f7,500 p.a. and over	6656	215 (3.23%)
income of f5,500 - < f7,500 p.a.	94183	3774 (4.01%)
income of f3,750 - < f5,500 p.a.	738062	36329 (4.92%)
income of < f3,750 p.a.	189531	9989 (5.27%)
Working in the family business:		
Agriculture	2662	103 (3.87%)
Other businesses	804	86 (10.70%)
No occupation	323635	5400 (1.67%)
Total	2600210	100410 (3.86%)

Sources: *13e Algemene volkstelling Deel 10A* p. 49.
13e Algemene volkstelling Deel 10A table 9.

Table 17. The proportion of wives in the paid workforce, by husband's occupation, 1960.

f7500 a year and less. (Average annual male income in 1959 was f6110[289].) The proportion rises as the husbands' earnings decline.

The picture drawn here is consistent with the results of a number of surveys made in the 1950s. An official report in 1951 on married women working in factories concluded that almost all of them worked there out of financial necessity[290], while, according to a government report on married female civil servants the following year, sixty-two percent of these worked in order to improve their financial position and just six percent out of the

[289] *Inkomensverdeling 1959 en vermogensverdeling 1960*, table 15.
[290] Blok (1989) p. 106.

Age	1947	1960
15-19	4.08%	10.06%
20-24	3.74%	9.23%
25-29	2.44%	5.23%
30-34	1.91%	3.89%
35-39	2.02%	4.09%
40-44	1.93%	4.36%
45-49	1.81%	4.11%
50-54	1.50%	3.51%
55-59	1.14%	2.48%
60-64	0.76%	1.32%
65+	0.30%	0.31%
Total	1.82%	3.88%

Source: *13e Algemene volkstelling Deel 10A* table 19.

Table 18. Percentage of married women in the paid workforce, by wife's age, 1947 and 1960.

love of the job[291]. A survey by the Sociological Institute of the Rijk University of Utrecht, published in 1957, came up with a similar picture. Over eighty percent of the married women they surveyed worked outside the home primarily for financial reasons[292].

Labour force participation was also highest amongst married women in the youngest age groups. Table 18 shows the percentages of married women in the paid workforce within each age group, in both 1947 and 1960. In both years, the percentages of married women in the youngest age groups who worked for pay were higher than the percentages in the older age groups. In 1960, about ten percent of married women under the age of twenty-five were recorded as being in the paid workforce. This is consistent with the findings of the 1957 survey mentioned above, which showed that the majority of working married women possessing labour cards had only recently married and were still childless[293].

More married women may, however, have participated in the workforce than the raw figures suggest. This is not just a question of married women not being declared as working because they had not registered. It follows from the methodology used in a census, which asks people if they worked during the previous week or whenever. As Goldin has pointed out, this gives the resulting figures an ambiguous meaning, depending on the homogeneity or heterogeneity of the workforce. In the case of what she calls "complete homogeneity",

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[291] Ibid. p. 108.
[292] Ibid. p. 106.
[293] Pott-Buter (1993) p. 192.

each individual works an identical number of weeks a year. In the case of the four percent participation rate in the Netherlands in 1960, this would mean that each married woman took part in the labour force for about a fortnight a year, standing a four percent chance of being in the workforce when the census is taken. "Complete heterogeneity", on the other hand, means that some individuals are to be found in the labour force for the entire year, while others are not employed at all[294]. In this case, a four percent participation rate means that exactly four percent of Dutch married women were in paid employment for fifty-two weeks. The truth, as Goldin also points out, is likely to be somewhere in between. That this is the case seems to be confirmed by the way that participation rates vary according to age. But even within each age group, the actual percentage of women working may have been higher. For example, suppose each married woman under the age of 25 worked for eight months before leaving to have a child[295]. In this case, fifteen percent of them will have been in the workforce in any one year. This percentage will be lower, the longer the average time that they worked.

The participation rate of women who had never married was considerably higher than this. Of the never-married female population between the ages of 14 and 65, fifty-eight percent were economically active (including those who were daughters working in the family business) in 1947, a number that had risen to sixty-four percent by 1960[296]. In other words, there was a tendency for women to work, but to leave sometime between getting married and giving birth to her first child. It is this that accounts for the high percentage of women aged 25 and over without jobs, and it also accounts for the low participation rate of Dutch women by international standards. Pott-Buter argues that this low participation rate is accounted for by the low rates of economic activity during adulthood and middle age[297].

This pattern of participation means that the female labour market behaved in a considerably different manner than the male. There was a more rapid turnover in its composition, with each man in it for life, a woman for only a few years. This means that, in the case of men, changes in average incomes over a few years - a decade in this case - tells us something about changes in the incomes of individual men. This is not necessarily the case with women, since the incomes that make up the average at each point in time might be the incomes of entirely different individuals. In addition, the relationship between earnings and family income differs by the gender of the owner. In the typical family, in

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[294] Goldin (1990) pp. 28-29.
[295] The number here is chosen for ease of calculation, rather than as an estimate based on evidence.
[296] Blok (1989) p. 105.
[297] Pott-Buter (1993) p. 161.

conditions of full employment, the father's earnings were a constant element in the household income. The mother's were not. These factors, combined with the very different occupational structures of the male and female workforces, mean that the analysis of the male and female workforces, and the effects of changes to them on incomes, should be undertaken separately.

4.5 Conclusion.

In the cases of both men and women, the number and proportion of those working for wages or a salary increased. This is partly because the economically-active population increased in size, but it also reflects changes within this population. There was a decline in the numbers reported as working in the family business, as well as a decline in the numbers who were self-employed. The number of those running businesses - both self-employed and employing others - fell, and there seems to have been some increase in the average size of business, with a decline in the proportion of small businesses in industry.

The growth of the male labour force was strongly dominated by the expansion of manufacturing. Nearly sixty percent of the net increase in men in the paid workforce took place in manufacturing, with the largest proportion of this going to the metal and chemical industries, where the growth of out put was highest. The age of the workforce in chemicals in 1960 was slightly higher than average, suggesting that the expansion of the workforce had involved the recruitment of experienced workers from other sectors. Otherwise, the age of the workforce in the industries whose workforces expanded tended to be younger, suggesting that workers in these tended to be recruited at the beginning of their working lives. After 1957, the service sector became more important as a source of increased employment. The industrial workforce also became more white-collar, with the 1958 recession not stopping the growth of white-collar employment in manufacturing. Nonetheless, the growth of white-collar employment did not take place at the expense of manual employment, and manual workers still formed the largest part of the male workforce in 1960.

The female workforce was younger than the male, and was heavily oriented to the service sector. It became grew younger because the size of the never-married workforce expanded more than the size of the married workforce. Despite an increase in the proportion of married women in paid work, by and large their participation rate remained extremely low. Overall, women's employment in the service sector moved away from traditional areas, such as domestic service, into office and retail work.

Using this information, it is in principle possible to calculate the effect of these changes on incomes. But first, we need to look at by how much and why wage rates grew during the period.

Chapter 5. Full Employment and Wages Growth.

This chapter looks at the effect of full employment on real wage rates. The intention here is to attempt to establish the extent to which this accounts for the real rise in disposable incomes. The implication in some of the literature discussed above is that it played an important role. The various critics of wage control, discussed in Chapter 3, suggest that wage rates followed market conditions, with van Hulst, in particular, implying that rises in wage rates were directly reflected in rises in disposable income. From very different assumptions, Myrdal argues that full employment enabled trade unions to negotiate higher wages than they otherwise would have done. The chapter is therefore a test of both of these viewpoints.

The chapter begins by considering how the effects of full employment can be measured. The problem here is that there is no clear counterfactual as to what would have happened to wage rates in the absence of full employment. The chapter therefore discusses a number of theories of wage determination in order to create a battery of tests both at the level of the economy as a whole and at the level of each industry. It then goes on to look at changes in income distribution, at wage drift, at the relative paths of wage growth and the growth of per capita national income, and wages growth by industry.

The chapter concludes that, although some effect of full employment can be seen in male wage rates, this is not enough to account for the rise in incomes over the period.

5.1 Measuring the effects of full employment.

Full employment will certainly have created upward pressure on wages. At the simplest level, this is just a question of supply and demand. If the demand for additional labour grew faster than the available supply then, *ceteris paribus*, the wage rates offered by employers would have risen. But things are not perhaps as simple as this. As Lipsey points out, the labour market does not behave in straightforward manner, with the supply and demand curves continuously shifting. The demand curve can shift, for example, due to cyclical variations in income, while the supply curve can shift due to exogenous changes in the labour market. He argues, however, that if an adjustment mechanism exists, then whatever the reason for the shift in the demand curve, a given level of excess demand should cause a given change of price[298]. In other words, the specific factors bringing about

[298] Lipsey (1960) p. 33.

the change in demand for labour can be safely ignored; the level and the change in the level of unemployment are the only factors that need to be considered. This argument seems to be borne out by Lipsey's reconsideration of Phillips' work on the relationship between wages and unemployment. He calculates that over eighty percent of the variance in British money wage rates between 1862 and 1913 was associated with the percentage of the workforce employed and the rate of change of unemployment[299]. It follows, therefore, in the Dutch case, that if the wage control system was ineffective, or even less than completely effective, then the upward pressure on wage rates from full employment would likely have been realised in an upward movement of nominal wage rates. Calculating the effect on wage rates of full employment can therefore be seen as a check on the arguments in Chapter 3.

Myrdal argues that trade unions also played a part in raising workers' wages. As was noted in Chapter 1, in *Beyond the Welfare State*, Myrdal suggests that full employment helped raise wage rates by strengthening the bargaining power of the trade unions[300]. But while it is certainly the case that increasing demand for labour would have aided trade union bargaining power, it is not clear by how much. Myrdal gives no figures, and his theoretical model gives no hint as to how figures might be calculated. In the case of the Netherlands, it might also be presumed that commitment to wage control by the trade unions would have meant them not exerting this extra bargaining power to any great extent. Evidence that they did use the extra bargaining power that full employment gave them, on the other hand, would therefore be evidence that their commitment was, as van Hulst suggests, merely verbal.

But it is not immediately clear that any upward movement of nominal wages in this context would have caused real wages to rise. Friedman argues that there was a basic defect in Philips' analysis of the relationship between unemployment and the change in the level of wages, in that he failed to distinguish between nominal and real wage rates. He argues that, contrary to the impression given by the Philips curve, there is no permanent trade-off between inflation and unemployment, and that there exists, rather, a "natural level of unemployment", produced when the economy is in equilibrium. A lower level of unemployment is an indication that there is excess demand for labour that will produce upward pressure on wage rates, while a higher level indicates an excess supply of labour that will produce downward pressure. In the case where the money supply is expanded to hold down unemployment there will be an initial expansion of the economy. Prices will

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[299] Ibid. p. 12.

rise, causing real wages to decline. Employees will start to demand higher nominal wages in anticipation of further price rises, and real wages will rise, returning to their former level, with the process becoming a continuous cycle[301]. Phelps has a slightly different story, although the end result is the same. He had noted a similar problem to the Phillips curve as Friedman at about the same time[302], but later came to argue a different mechanism. He now suggests that in conditions of full employment firms attempt to outbid one another to attract additional labour[303]. The costs of this would be passed on to consumers in the form of price rises, eroding the real value of nominal wages, thus ensuring that real wages would not rise. This distinction between nominal and real wages is important for this study, since we are looking at the real rise in disposable incomes. We therefore need to look at the rises in real, not nominal, wage rates. But theory cannot tell us what the natural rate of unemployment was in the Netherlands during the 1950s, nor what its effect on the real value of nominal wages was.

Nor is it obvious how to measure the effects of full employment on wage rates. In principle, we need to know two figures. We need to know how much real wage rates rose under conditions of full employment and we need to know how much they would have risen in the absence of full employment. The problem is that there exists no theoretical model which gives a straightforward method of calculating the second figure.

There is also a problem of at what level the measurement should take place. There is no straightforward answer as to the whether the entire workforce should be measured or whether each industry should be treated separately. The argument for treating each industry separately is that the demand for labour develops differently for each industry. This is also the case for other factors, such as trade union coverage. On the other hand, the demand for labour in one sector will, *ceteris paribus*, diminish the supply of labour available for work in other sectors, thereby affecting wage levels generally.

Both approaches are used here. That is, the effects of full employment are sought amongst the workforce as a whole and at the level of each industry. Each approach is investigated in two different ways. It is suggested that, at the level of the workforce as a whole, full employment might have had an effect both on income distribution and on the growth of wage rates as compared to the growth of per capita national income. At the level of each industry, there might have been different effects on wage rates of variation in the level of

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[300] Myrdal (1960) p. 32.
[301] Friedman (1968) pp. 8-11.
[302] Phelps (1967) p. 255.
[303] Phelps (1995) p. 19.

trade union bargaining power and of variation in the level of demand for labour by employers. The reasoning behind each of these is different.

Myrdal's argument suggests that full employment increased wage earners' income more than those of other sections of the population. This should be detectable in a changed distribution of income, with the share of higher-income groups in national income falling during periods when the level of unemployment fell. There are two theoretical ways to measure this change. It should be detectable as a change in labour's share of national income and it should be detectable in changes to the distribution of individual incomes. Of the two, changes to labour's share of national income might seem the natural one to use in the circumstances. However, Atkinson points out that there is a problem with the concept, in that Ricardo's division of incomes into wages, profits and rents does not hold in a developed capitalist society. For example, a worker may receive profit income via his or her rights to a pension[304]. But, just taking wages as against other incomes, regardless of whether these other incomes are going to the worker or to someone else, is also not adequate. Labour's share of national income is partly dependent on the proportion of the economically-active population who are wage earners. One more worker, if nothing else changes, will increase labour's share, and, as we have seen, the proportion of wage earners grew during this period. Changes in labour's share of national income may therefore not tell us anything more than we know already from the censuses. On the other hand, changes to the distribution of individual incomes may originate from changes to sources of income other than wages. However, if full employment had an effect on wages in the manner that Myrdal proposed, then it should show up as changes to the pattern of income distribution, and so the pattern of income distribution will be used as a test of this. This is done in section 5.2.

Wage drift might seem a reasonable measure, but it is less accurate that it appears at first sight. The earlier discussion of wage drift and the effect that the demand for labour may have had on the effectiveness of wage control suggests, as a counterfactual, that wage drift would have been zero in the absence of full employment. Measuring wage drift is reasonably straightforward, since its extent has been calculated by the CBS, but wage drift is not necessarily the same as the effect of full employment. One of the factors that were taken into account when determining allowable wage rises was the state of the labour market. For example, the 1954 report by the Social-Economic Council on the possibility of wage rises was motivated by tensions on the labour market that were leading to increasing

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[304] Atkinson (1983) pp. 220-222.

wage drift[305]. This report concluded, amongst other things, that a condition of allowing a general rise should be a reduction in the amount of black wages paid[306]. The use of wage drift as a measure might therefore underestimate the effect of full employment. Nonetheless, some effect is likely to be seen, so in section 5.3 an attempt is made to measure it.

Comparing the growth of actual wage rates with the growth of per capita national income is likely to give a better picture than wage drift does. There is a clear counterfactual. If wages kept their share of national income, allowing for all other factors, then wage rates should grow at the same rate as per capita national income. In this comparison, it is necessary to keep in mind that there are other factors involved in determining national income than wages, and that changes in these factors could change the relationship. Most notably, per capita national income is determined in part by population and will therefore be affected by changes in the proportion of the population that is economically active. What is really needed for the comparison is the figure for income per economically active person, but this is not available. Nonetheless, even taking possible distortions into account, it is possible to test whether wage rates increased faster than per capita national income in periods when unemployment fell, and slower in periods when demand for labour slackened. This is the subject of section 5.4.

Calculating the effects by industry is even more problematic, since different theories of wage formation predict different growth patterns of wages by industry. It is necessary to sort out what these predicted patterns are in order to create testable hypotheses. Theories of wage determination can be broadly divided into two categories: those that relate differences in wage levels to the characteristics of the workers themselves and those that relate differences in wage levels to some structural aspect of the workforce. Under the former can be understood theories that argue wages are determined by a worker's marginal product and those that argue wages are determined by human capital. In the latter category can be understood theories that relate variations in wages to variations in levels of trade union representation between industries, theories of internal labour markets and the so-called "geological theory" that argues wage levels vary between industries as a consequence of the order in which the various industries came into existence.

Theories that relate wage differentials to differing characteristics of workers are not useful in this study. There are two reasons for this. Firstly, a number of studies have queried the

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[305] SER (1954) p. 5.
[306] Ibid. p. 34.

relationship between marginal product and wages, and between human capital and wages. Secondly, the relevant data are not available for the Netherlands in this period. The theory that wages are determined by the marginal productivity of the worker is one often taught to undergraduates, and is occasionally to be found in empirical studies. For example, Jablonski, Rosenblum and Kunze, investigating the slowdown in the rate of productivity growth in the USA between 1973 and 1986, conclude that this was in part due to a fall of one year in the average age of the workforce between 1973 and 1979. They reach this conclusion on the basis that the relationship between age and earnings can be used as a proxy for the relationship between age and productivity[307]. However, this relationship has been queried. A study by Kotlikoff and Gokhale of the earnings histories of 300,000 employees of a Fortune 1000 company between 1969 and 1983 suggests that there is little or no relationship between marginal product and workers' remuneration. Their results show that workers are paid less than their marginal product when young, more when older, with the weakest correlation between marginal product and pay to be found among managers. The only exception to this pattern was to be found amongst the sales staff, who were paid on commission[308]. Hellerstein and Neumark, using firm-level data from Israeli manufacturing firms, claim to find otherwise, but admit their results are not conclusive. In this study they find identical age-productivity and age-earnings profiles, but the sample of workers contains few skilled workers, and comprises mostly semi-skilled and unskilled workers - on average, some 89% of each firm's workforce - who would be more likely to be hired on a spot basis than skilled workers. Furthermore, the authors accept that, because their productivity profiles are relatively imprecise, their results are not inconsistent with "sizeable divergences" between the age-earnings and the age-productivity profiles, and they conclude that, while the data back their conclusions, there is no strong evidence to reject other hypotheses[309].

Similarly, there are questions surrounding the relationship between human capital and earnings. Using figures for the after-tax incomes of white US males in 1939 and 1949, by age and years of education, Becker argues that these data clearly show that the average income in each age-class is strongly related to the length of education[310]. He further argues that the rate of increase of earnings by age varies according to education and that the 1939 data show increasing slopes as the level of education increases, from elementary to high

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[307] Jablonski, *et al* (1988) pp. 34-38.
[308] Kotlikoff and Gokhale (1992) pp. 1215-42.
[309] Hellerstein and Neumark (1995) pp. 89-109.
[310] Becker (1964) p. 139.

school to college[311]. Medoff and Abraham lend some support to this in a study using data on managerial and professional employees in two large corporations in the US manufacturing sector. They find a positive correlation between human capital and earnings, but none between human capital and performance[312]. But Freeman suggests this association between college education and earnings changes over time, arguing that both the real and the relative earnings of college graduates in the USA fell in the early 1970s. The fall was caused by a slackened growth of demand, due to a reduced rate of expansion of those industries that employ many college-trained workers, while the supply of such labour continued to increase[313].

It is not possible to measure either the effect of productivity or education on wages in the Netherlands in this period because the data are not available. Annual figures are published for productivity in industry as a whole, but it is not clear how accurate figures could be calculated for each industry, let alone for each group of workers. The "differentiated wages policy" of the Liberal-Catholic coalition that took office in 1959 was designed to allow wage rises in each industry according to rises in the industry's productivity, but this policy quickly ran into trouble when it was discovered that no one knew how to calculate such productivity increases[314]. There are no theoretical problems with the association of education and occupation, but no data on this was collected in the Netherlands before the 1960 census[315].

In contrast, some of the effects of trade unionism can be measured. Studies in both Britain and the USA have found that trade unionism has had an effect on wage rates. Freeman and Medoff have found a "union wage effect" in a cross-section of the U.S. workforce, showing that unionised labour was substantially higher paid than non-unionised, with a sizeable, although smaller, effect for workers who change union status (i.e. union to non-union or vice versa). The union wage effect does, however, differ between workers - e.g. it is greater for younger than older workers, for non-white than white, for men than for women, and there is substantial variation across industries[316]. Lewis argues that this effect varies from one period to another[317]. Pencavel, in a study of the wages of British manual workers in the early 1960s, found that union membership raised hourly earnings by

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311 Ibid. p. 143.
312 Medoff and Abraham (1980) pp. 703-36.
313 Freeman (1976) pp. 184-185.
314 Abert (1969) p. 86.
315 Hartog, *et al* (1993) p. 187.
316 Freeman and Medoff (1984) pp. 46-50.
317 Lewis (1963) pp. 4-5.

between zero and ten percent[318]. Mulvey and Foster find a greater effect looking at British workers covered by collective agreements in 1973. They point out that, whereas about 80% of full-time adult manual workers were covered by collective agreements, only about 55% were trade union members. Because the data they use refer to all those in receipt of a union-negotiated wage, whether they are members of trade unions or not, then the estimated differential is liable to be higher than if membership were used. They find that workers covered by collective agreements received wages some 22% to 48% higher than those that did not, with the differential increasing to a range of 36% to 60% for manual workers[319].

Since Myrdal suggested that full employment strengthened the bargaining power of trade unions, it follows that wages should have risen faster during the 1950s in those industries where the influence of the trade unions was greatest. Both the numbers of trade union members by industry and the number of workers in each industry covered by collective agreements are published, so it is possible to test this, which is done in section 5.5.

Structural theories of wage determination can also be used to measure the effects of full employment. Two theories fall under this heading: the "geological theory" and the theory of internal labour markets. The "geological theory" was so-named by Lutz[320] but was first proposed by Dunlop. Dunlop argues that wage theory, instead of reducing the problem of wage setting to the problem of the setting of a single rate which can be regarded as an index for all other wage rates, needs to work with the concept of the wage structure. Wage rates do not move together, and the problem is one of setting and variation in a whole structure or complex of rates, the major level of enquiry, he argues, being the interaction between wage level and wage structure[321]. He proposes the use of the concepts of the job cluster and the wage contour. The job cluster is defined as a stable group of job classifications or work assignments, linked together by technology, the administrative organisation of the production process and the social custom that their wage rates move together. An example of a job cluster is a tool room in a plant[322]. A wage contour is a stable group of firms, linked together by the similarity of their product markets, the need to resort to similar sources for a labour force and a common labour market organisation that, by custom, has common wage-making characteristics. As an example, the wage rates of jobs in US steel firms move together. A wage contour has three dimensions: particular occupations

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[318] Pencavel (1974) pp. 194-210.
[319] Mulvey and Foster (1976) pp. 258-275.
[320] Lutz (1976) pp. 473-491.
[321] Dunlop (1957) p. 15.
[322] Ibid. p. 16.

or job clusters, the sector or industry and geographical location[323]. In periods of a tight labour market, the various contours have to bid for labour, and the differentiated structure of wage rates created will reflect product market conditions, while, for a variety of reasons, Dunlop insists, wage differentials are not easily altered in a looser market[324]. For this reason, Dunlop argues that the wage structure of a country reflects its pattern of industrialisation. In an agrarian society, only small differentials are needed to attract labour out of agriculture into industry. As successive industries develop, higher rates are continually required to draw labour out of the older industries[325]. It is this aspect of the theory that has attracted the most interest, and a number of studies claim to have found stable industrial wage structures across time and across countries. Hoffmann finds stable differentials between industrial wages in Germany across time and across a series of countries[326]. Papola and Bharadwaj also find a stable ranking of the inter-industry wage structure in the short run across seventeen industrialised countries[327]. Krueger and Summers find a stable structure in the USA between 1923 and 1984[328], and again find a stable structure between countries[329].

The "geological theory" can easily be linked conceptually with the theory of internal labour markets. This theory, proposed by Doeringer and Piore, argues that the institutional structure of labour markets is composed of distinct internal and external labour markets. The internal labour market is defined by an enterprise, a part of an enterprise, a craft or a professional community, where entry is limited to particular jobs or ports of entry. The pricing of labour and the allocation of labour from ports of entry to other work positions are governed by administrative rules and customs[330]. The external labour market is the market outside the enterprise. They also suggest that a "dual labour market" exists, with one section of the labour force being hired from within internal markets, and another section where little difference exists between internal and external markets. This latter section tends to be the lower-paid sector, associated with women, youth and ethnic minorities[331].

It is possible to use the "geological theory" as a basis for a model with which to measure the effects on wages of differential demand for labour between industries. The theory

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323 Ibid. p. 17.
324 Ibid. p. 22.
325 Ibid. p. 25.
326 Hoffmann (1966) pp. 25-29.
327 Papola and Bharadwaj (1970) pp. 72-90.
328 Krueger and Summers (1987) p. 22.
329 Ibid. p. 26.
330 Doeringer and Piore (1985) p. x.

predicts that the inter-industry wage structure should reflect demand for new labour in periods of low unemployment. Therefore, using annual wages surveys, it is possible to see if those industries where demand was greatest in the 1950s saw their wage rates increase faster than industry as a whole. This hypothesis is tested in section 5.5.

It is not possible to use the theory of internal labour markets as the basis for any testable hypothesis, as no appropriate data are available[332].

In most cases where a test is made of the effect of full employment, this is effectively made on real wage rates. This result occurs because, in the majority of tests, wage rates or incomes are compared within a single year. In these cases. both sides of the comparison have been subject to the same rate of inflation, and therefore the results are identical for both nominal and real wages. The exception is in section 5.3, where it is not clear to what extent the wage drift identified by the CBS is real. In all other cases, although the original data are in nominal values, the comparisons are real.

5.2 The distribution of income and how it changed.

Income distribution reports published by the CBS, covering a number of years during the period, can be used to measure changes in the distribution of individual incomes. These reports were created by sampling income-tax data, and categorise the number of individuals and their total incomes in a variety of ways. Data are published for 1946, 1950, 1952 through 1955 and 1957 through 1960.

The reports do not contain all incomes. Incomes derived from the "black economy" are, not surprisingly, not included, but there is no reason to suppose the extent of this changed as a proportion of total income during the period[333]. The same goes for the underreporting of income. The effect of either of these on income trends will therefore be slight. Slightly more problematic is the absence of data on married women. Under the 1941 *Decree on Income Tax*, married women were not liable for income tax in themselves unless they were permanently separated[334]. This distorts the data in two ways, in that it boosts husbands' reported incomes and reduces the number of women reported as receiving income. There

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331 Ibid. pp. x-xi.

332 Doeringer and Piore could find no measures of neo-classical economic variables to use for their original study, and used heuristic evidence as the basis of their argument (ibid. p. 5).

333 The "black economy" is not to be confused with "black wages", which were paid in respect of work done within the "white economy". As will be seen below, black wages appear to have been largely reported.

334 *Inkomensverdeling 1950, Aanvullende gegevens* pp. 5-6.

is no way around this problem, but the low proportion of married women in the paid workforce suggests that the distortion will not be great.

On the other hand, all other incomes are included, including the lowest. Those whose incomes are included in the reports are referred to in this study as the "assessable population" - i.e. those whose income is assessable for income tax. The equivalent group to the paid workforce is referred to as the assessable *working* population, and excludes those receiving their incomes from pensions and from "no occupation".

The data are not reported in the same way in each year's report. The categories that are reported differ from year to year, and definitions change, making it difficult or impossible accurately to compare apparently similar reports. In the case of the overall distribution of income, however, comparable reports are published for 1946, 1950, 1955, 1958 and 1960, giving the numbers of individuals in the assessable population broken down by size of income.

Two methods are used to measure changes in income distribution: the Lorenz curve and the Atkinson index. The Lorenz curve can be used to demonstrate a broad picture. It is a cumulative distribution function of incomes, created by plotting the percentage of the income-receiving population against the cumulative percentage of the income they receive. Thus, if the lowest-paid ten percent of the population receive five percent of the total income and the lowest-paid eighty percent receive sixty percent of the total income, then the curve joins the points (0,0), (10,5), (80,60) and (100,100) - the first figure denoting the x-axis, the second the y-axis. The closer the curve is to a diagonal joining (0,0) to (100,100) then the more equal distribution is. By plotting such curves for a number of years, the movement of the curve relative to the diagonal shows how the distribution of income changed over time.

The Atkinson index, on the other hand, can be used to check how each section of the population (the richest, the poorest, etc) was affected by the changing income distribution. This is possible because an Atkinson index is calculated using a parameter (ε) which indicates how important equality of incomes is considered to be. It is therefore unlike other measures of inequality, such as the Gini coefficient, where the relative importance of income equality is assumed. The Atkinson parameter ranges in size from zero, which signifies indifference, to infinity, signifying concern only about the position of the poorest[335]. More specifically, Kaeble and Thomas identify a value of 1.5 with the viewpoint

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[335] Atkinson (1983) p. 56.

of Beatrice Webb, only mildly preoccupied with inequality, and a value of 4 with that of Proudhon, obsessed with it[336]. Atkinson gives, as an illustration of the use of the index, examples of the measurement of British and West German income distributions using values of ε ranging from 0.5 to 2.

The formula for the index I, when $\varepsilon \neq 1$, is

$$I = 1 - \left[\sum_{i=1}^{n} \left(\frac{Y_i}{\overline{Y}} \right)^{1-\varepsilon} f_i \right]^{1/(1-\varepsilon)}$$

where

Y_i = the income of those in the i^{th} income range

n = the number of income ranges

f_i = the proportion of the population with incomes in the i^{th} range

$\overline{Y}$ = mean income

and when $\varepsilon = 1$

$$I = 1 - \exp\left[\sum_{i=1}^{n} f_i \log_e \left(\frac{Y_i}{\overline{Y}} \right) \right]$$

The distribution for the Netherlands was calculated here for each year for which data are available with ε set to values from 0.5 to 4. As the value increases, it gives information about the position of those lower down the income scale.

The Lorenz curves and the Atkinson index both paint roughly the same picture. The Lorenz curves for 1946, 1950 and 1960 are shown in Figure 7, and the Atkinson index values for all the years for which there are data in Table 19. There are three important points that can be made, concerning when the greatest effect on income distribution occurred, concerning whether or not full employment had an effect on income distribution and concerning the incomes of the poorest section of the population.

The post-war recovery seems, for most people, to have had a greater impact on the distribution of income than anything that occurred during the 1950s. There was a definite move towards greater equality during the period of post-war recovery, but, while there was a further move to equal distribution between 1950 and 1960, this did not happen to

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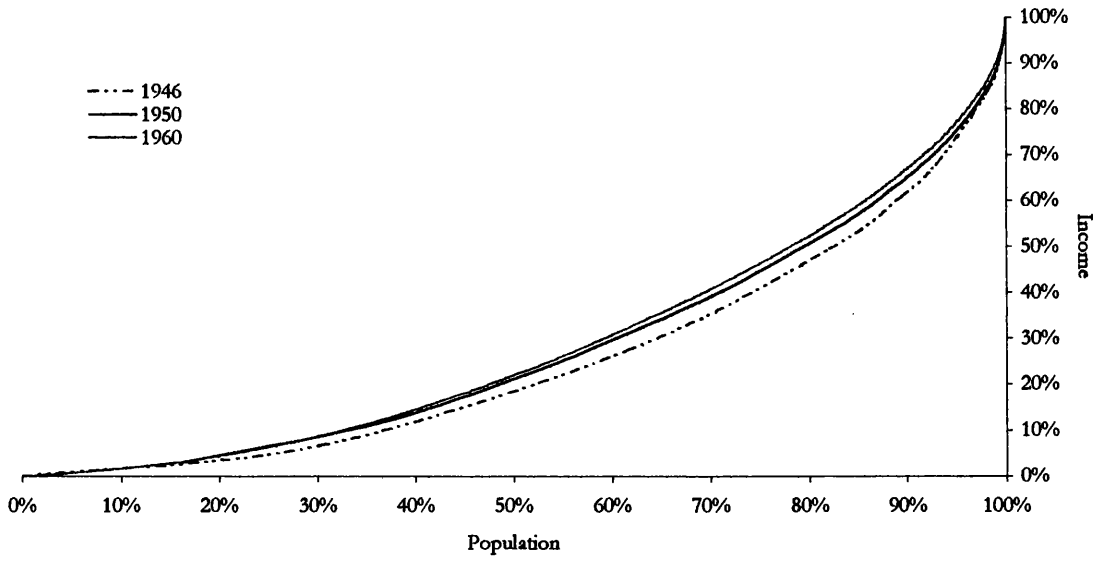
[336] Kaeble and Thomas (1991) p. 27.



Sources: *Inkomensverdeling 1946 en vermogensverdeling 1947 Anvulende gegevens*, table 2
Inkomensverdeling 1950 Aanvullende gegevens, table 4.
Inkomensverdeling 1960 Aanvullende gegevens, table 4.

Figure 7: Income distribution of the assessable population.

anything like the same extent. This can clearly be seen in the changing shape of the Lorenz curves, where the movement between 1946 and 1950 is much greater than that between 1950 and 1960. The curves for 1955, 1957 and 1958 have been omitted for clarity, but they fit between those for 1950 and 1960. The Atkinson index for all calculated values of ε, with the exception of $\varepsilon = 4$, show a big fall in value between 1946 and 1950, with the index value never reaching the 1946 level again, but for values of ε of 0.5 and 1, the index is lower in 1960 than 1950. This suggests a shift in income distribution from the higher to the middle income groups, something that is also visible from a close inspection of the Lorenz curves.

Nonetheless, in the recession year of 1958, incomes did briefly become less equal[337]. This can be seen with the Atkinson index, for all values of ε, and can also be seen when comparing the Lorenz curves for 1955, 1957 and 1958. The curves for 1955 and 1957 lie more or less on top of one another, with the 1958 curve lie slightly to their right. Given that these results show income distribution to have got less equal in a year when unemployment increased, they are therefore consistent with the hypothesis that some part of the equalisation of income distribution was due to full employment.

[337] The recession began during 1957, but 1957 does not reveal itself as a recession year with annual data. Thus, the recession seems to appear suddenly in 1958.

ε		1946	1950	1955	1957	1958	1960
0.5	All	0.20	0.17	0.17	0.16	0.17	0.16
	Younger than 70		0.17		0.16	0.17	0.16
	Aged 21-69		0.15		0.13	0.17	0.12
1.0	All	0.34	0.30	0.29	0.29	0.30	0.29
	Younger than 70		0.30		0.29	0.30	0.29
	Aged 21-69		0.25		0.23	0.24	0.22
1.5	All	0.45	0.40	0.40	0.40	0.41	0.40
	Younger than 70		0.40		0.40	0.41	0.40
	Aged 21-69		0.34		0.31	0.32	0.29
2.0	All	0.53	0.49	0.50	0.49	0.51	0.49
	Younger than 70		0.49		0.49	0.51	0.50
	Aged 21-69		0.42		0.39	0.40	0.36
4.0	All	0.68	0.68	0.72	0.72	0.73	0.70
	Younger than 70		0.68		0.72	0.73	0.71
	Aged 21-69		0.65		0.63	0.63	0.56

Sources: *Inkomensverdeling 1946 en vermogensverdeling 1947 Aanvullende gegevens*, table 2.
Inkomensverdeling 1950 Aanvullende gegevens, table 4.
Inkomensverdeling 1955, table 3.
Inkomensverdeling 1957 en vermogensverdeling 1958, table 2.
Inkomensverdeling 1958 en vermogensverdeling 1959, table 2.
Inkomensverdeling 1960 Aanvullende gegevens, table 4.

Table 19. Atkinson index values for 1946, 1950, 1955, 1958 and 1960.

But it should also be noted that the poorest section of the population appeared to do relatively less well throughout the 1950s. This section of the population became relatively poorer throughout the period. The Atkinson index with $\varepsilon = 4$ shows that the post-war recovery made no difference to income distribution as far as this group were concerned, with income distribution becoming less equal during the 1950s. As with other values of ε, the value of the index rises in 1958 and it falls in 1960, indicating that the level of employment very likely had an effect. Close inspection of the Lorenz curve suggests that this group comprised the poorest 10-12% of the population.

There are two possible explanations for this. It might have been that some were left behind as incomes rose. There was some awareness in official circles that concentration on wage income created a number of "forgotten groups" such as widows and pensioners[338], and several laws passed in the post-war period tackled this issue. Under the 1947 *Noodwet Ouderdomsvoorziening* payments were made by the state to those aged 65 and above whose

[338] SER (1954) p. 36.

incomes were too low, while, in 1956, the *Algemene Ouderdomswet* was passed, making old-age pensions a non-means tested right. Widows and orphans began to receive payments under the *Algemene Weduwe- en Wezenwet* in 1958[339]. These will certainly have had an effect on income distribution, but how much is another question. Calculation of the Atkinson index excluding those over 70 gives exactly the same results as the whole population except in the case of 1960, where the distribution of income is slightly less equal for those 70 and under than for the population as a whole. This is consistent with the introduction of old-age pensions beginning to have an effect, albeit a small one.

But a more likely explanation is that widening distribution was a reflection of the increasing participation of women in the paid workforce. This phenomenon was the result of the combined effect of women's wages being generally lower than men's and the income distribution data only including those with incomes greater than zero. As women entered the paid labour force, their incomes jumped from zero to, usually, a value lying at the lower end of the income distribution. As a consequence, although per capita incomes were rising, the proportion of the assessable population at the lower end of the income distribution will have increased.

It is not possible to test this directly, since no data are available for incomes broken down by both size of incomes and gender. But because the female working population was young, some of the effect of increased participation can be captured by omitting the incomes of those under the age of 21 from the calculations. In each year for which this is possible, the value of the Atkinson index is lower for those aged 21-69 than for the entire population. This is what would be expected, since those under 21 would be amongst the lower paid. But the index for the 21-69 year-olds fell between 1950 and 1957 for all values of ε, unlike the index for the entire population. This means that it was a feature of the incomes of the under-21s that prevented the index falling as the level of unemployment fell.

Most probably, then, this is a consequence of increased numbers of young women entering the labour force. These young women will have had low earnings, but previously would have earned nothing at all, thereby being omitted from the figures. It seems therefore, paradoxically, that the increasing inequality of income was actually a consequence of increasing disposable income.

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[339] Van Loo (1992) pp. 115-116.

5.3 Wage drift.

It might seem that any difficulty in calculating wage drift is to be found in establishing the rates of pay that workers actually received. The allowable increases were published, and since increases over and above these were illegal, then it might be reasonable to assume that it would be difficult, if not impossible, to establish what was actually paid.

In fact, discovering what workers were actually paid is relatively easy. The CBS conducted an annual survey of industrial wages throughout the period under investigation, by asking a sample of employers to return declarations listing the wages and hours worked by their individual employees. The published results are categorised by industry, gender, age group and skill level. Because it was not possible to trace from these results how individual firms dealt with wage payments, this survey could not be used as the basis for an investigation into who was paying black wages. But it can be used to calculate the increases for workers as a whole, in specific industries, at specific skill levels, etc, by comparing the wages paid in successive years.

On the other hand, calculating what wages should have been had the regulations been followed is not so straightforward. Wage control was not a question of increasing the wages of an individual worker by a decreed amount, although this is the impression one sometimes gets from the critics of the system. It was considerably more flexible than this. Every CAO was different, which was why each one had to be individually approved by the Board of Public Mediators. It was not immediately clear in a lot of cases whether a CAO kept to the regulations or not, and it may not have even been clear to an individual firm whether or not they were paying black wages.

Firstly, different groups of workers had different CAOs applying to them. This is to be expected. For example, monthly-paid staff needed to be treated differently from the weekly-paid. So, looking at the metal industry in 1950, we find that office staff have their own CAO[340]. Similarly, conditions varied across an industry, perhaps differing between large and small enterprises. So, again in the metal industry in 1950, different CAOs were agreed for manual workers in large workplaces[341] and for those in small workplaces[342]. The specific wage rates were generally the same, but the CAO for small workplaces covered smithies.

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[340] *Statistiek der lonen* (1950) p. 29.
[341] Ibid. p. 30.
[342] Ibid. p. 31.

		Time	Tariff
1951		57	43
1952	1)	54	46
1953	1)	50	50
1954	1)	48	52
1955	1)	46	54
1956	1)	47	53
1958	2)	58	42
1959	2)	45	55

Notes: 1) excludes building and construction
2) excludes coal mining

Sources: *Jaarcijfer voor Nederland 1951-1952* table 349
Jaarcijfer voor Nederland 1953-1954 table 340
Jaarcijfer voor Nederland 1955-1956 table 340
Jaarcijfer voor Nederland 1957-1958 table 366
Jaarcijfer voor Nederland 1959-1960 table 372

Table 20. Proportion of the industrial workforce (men and women) paid by time and tariff wages, 1951-59.

CAOs did not all apply for the same period of time. There were two situations in which a new CAO was agreed: when the old CAO expired and when an old CAO was amended[343]. Therefore it was not always the case that a new CAO was introduced at the same time as the new regulations. So, for example, when a general pay rise was awarded effective from 1st January 1950, of a maximum of five percent, plus a rise in the total wage bill of two percent[344], a large number of industries introduced the rise immediately. But others did not. The new CAO for hairdressers ran from the 16th January[345], attendants in bicycle parks got their increase on the 1st February[346], shop workers on the 1st March[347], butchers on the 1st April[348], workers in the printing ink industry on the 7th June[349], and so on and so forth[350].

Moreover, a CAO did not just specify one figure for the wage rate. For example, workers' earnings can vary with age[351]. This is, amongst other things, a consequence of the way that a worker could move up the wage scale as he or she got older or gained more experience. Moreover, the worker could be paid according to a tariff, rather than a time rate. Tariff

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[343] Amendments also had to be approved by the Public Mediators.
[344] *Statistiek der lonen* (1950) p. 15.
[345] Ibid. p. 27.
[346] Ibid. p. 32.
[347] Ibid. p. 48.
[348] Ibid. p. 142.
[349] Ibid. p. 136.
[350] This list is by no means exhaustive.
[351] The implications of this are dealt with in Chapter 6.

Class of municipality:	I				II				III				IV			
	a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d
Enterprises in which tariff wages are paid																
skilled	89	94	96	119	87	92	94	115	84	89	91	111	81	86	88	107
semi-skilled	83	88	90	111	81	86	88	108	78	83	85	104	75	80	82	100
unskilled	76	80	83	101	74	78	81	98	71	75	77	94	69	73	75	89
Enterprises in which tariff wages are not paid																
skilled	99		105		96		102		91		98		88		94	
semi-skilled	92		98		88		95		84		90		81		86	
unskilled	84		90		81		87		78		84		75		80	

Source: *Statistiek der lonen (1950)* p. 30.

For explanation, see text.

Table 21. Basic wage rates, in cents, according to the CAO for large enterprises in the metal industry, effective from 1st January 1950.

wages refer to such methods of payment as piece rates, an agreed price for a job, bonus systems, etc - the term is sometimes translated in Dutch official publications as "payment by results". These systems were introduced as a means of improving productivity[352] and formed the basis for payment of an increasing proportion of the industrial workforce during the 1950s, as can be seen from Table 20. Even time rates could vary within a CAO. For example, a range of basic hourly rates might be specified, and there could be additional rates for shift working. There could also be differences according to the classification of the municipality in which the enterprise found itself. As was noted earlier, smaller municipalities had lower costs of living, and therefore wage rates were lower.

As an example of this, consider the 1950 CAO for large enterprises in the metal industry. The hourly rates upon which wages were based are shown in Table 21. The top line shows the class of municipality in which each specific rate applied. There were, in fact, five classes, I being the largest and V the smallest, but no wage rate is given for class V in this instance[353]. Under each class of municipality are four columns of figures, in cents. Column a gives the personal minimum hourly wage (i.e. no worker may earn less than this), and column c gives the maximum average hourly wage (i.e. no enterprise may pay an average hourly wage greater than this). These two figures give the basis for wages in those enterprises where workers were paid by the hour. For enterprises where wages were paid according to a tariff, two other figures applied. Column b gives the minimum average hourly wage that could be paid, while column d gives the maximum average hourly

[352] Windmuller (1969) p. 342.

[353] Possibly the possession of a large metalworking enterprise meant, by that fact alone, that the municipality was too large to be in class V.

earnings. There are conditions attached to these figures. In enterprises where tariff wages were paid, the minimum average hourly wage, taken over six months, was to be ten percent higher than that reported, for all skill levels, which perhaps put some pressure to move to a tariff payment system. In enterprises where workers were paid by the hour, a maximum of twenty percent of the skilled workforce could earn more than ten percent above the maximum average hourly wage, further increasing the pressure. Shift workers could earn more. Shift workers working 90 hours over two weeks were paid 104 hours' wages, those working 92 hours were paid for 107 hours, 94 hours' work was paid as 110 and 96 hours as 113. In addition to all this, a guilder a week was to be taken out of the wages of those aged 18 and over as a pension contribution, and, finally, none of this applied to workers paid according to a daily or weekly rate[354].

From this, it can be seen that calculating whether a single enterprise was paying black wages or not could be an impossible task, since there were a large number of legitimate reasons why wages should rise, in a single case, faster than the legal national average.

The CBS calculated a series of the growth of regulation wages as part of its own study of wage drift. This is the series that will be used. It uses the basic time wages reported in CAOs, ignoring bonuses for piece work, shift working, etc, and takes these to create an index of the regulation wages of adult male industrial workers. The increase in the index number is used as a measure of the growth of regulation wages.[355].

By comparing the index of regulation wages to an index of earned wages of adult male industrial workers, it was shown that wage drift was at its highest during periods of full employment. Index numbers were used because it was recognised that not all the differences between regulation wages and earned wages were due to wage drift. Five reasons for differences were identified: they could be due to structural adjustments within an industry; they could be due to structural adjustments between industries; they could be due to wage rises for workers where wages fell outside the scope of wage control; they could be due to wage rises above the CAO; and they could be due to a difference between what the effect of the CAO was calculated to be and its actual effect. The index of earned wages was calculated to keep a fixed relationship between the number of workers in a branch of industry, between occupational categories, between the genders and between age cohorts, thus eliminating the first two problems, while the third, it was stated, was hardly ever of significance in industry. Differences in the index numbers of earned and regulation

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354 *Statistiek der lonen* (1950) p. 30.
355 CBS (1975) p. 5.

	Earnings per hour	Regulation wages per hour	Difference	Unemployment rate
1950-51	6.6%	5.7%	0.9%	2.26%
1951-52	3.0%	2.3%	0.7%	3.48%
1952-53	2.3%	0.9%	1.4%	2.45%
1953-54	15.9%	15.0%	0.9%	1.62%
1954-55	3.2%	0.7%	2.5%	1.00%
1955-56	8.9%	5.6%	3.3%	0.71%
1956-57	11.2%	9.9%	1.3%	0.96%
1957-58	0.5%	3.6%	-3.1%	2.01%
1958-59	3.7%	2.1%	1.6%	1.41%
1959-60	9.6%	6.9%	2.7%	0.81%

Notes: 1) Percentage increases in earnings are from October to October.
2) The figures for both earnings and regulation wages exclude holiday bonuses and other special payments.
3) The unemployment rate is that for the second calendar year of the period - i.e. for the period 1950-51, the rate for 1951 is given , for 1951-52 the rate for 1952, etc.
4) The unemployment rate is calculated as the number of registered unemeployed (male and female) expressed as a percentage of the total number of jobs plus registered unemployed.

Sources: *CBS (1975)* appendix 1.
CBS (1994) pp. 48-49.

Table 22. Differences in the growth of regulation wages and earned wages of adult male industrial workers.

wages must therefore have been entirely due to the last two factors[356]. The differences are shown in Table 22 along with an estimate of the unemployment rate (an estimate because no official figures for the unemployment rate are published for any year before 1970). The largest gap between earnings growth and the growth of regulation wages are to be found in 1954-55, 1955-56 and 1959-60 - years of falling unemployment - while the gap closes in the recession year of 1957-58, when unemployment rose[357].

This result is not unexpected, but it provides no basis on which to investigate further. It gives no indication of where these increases came from, it gives no indication of how important these increases were - particularly since they represent nominal, not real, wage drift - and it gives no indication of what impact they had on real incomes.

5.4 Wage growth and the growth of national income.

Wage drift is important in this context only if it meant that wage earners received higher earnings than they would have done in the absence of full employment. As has earlier been

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[356] Ibid. p. 7.
[357] The pattern of unemployment over the period is discussed in more details in section 4.2 above.

noted, the state of the labour market was taken into account in the recommendations of the Social-Economic Council, while discussions within the Foundation of Labour also played a part in setting the wage norm. Regulation wages were not, therefore, an accurate reflection of the labour market.

An alternative method of measuring the effects of full employment is to compare the growth of wages per worker and per capita national income. The assumption here is that, in the absence of other factors, then these two figures will keep in step. One of the factors that will affect this relationship is, of course, the proportion of the population that is economically active. A better measure would be national income per economically active individual, but it is not possible to calculate this figure from year to year. Inhabitants of the Netherlands have to register at their local town hall, but do not have to declare whether or not they are involved in any economic activity. Within certain limits[358], therefore, the total population of the Netherlands is known from year to year, but not the economically active population. But comparing the growth of wages per worker with per capita national income does get around the main problem with such figures as labour's share of national income, which is that it changes with the proportional size of the labour force.

Accepting the problems with such a comparison, it is possible to test whether wages rose faster than other sources of income in years when unemployment was lowest. In this context "wages" means the price of labour, and this should properly mean wage rates actually offered. As we have seen, there is a considerable problem in determining a single figure for the regulation wage rate, let alone what the rate was in practice. Hourly wages paid are therefore used as a proxy. As with the CBS study, in order to minimise the effect of structural changes, the figures for wages are be those of male industrial workers aged over 25 (rather than adults) and they are also separated out by skill level.

The figures for hourly wages are obtained from the annual wages surveys, conducted in the autumn of each year throughout the period. The majority of the data came from questionnaires submitted to employers. Enterprises employing fewer than ten employees were excluded, as with the *Algemene industriestatistiek*, but, unlike the *Algemene industriestatistiek*, the surveys were not compulsory, depending on the cooperation of employers[359]. They covered about three-quarters of the number of workers covered by the *Algemene industriestatistiek*[360]. The surveys asked for data concerning the wages paid in one

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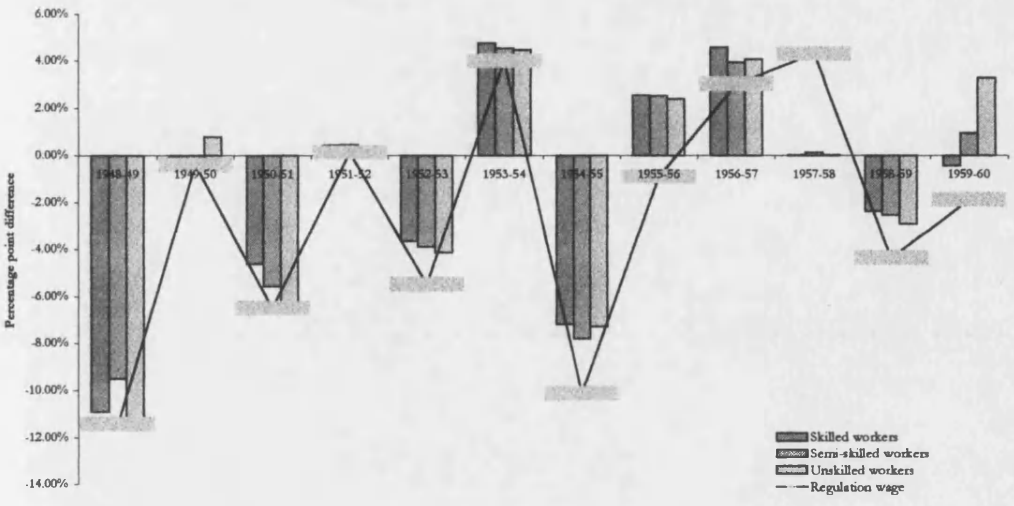
358 E.g. illegal immigrants might choose not to register.
359 *Statistiek der lonen* (1950) p. 71.
360 *Statistiek der lonen* (1951) p. 41.



Sources: *Statistiek der lonen*
Statistiek der lonen in de nijverheid
CBS (1975) p. 31
Jaarcijfers voor Nederland 1959-1960 table 328

Figure 8. Annual rates of hourly earnings of male industrial workers aged 25 and over, compared with per capita national income at market prices.

week in September or October[361] (later, changed to a week in October[362]). The employer was allowed to determine in which week the survey was taken, with the proviso that the week in question could not include holidays or free days. These surveys reported the wages actually paid, and they covered manual workers only[363]. The questionnaire asked for data on the individual wages of each worker, and these data were summarised by the CBS.

The employer had to fill in name or clock number of each worker, his or her occupation or job, age, number of hours worked in the week of the survey, the complete wage earned, and whether or not the worker was on shift work. The figure for the complete wage was to include the basic wage, bonuses, shift allowances, overtime payments and the like. The data for men and women were entered on different sheets[364]. The surveys were supplemented by data from the wage bureaux of the employers' organisations[365].

The data are reported summarised by skill level: skilled, semi-skilled and unskilled. The skill levels are those reported in the surveys. A skilled worker was defined as one who has received a trade education, at school, or in the factory or workplace, a semi-skilled worker as a routine worker with a simple knowledge of the trade, and an unskilled worker as one in

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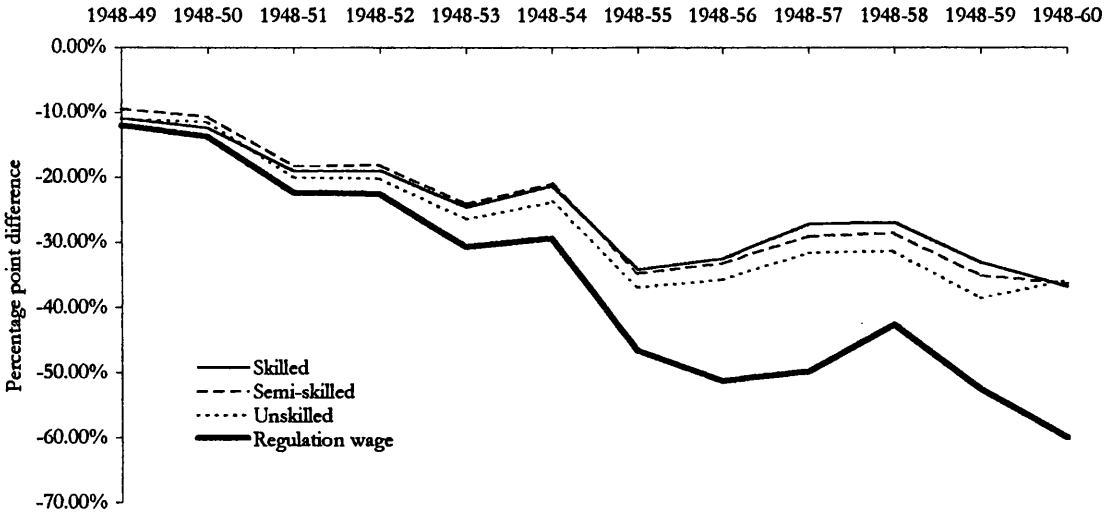
361 *Statistiek der lonen* (1950) p. 74.
362 *Statistiek der lonen in de nijverheid Oktober 1956* p. 6.
363 *Statistiek der lonen* (1950) p. 74.
364 For an example of the questionnaire, see *Statistiek der lonen in de nijverheid Oktober 1956* pp. 61-62.
365 *Statistiek der lonen* (1954) p. 35.



Source: *Statistiek der lonen*
Statistiek der lonen in de nijverheid
CBS (1975) p. 31
Jaarcijfers voor Nederland 1959-1960 table 328

Figure 9. Cumulative growth of hourly earnings of male industrial workers aged 25 and over, compared with per capita income at market prices.

an occupation where no knowledge of the trade was required[366]. The annual increase in the average wages of each of these, compared to the growth of per capita national income is shown in Figure 8. The horizontal line at y = 0.00% represents the annual increase in per capita national income. The vertical bars represent the annual growth of hourly earnings of skilled, semi-skilled and unskilled male industrial workers, expressed as the difference between the actual growth and the growth of per capita national income. Where the vertical bars hang down from the x-axis, hourly earnings grew by less than per capita national income, and where they project upwards the hourly earnings grew by more. For reference, the annual growth of the regulation wage, as calculated by the CBS, less the growth in per capita national income is also shown. This is represented by the horizontal bars, and its path is shown by the line joining them.

In general, while full employment seems to have caused wages to rise, wage control seems to have created some downward pressure. It appears from Figure 8 that wages followed wage control, at least until 1955. In 1952-53, there was rising demand for labour, but wage rises kept below the growth in per capita national income. In 1954-55, demand for labour was higher than its supply, but wages growth was well below the growth in per capita national income. It should be noted in this context that there was no general rise in

[366] *Statistiek der lonen* (1950) pp. 74-81.

regulation wages in 1955, despite rises in the price of milk and in rents[367]. The picture in the first half of the 1950s, then, was as painted by Pen: black wages existed, but were kept under control[368]. However, this picture begins to break down as unemployment fell to unprecedentedly low levels in 1955-56 - although it should be noted that, since the figures make no distinction by industry, some of this apparent wage drift may be due to increasing employment in higher-wage industries. But it should also be noted that the apparent wage drift becomes negative in the context of rising unemployment in 1957-58, suggesting that a low level of unemployment had had an effect in the previous two years[369].

Taking the decade as a whole, wages did not grow as fast as per capita national income. Figure 9 shows the cumulative growth of hourly wages since 1948, less the cumulative growth of per capita national income, together with the equivalent figure for regulation wages. At the beginning of the period, wage control seems to have helped to hold down wages, but the gap began to widen from 1952, and sharply widened in 1955-56. However, despite the fact that earned wages grew faster than regulation wages, the overall gap between the cumulative growth of earned wages and the cumulative growth of per capita national income had become extremely large by 1960.

5.5 Wages growth by industry.

Full employment will not have had the same effect on wage levels in each industry. Two mechanisms for this are proposed here. One is the straightforward effect of supply and demand on prices: when demand for labour was greater than supply, it pushed up its price. This mechanism forms part of the argument of those who conclude that wage control had little or no effect. The other mechanism is the one proposed by Myrdal: the increased demand for labour strengthened the bargaining position of trade unions and enabled them to extract greater rises than would have been the case had demand for labour been less. Each of these mechanisms would have had different effects on different industries, since the demand for labour was different in different industries, as was the influence of the trade unions.

What is important here is the relative movement of wage rates. To look at the relative effects, by industry, of trade unionism or of the demand for labour, it is necessary to see

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[367] Windmuller, et *al* (1987) p. 182.
[368] J. Pen, "Loonpolitiek onmacht?", *Hollands maandblad* December 1964, cited in Windmuller (1969) p. 317.
[369] It should also be noted that Brander *et al* found that this was the period was wage control was most effective.

how wage levels in different industries moved in relation to one another. The assumption is being made, of course, that wage rates will move together in the absence of any differential disturbance. In order to test for these effects, first the actual relative movements of wage rates are established, then these movements are compared to differences in trade union influence and in demand for labour by industry. The use of relative wage rates also means that, although the original data represent nominal wage rates, the results hold true for real wages.

The relative movement used is that of the hourly wages of male workers aged 25 and over, broken down by skill, taken from the annual surveys used above. Any overall figure would be affected by the changing gender, age and skill composition of the workforce. In fact, more accurate results would be obtained if the data could be broken down further by age, but these are not published. There is also a good argument for analysing the figures at a lower level than that of industry. There are wide variations in wages in different branches of each industry, and the changing relative size of these will obviously affect the results. However, although figures for hourly wages are available at lower levels, there are few clear runs for these across the period. Industry is the lowest level for which a consistent picture can be drawn.

The wage rates were converted into index numbers before being compared. A separate set was created for each skill level. The mean hourly wages for male workers in manufacturing at each skill level in each year was set to 100. The index number for a particular industry in any given year therefore shows the value of hourly wages paid at that skill level relative to the mean paid in manufacturing in that year. The relative hourly wages of skilled workers are shown in Table 23, those of semi-skilled workers in Table 24 and those of unskilled workers in Table 25.

There are some problems with the data as reported by the CBS, which have to be taken into account when interpreting the results. There seem to be sampling problems with the wages of skilled workers in the leather and rubber industries in the late 1940s and early 1950s. No data was reported at all in this category in 1949, while wages for these workers appear to have risen well above average in 1950-51 and well below average in 1951-52. While this is of course possible, the 1951 CAO for the shoe industry - the only one of these industries reporting the wages of skilled workers - gave exactly the same wage rates to men as the 1950 CAO[370]. The number in the sample is rather low in the earlier years. It

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[370] *Statistiek der lonen* (1950) p. 139, *Statistiek der lonen* (1951) p. 30.

	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Pottery, glass, etc	100	100	98	97	93	92	91	92	93	90	92	93	95
Printing and publishing	104	103	103	101	101	100	97	105	101	103	104	106	105
Building and construction	90	91	91	93	94	98	97	97	98	100	102	99	100
Chemical industries	103	98	100	99	101	103	106	104	107	105	108	106	108
Wood, cork, straw goods	94	87	93	93	91	90	90	92	91	93	95	93	95
Clothing and cleaning	115	119	118	116	106	103	102	103	102	103	102	99	102
Leather and rubber	107	#N/A	91	105	97	96	97	99	99	98	97	100	98
Metal industries	105	104	104	104	105	103	104	102	102	100	98	100	99
Paper industry	96	96	101	99	97	97	101	100	100	100	102	100	105
Textiles	98	100	104	102	101	100	101	99	100	98	101	99	101
Food processing	97	97	95	93	95	95	96	98	97	98	97	98	100

Manufacturing as a whole= 100

Sources: *Statistiek der lonen*
Statistiek der lonen in de nijverheid

Table 23. Relative hourly wages of skilled male workers aged 25 and over.

increases from an unlikely zero in 1949[371], to 37 in 1950, to 75 in 1951 to 393 in 1952, and it then fluctuates around the 500 mark for the rest of the decade. The relationship between skilled wages in leather and rubber and the overall average remains more or less stable from 1952, while there is no similar recorded rise for semi-skilled and unskilled leather and rubber workers at the beginning of the 1950s. The numbers of these latter groups in the sample remain more or less constant for the whole of the period. It would seem therefore that the relative movements of the wage rates of skilled shoe workers are a consequence of the low numbers in the sample in the early years. But, since the leather and rubber industries employ so few workers overall, the skilled workforce in the industry can be ignored for all practical purposes.

There also exists the mystery of the declining relative wages of skilled workers in clothing. These fell from about 120% of the average skilled wage to just over a hundred percent. This fall was driven by the wages of skilled workers in the ready-made clothing industry, who form about 60% of the sample in the sector. Their wages fell from over 140% of the average to 105%. This could be a sampling error, but this is less likely than in the case of the shoe industry, since the numbers are larger. There were fewer than 200 skilled workers

	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Pottery, glass, etc	101	97	97	97	97	96	96	98	98	98	97	97	99
Printing and publishing	102	100	100	100	99	99	99	103	100	103	104	108	105
Building and construction	94	91	90	93	94	99	96	96	96	97	99	97	97
Chemical industries	103	103	103	104	103	105	107	105	105	105	105	104	105
Wood, cork, straw goods	98	96	95	94	93	94	95	96	96	96	95	96	98
Clothing and cleaning	98	96	97	95	92	93	92	94	95	95	97	96	97
Leather and rubber	99	96	96	95	94	93	94	96	97	97	97	98	97
Metal industries	107	105	104	105	106	104	103	102	101	101	101	103	100
Paper industry	91	94	95	93	94	94	96	98	98	98	99	99	102
Textiles	106	105	106	105	104	105	106	104	105	105	104	102	103
Food processing	87	96	96	95	96	96	98	100	100	100	101	99	101

Manufacturing as a whole = 100

Sources: *Statistiek der lonen*
Statistiek der lonen in de nijverheid

Table 24. Relative hourly wages of semi-skilled male workers aged 25 and over.

	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Pottery, glass, etc	101	98	99	100	100	99	97	101	98	100	98	98	97
Printing and publishing	98	99	102	103	100	99	100	104	98	101	102	105	100
Building and construction	96	95	97	97	94	99	97	96	98	94	95	95	94
Chemical industries	104	104	105	104	104	105	106	103	104	104	105	103	104
Wood, cork, straw goods	92	95	93	94	94	95	95	97	97	97	98	95	95
Clothing and cleaning	97	98	96	97	96	98	97	99	100	100	100	99	99
Leather and rubber	95	94	94	93	92	93	92	96	95	95	98	98	96
Metal industries	103	103	101	102	103	101	101	99	100	99	99	102	98
Paper industry	98	96	97	96	98	97	105	102	102	102	103	102	103
Textiles	104	103	104	103	103	101	101	101	101	100	101	98	98
Food processing	99	99	99	97	99	100	100	101	101	102	102	101	103

Manufacturing as a whole = 100

Sources: *Statistiek der lonen*
Statistiek der lonen in de nijverheid

Table 25. Relative hourly wages of unskilled male workers aged 25 and over.

in the sample of workers in ready-made clothing in 1948 and 1949, but this number increased to over 300 in 1950 and 1951, and remained between 450 and 600 for the rest of the decade. Furthermore, the relative wage changes gradually over time, rather than jumping suddenly from year to year. The most likely explanation would seem to be a change in the composition of the skilled workforce in the ready-made clothing industry, but this could only be checked by a closer study of the development of this industry in the post-war period. Again, the numbers employed in this industry are not large enough to affect the overall picture.

Skilled wages in printing and publishing also follow a slightly unexpected path. In 1954, they fell suddenly from about 3% above the overall average skilled rate to just below it. This is probably connected with the timing of the 1954 CAO for printworkers, which was effective from 1st October of that year. If the survey was conducted during September in a number, if not all, printing firms, then it would not have caught the effect of the rise. A similar, though less obvious effect can be seen with semi-skilled wages, while unskilled wages were more volatile throughout the period.

Definite patterns can be seen in the relative wage levels. These levels are not static. Static levels would mean that the index numbers remained constant over time, as the average wage in each industry remained a constant proportion of the average wage. An increase in the index number for a particular industry means that wages in that industry were increasing faster than average wages, a decrease means that they were increasing at a slower rate.

There are identifiable industries where pay is consistently low. For most of the period, skilled workers employed in the manufacture of pottery, glass and the suchlike, and in the manufacture of wooden, cork and straw goods were paid at a noticeably lower rate than

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[371] The wage index for this year is represented in the tables as "not available" (#N/A).

other skilled workers. The same was true for semi-skilled workers in these industries. Semi-skilled wages in leather and rubber were also lower than average in every year, except 1948, as were semi-skilled wages in clothing and cleaning, which declined in a pattern similar to those of skilled workers in this industry. Amongst the unskilled, only workers in wooden and cork goods, and in leather and rubber were consistently paid below average, while pottery and glass workers saw their relative wage rates decline, and those in clothing and cleaning saw them rise to the average.

There are other industries where wage rates rose from below average. Wage rates in the paper industry at all skill levels rose from below average to above average, while skilled and semi-skilled rates in food processing rose from below to around average.

Some industries, although not necessarily the expected ones, saw their wage rates decline, relative to other industries. The metal and textile industries were both relatively high-paying at the beginning of the period and generally paid at rates around the average at the end. The exception here is the rate for semi-skilled workers in textiles, which declined but was still above average in 1960.

There are consistently high-paying industries. Semi-skilled and unskilled workers in chemicals were paid well above the average throughout, as were skilled chemical workers from 1952. Skilled and semi-skilled workers in printing were consistently paid at high rates, although the rates for unskilled workers were more variable. However, numerically, printing was dominated by skilled labour, which comprised around three-quarters of the sample in the mid-1950s.

There are two possible ways of measuring the influence of trade unions. It is possible to measure it as the proportion of those employed in each industry who are members of trade unions. The possible objection to this is that workers can be members of trade unions without being represented in wage negotiations. Membership of a trade union does not of itself guarantee an effect on a worker's wages, although it may be that trade union membership is larger in those industries where wages are covered by trade union negotiated agreements. The consequence of this is there could be appear to be a loose, or no, correlation between the influence of trade unions and higher wage rates, when there is in fact a strong one.

Following this line of argument, a better measure of the relative strength of the trade unions is the proportion of workers in an industry covered by trade union negotiated wage agreements. Both measures are used, taken from *Jaarcijfers voor Nederland.* Figures for the Communist-led EVC and the syndicalist-influenced OVB are omitted from the published

	1952	1953	1954	1955	1956	1957	1958	1959	1960
Manufacture of earthenware, glass, etc	78	78	78	85	80	83	85	84	84
Print and publishing, and paper industries	174	170	169	171	172	164	158	160	163
Chemicals	94	96	92	95	96	96	89	89	91
M'facture of wooden, cork and straw goods	125	127	124	121	123	120	125	123	121
Clothing and cleaning, textiles	61	55	55	56	57	58	59	59	59
Leather, oilcloth and rubber industries	69	60	67	65	66	70	71	68	59
Metal industries	115	120	118	115	113	114	113	114	113
Food processing	106	112	112	114	114	115	112	113	114

Manufacturing as a whole = 100

Sources: *Omvang der vakbeweging in Nederland*
Algemene industriestatistiek

Table 26: Relative sizes of trade union membership by industry, in manufacturing, 1952-60.

data after 1950, but neither was large enough after this date to influence that story. The figures on employment are those published in the *Algemene industriestatistiek*. Since these are quarterly data, the first quarter figures are used to match the trade union figures, which refer to the 1st January of each year. There is a problem in that the *Algemene industriestatistiek* covered only those enterprises employing ten or more workers, while the trade union figures include everyone. The proportion of the workforce in each industry who are trade union members or who are covered by CAOs can therefore exceed 100%. However, the important point is this discussion is the relative size of each percentage. Industries are not categorised in the same way in the two series, but the *Algemene industriestatistiek* can be summed up at the same level as the trade union figures.

There are two possible ways in which trade unions could have influenced the wage structure. It could have been that the industries where trade unions had the most influence were the high-wage ones, or it could have been that the industries where the trade unions had the most influence were the ones in which workers received higher wage increases than average. Again, there are difficulties in making direct comparisons. The industries into which the trade union data are divided are not the same as those in the wage surveys. Trade union figures are quoted for the diamond industry, for example, but it is not clear under which heading this is included in the wage surveys, and there are so few workers in the diamond industry that they may not have been surveyed at all. Trade union figures for the textile industry are included with those for clothing and cleaning, and the paper industry is lumped together with printing and publishing. Nor are the trade union data broken down by gender, which may cause some distortions in the comparisons.

A chi-squared test was used to check if the distribution of industries paying high wages were associated with high levels of trade union membership. A high wage industry in a particular year is defined as one that paid, for a particular skill, an hourly wage that was greater than the manufacturing mean - in other words, its index number for that year in the

tables above is greater than 100. An industry with a high level of trade union membership is defined as one in which the proportion of trade union members was higher than that for manufacturing as a whole. The levels of trade union membership by industry are shown in Table 26. Once again, a high level means that its index number is greater than 100.

The null hypothesis is that no relationship exists between these two distributions. Because the trade union data are categorised in a slightly different manner to the wage data, the wage data were recalculated. The diamond industry, with fewer than a thousand workers, was simply omitted. Additionally, because the data published in the *Algemene industriestatistiek* was obtained on a slightly different basis from 1952 onwards - and the *Algemene industriestatistiek* was used to calculate the proportion of trade union members in an industry - the test was carried out using the years 1952-60 only. In order to calculate the χ^2 statistic, a combined attribute table was created - in each of the years 1952-60, each industry was coded as high wage/highly unionised, low wage/ highly unionised, etc. Since the trade union data are not broken down by skill level, the index number for trade union membership for the entire industry was matched against each skill level in turn. The total number of occurrences of each combined attribute was then counted, and matched against the number that would be expected if they were randomly distributed. To do this, the numbers were simply put into a table of two rows (high wage level and low wage level) and two columns (high trade union membership and low trade union membership), giving a set of four cells. The probability P_{ij} that any industry in any one year was counted in cell (ij) - where i is the row and j is the column, and each can have the value "high" or "low" - is given by

$$P_{ij} = \left(\frac{n_i}{n}\right)\left(\frac{n_j}{n}\right)$$

where

n = the number of observations in the total sample

n_i = the number of observations in row i

n_j = the number of observations in column j

In order to calculate the expected value in cell (ij) if the distribution is random (E_{ij}), we multiply this by the sample size

$$E_{ij} = n\left(\frac{n_i}{n}\right)\left(\frac{n_j}{n}\right) = \frac{n_i \times n_j}{n}$$

What we are interested in is the difference between the expected value in the cell and the actual, observed, value (O_{ij}). The test statistic (χ^2) is given by

$$\chi^2 = \sum_{i=1}^{r}\sum_{j=1}^{c}\left[\frac{(O_{ij} - E_{ij})^2}{E_{ij}}\right]$$

where

r = the number of rows

c = the number of columns

High levels of trade union membership and high wage levels do not appear to have gone together. The χ^2 statistic for the observed combinations of the two for the years 1952-60 is precisely zero, which means that the distribution is completely random. The χ^2 statistics for 1952-59 and 1953-60 are reassuringly approximate, above zero but close to it. Here too, the null hypothesis of no association cannot be rejected.

Similarly, there seems to be no association between high levels of trade union membership and high wage growth. The same test was repeated, but this time with high wages defined as the mean hourly wage in an industry rising by a higher percentage in the course of a year than did the mean hourly wage in manufacturing as a whole. The results here showed that, here too, the null hypothesis cannot be rejected.

Measuring the effect on wage rates of the number of workers covered by trade union agreements is more difficult because of the shortage of data. It is not possible to use a chi-squared test in this case because there are too few observations, with numbers only being available for 1951, 1954 and 1956. Instead Spearman rank correlation was used. This tests if the rankings of two sets of observations, X and Y, are related. The Spearman rank correlation coefficient (r_s) is calculated by

$$r_s = 1 - \frac{6 \times \sum_{i=1}^{n}[R(X_i) - R(Y_i)]^2}{n(n^2 - 1)}$$

where

n = the number of observations in each of the samples

$R(X_i)$ = the ranking of the i^{th} observation in set X

$R(Y_i)$ = the ranking of the i^{th} observation in set Y

	1951				1954				1956			
		Wage level				Wage level				Wage level		
	CAO coverage	Skilled	Semi-skilled	Unskilled	CAO coverage	Skilled	Semi-skilled	Unskilled	CAO coverage	Skilled	Semi-skilled	Unskilled
Manufacture of earthenware, glass, etc	5=	8	4	4	7	8	6	6=	8	8	5=	7
Printing, publishing and paper industries	2	6	6=	5	3	5	5	2	4	4	5=	2=
Chemical industries	9	7	3	1	9	1	1	1	9	1	1=	1
Manufacture of wooden, cork and straw goods	8	9	9	8=	4	9	7=	8	3	9	7=	8
Clothing and cleaning	1	1	6=	6=	2	3	9	6=	1=	2	9	5
Leather, oilcloth and rubber industries	7	2	6=	8=	6	6	7=	9	5	6	7=	9
Metal industries	3	3	1=	3	1	2	3	3=	1=	3	3	6
Textile industry	4	4	1=	2	5	4	2	3=	7	5	1=	2=
Food processing	5=	5	5	6=	8	7	4	5	6	7	4	2=
Correlation coefficient		0.56				0.18				0.10		

Sources: *Jaarcijfers voor Nederland, 1951-1952*, table 351.
Jaarcijfers voor Nederland, 1953-1954, table 342.
Jaarcijfers voor Nederland, 1955-1956, table 342.
Statistiek der lonen
Statistiek der lonen in de nijverheid
Algemene industriestatistiek

Table 27: Rank correlation of trade union coverage and wage levels.

In order to calculate this, industries were ranked according to the proportion of their workforce covered by trade union agreements. This was calculated from the number of workers in each industry covered, expressed as a percentage of the number of male manual workers in the industry reported in the *Algemene industriestatistiek*. Industries were also ranked by the level and growth of mean hourly wages, and, as previously, the mean wages paid to workers at each skill level were kept separate. The null hypothesis here is that the ranking of trade union coverage and the ranking of wages are independent.

Most of the possible tests were ruled out because Spearman rank correlation is unreliable when the data contain equal rankings. Almost all the wage data does. There are equal rankings at all skill levels in the data on wages growth, and in the data for semi-skilled and unskilled wage levels. Equal ranking also occurs in the CAO coverage for 1951 and 1956, but leaving these out of the tests would have confined the investigation to just one year. The tests were, however, confined to the correlation of the ranking of trade union coverage with the ranking of skilled wage levels, and are shown in Table 27. In all three years, the null hypothesis of independence cannot be rejected.

The hypothesis that the level of CAO coverage had an effect on wage levels cannot, however, be simply dismissed. There are obvious outliers in each of the years that significantly affect the results. In the data for 1951, the outlier is the leather and rubber industry. We have already noted above that the figure for skilled wages in this industry at the beginning of the 1950s is suspect. It was well above average in 1951 and well below average in 1952, and this was put down to there being too small a sample in these years. Omitting this industry from the rank correlation dramatically transforms the coefficient. There is then less than a 2.5 percent chance that the rankings are independent, and we can reject the null hypothesis.

In the data for 1954 and 1956, the outliers are chemicals and the manufacture of wooden, cork and straw goods. Chemicals paid high wages, but had a low rate of CAO coverage, while the manufacture of wooden, cork and straw goods paid low wages but had a high proportion of its workforce covered by CAOs. Once again, removing these from the calculation transforms the coefficient. Without these industries, there is only a one percent chance that the rankings are independent, and we can reject the null hypothesis.

There are reasons, again, for supposing that these two industries were different from the others. Chemicals was a relatively low-wage industry in 1951 - at least for skilled workers, whose hourly wage ranked seventh in Table 27. As we saw in Chapter 4, it was one of the industries in which the workforce grew by the most over the period, but we also saw, in Table 13, that its workforce was older in 1960 than that of the other new industries. Its different age structure suggests the possibility that its workforce might have been also different in some other way, which also affected its wage rates.

The manufacture of wooden, cork and straw goods was different again. Only a small proportion of its workforce was covered by CAOs in 1951, so its low wages may have been a hangover from an earlier period. In fact, the wages of skilled workers in this industry did not, in general, rise more than the mean for manufacturing as a whole. The wages of semi-skilled workers, on the other hand, rose by more than the manufacturing average in every year from 1953 onwards to the end of the period. The story here may well, therefore, have been different to that of other industries.

All this suggests that trade union coverage may have had an effect on wages - at least, those of skilled workers, since the ranking of the other skills were not the same - but that this effect may have been of secondary importance. It was only apparent when it was not overridden by other factors.

Measurement of the effect of the demand for labour on wage rates is also problematic. The problem here is not that data do not exist, but rather that it is not clear what data should be used as a proxy for demand. Demand for labour cannot be measured directly. It is only possible to measure it indirectly, by the effect that it has. Two proxies are used here: increased employment and registered demand from employers. There are problems with each of these, but they are complementary. Increased employment is, of course, the consequence of increased demand for labour, but only measures satisfied demand. Demand that is not satisfied, by definition, will not result in an increase in employment. On the other hand, registered demand from employers might not fully reflect demand. There might be other sources than labour bureaux, perhaps more efficient, where employers

	1952	1953	1954	1955	1956	1957	1958	1959	1960
Manufacture of earthenware, glass, etc	94	100	98	99	101	96	98	101	97
Printing and publishing	103	99	101	101	113	102	106	100	100
Chemical industries	98	101	104	100	101	102	104	100	101
M'facture of wooden, cork, straw goods	94	100	100	99	95	100	97	101	101
Clothing and cleaning	100	98	98	100	98	109	101	100	99
Leather, oilcloth and rubber industries	106	101	100	101	100	99	99	103	98
Metal industries	102	99	102	102	102	99	97	100	101
Paper industry	94	104	100	102	86	104	104	101	101
Textile ind Manufacturing as a whole	97	104	98	96	98	101	97	99	99
Foodstuffs	102	98	96	98	97	102	107	98	99

Share of each industry in the previous year's manufacturing workforce = 100

Source: *Algemene industriestatistiek*

Table 28: The changing share of each industry in male manufacturing employment, 1952-60.

could seek for labour. However, the difference between demand and those registered as seeking work gives an idea of unsatisfied demand. If demand for labour had a significant effect on wage rates then this will have two consequences. Wage rates in industries whose share of total employment has increased would be expected to have increased greater than the average, and vice versa. Higher wage growth than average would also be expected for those industries where there was high registered demand for labour compared to the number registered as seeking work.

Once again, chi-squared tests are used, this time to compare the distribution of a high demand for labour with that of high wages. A high demand for labour is defined in two ways: high growth and a a higher demand for labour than average. High growth is when an industry's share of the male manual workforce increased over the period of a year - i.e. when its male manual workforce grew at a faster rate than the manual workforce in manufacturing as a whole. A higher demand for labour than average is when the ratio of the employers' registered demand for male labour to the registered labour reserve for an industry, in a specific year, is higher than for manufacturing as a whole. High wages are defined in the two ways used previously, and the null hypothesis is that high wages are independent of a high demand for labour.

A higher demand for labour than average - at least as measure by registered supply and demand - was not associated with high wage industries. The null hypothesis of independence from higher than average employers' demand cannot be rejected for either definition of high wages. This seems surprising, and may be because the registered figures did not reflect the true state of affairs. Where an industry was able to rely on informal networks to spread news of job vacancies, for example, then its registered demand for labour may well understate its actual demand.

	Skilled	Semi-skilled	Unskilled
Pottery, glass, etc	17.17%	19.87%	18.03%
Printing and publishing	27.71%	29.26%	22.62%
Chemical industries	30.48%	21.88%	17.45%
Wood, cork, straw goods	23.07%	21.02%	20.78%
Clothing and cleaning	2.90%	19.00%	22.86%
Leather and rubber	36.52%	22.93%	23.87%
Metal industries	19.22%	18.44%	19.86%
Paper industry	22.60%	25.41%	25.42%
Textiles	18.03%	16.14%	12.95%
Food processing	27.50%	24.45%	22.10%
Manufacturing	23.56%	20.41%	19.04%

Sources: *Statistiek der lonen*
Statistiek der lonen in de nijverheid
Jaarcijfers voor Nederland, 1960-1961, table 335.

Table 29. Increase in the real wage rates of male industrial workers aged 25 and over, 1950-59.

In contrast, higher than average employment growth does appear to be associated with those industries that paid high wages. Employment growth is measured using the figures for male manual workers from the *Algemene industriestatistiek*. Third quarter data is used in order to match the time that the wage surveys were taken, and this is converted into an index. The value of the index is calculated such that an industry's share of the manufacturing workforce in the previous year is 100. This means that if the index number for an industry in a particular year is greater than 100, that industry's share of the manufacturing workforce grew in that year. Table 28 shows the share of the manufacturing workforce each industry had changed each year. The null hypothesis of independence between this share growing in any year and the industry paying high wages can be rejected for both definitions of high wages - at the 99.5% level for hourly wages being above average for manufacturing and at the 97.5% level for hourly wage growth being higher than the average for manufacturing. In other words, the probability is that they were associated.

But rising wage rates can account for only around two-thirds of the rise in male incomes. Table 29 shows the real rise in men's hourly wages between 1950 and 1959 - two years for which there are also data on men's incomes.

The first thing that is noticeable about the data in this table is that there seems to be no evidence here of the effect of differences between industries in the demand for labour. For example, the workforce in chemicals grew by more than the average rate, and here the wage rate for skilled workers rose by nearly seven percentage points more than the mean for manufacturing as a whole. On the other hand, the size of the workforce in the metal

industries also rose by more than average, but skilled wage rates rose by less. In food processing, the share of the manufacturing workforce fell, but skilled wage rates rose by more than average[372].

It is not clear, therefore, how much of the total rise in wage rates was due to the low level of unemployment. However, in the - extremely unlikely - event that all of this can be put down to the effect of full employment, it would still leave a third of the rise in real incomes unexplained. The rise in wage rates shown in Table 29 is around twenty percent. The real increase in men's incomes over the same period was thirty-one percent[373], which means that the effect of rising wage rates only accounts for about half the rise in incomes. Since it is likely that factors other than full employment were involved in the rise in wage rates, full employment must therefore account for less than half the rise in income.

5.6 Conclusion.

It can be concluded, then, that full employment had some effect on wage rates. These effects can be seen in the distribution of income, although they do not seem to be major, and wage drift was noted in years of low unemployment. Industries whose workforces grew by more than average - implying their demand for labour grew by more than average - were the high wage ones. It may be, too, that trade unions had an effect. If we accept the argument that the figure for skilled wage rates in leather and rubber in 1951 is suspect, and we accept that chemicals and the manufacture of wooden, cork and straw goods were in some ways different to other industries in the mid-1950s, then we can see some effect of trade union coverage on the variation in wage rates. But these effects were, at best, secondary, only apparent when other factors were absent. In any case, the growth in wage rates was not enough to account for the rise in incomes. This is not to say that the rise in hourly wages was not substantial, but it was nonetheless only around two-thirds of the mean rise in incomes.

But these results are consistent with the argument that structural changes to the workforce caused incomes to rise. We have seen that the industries in which the workforce grew by more than average were also the ones which paid higher wages than average. Looked at in another way, it means that there was a net shift in male labour to the higher-wage

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[372] The rise in skilled wage rates for clothing and for leather working should be ignored, since there are reasons to doubt the reported figures for 1950. Data from other years in the 1950s suggests that the growth in skilled wage rates over the decade, as with the semi-skilled and unskilled wage rates, was close to the mean for manufacturing.

industries. The next chapter therefore investigates whether this net movement was substantial enough to account for the rise in income.

[373] See Table 44, below.

Chapter 6. Structural Change and Income Growth.

This chapter looks at the effect on incomes of structural changes in the workforce. The focus here, once again, is on the male workforce, but constraints on data mean that sometimes the whole workforce - both male and female - is considered. The chapter begins by looking at changes in the male workforce as a single entity. In Chapter 4, three net movements of labour affecting the sectoral structure were identified: the movement of labour out of agriculture, the movement of labour into manufacturing and the, smaller and later, movement of labour into services. Shift-share analysis is used to attempt to calculate the effect of these movements on incomes. From the interpretation of the results, it is concluded that a distinction must be made in investigating the two different ways that the sectoral structure of the workforce changed. On the one hand, employment in manufacturing grew because manufacturing recruited a disproportionately large percentage of those who entered the labour force for the first time, and, on the other, it grew by recruiting workers from other sectors. New entrants to the workforce are identified in this chapter as the younger workforce and those already in work are identified as the older workforce.

Most of the chapter is concerned with analysing these structural changes by age. The first of the sections dealing with this looks at the effect age has on earnings, and it is followed by a section describing the changes in the age structure of the Dutch workforce. The effects on income of changes in the younger and older workforces are then investigated separately. The chapter demonstrates that the income of the younger workforce increased faster than that of the older workforce, and that this increase was linked with the increasing proportion of the workforce in manufacturing. It also finds that sizeable increases in income were to be had by older workers who changed jobs, but that this concerned only a minority of them.

Finally, the chapter considers the growth of mean income by birth cohort. It establishes that extremely large increases in income were received by those birth cohorts born after 1920 - those who were in their twenties and younger in the 1950s. These increases were large not just in comparison with those received by earlier birth cohorts, but also historically. The chapter concludes that structural changes in the younger workforce made a major contribution to the growth in disposable income.

6.1 The net movement of labour.

It is possible for a worker to increase his or her earnings, independently of any general movement in wage rates, by moving to a higher-paid job. Indeed, if wage levels are held stationary, this might be the only method available by which earnings could be increased. Such increases will depend on opportunity. In the case where a worker is forced to move jobs to one which pays a lower wage rate, earnings will fall - again with no change in overall wage rates. Consequently, the earnings history of an individual worker will not be identical to the development of wage rates.

When the movement between jobs is repeated on a large scale, it would be expected to have an effect on the level of average earnings. The only case in which this would have no measurable effect is when the movements are random and cancel each other out. But in a case such as that of the Netherlands in the 1950s, where structural change in the economy led to the creation of new jobs paying higher wage rates, workers moving into these jobs will have experienced a rise in earnings, and it is to be expected that average earnings will have risen without there necessarily having been a change in overall rates of pay.

In the simple case, it is possible to measure by how much incomes rose as a consequence of the net movement of labour between sectors by the use of shift-share analysis. This involves calculating the effect on overall income of changes in the relative proportions of the workforce in each sector. It is possible to do this because total income earned in the economy as a whole is the sum of the income earned in each sector. This can be expressed as

$$Y = \sum_{i=1}^{i=n} Y_i$$

where

Y = the total income earned in the economy as a whole.

n = the number of sectors.

Y_i = the total income earned in the i^{th} sector.

Since the total income earned in any particular sector can be expressed as the product of the mean income earned in the sector ($\bar{y}_i$) and the number of those working in it (L_i), then

$$Y_i = \bar{y}_i \times L_i$$

which, putting these two equations together, gives

$$Y = \sum_{i=1}^{i=n} (\bar{y}_i \times L_i)$$

What this equation states is that, assuming nothing happens to change the mean income in each sector, a rise in the number of people working in a given sector will cause total income, in the economy as a whole, to rise. Likewise, a decline in numbers will cause total income to fall. Assuming that the total working population remains the same, then a rise in the number working in one sector means a fall in the number working in another. The result of this will be a rise in the income earned in the first sector, a fall in the income earned in the second. If the average incomes earned in the two sectors differ, then the total income earned in the economy as a whole will rise or fall as a consequence of the net movement of labour from one to the other.

In the case of the Netherlands during the 1950s, the total number of people in the working population increased, and the numbers working in most sectors increased. In these sectors, therefore, income rose for demographic reasons. In order to eliminate the effect of this in the calculation of total income, it is necessary to use each sector's proportion (P_i) of the total workforce (L) in place of the number working in it. This recasts the equation as

$$Y = \sum_{i=1}^{i=n} (\bar{y}_i \times P_i \times L)$$

which means that mean income per worker ($\bar{Y}$) can be calculated as

$$\bar{Y} = \sum_{i=1}^{i=n} (\bar{y}_i \times P_i)$$

If the mean income per worker increases by an amount $\delta\bar{Y}$ over a given period of time, then the mean income per worker at the end of the period can be expressed as

$$\bar{Y} + \delta\bar{Y} = \sum_{i=1}^{i=n} [(\bar{y}_i + \delta\bar{y}_i) \times (P_i + \delta P_i)]$$

where

$\delta\bar{y}_i$ = the increase in the mean income in the i^{th} sector over the period

δP_i = the increase in the proportion of the workforce in the i^{th} sector over the period.

This equation expands to

$$\bar{Y} + \delta\bar{Y} = \sum_{i=1}^{i=n} (\bar{y}_i \times P_i) + \sum_{i=1}^{i=n} (\delta\bar{y}_i \times P_i) + \sum_{i=1}^{i=n} (\bar{y}_i \times \delta P_i) + \sum_{i=1}^{i=n} (\delta\bar{y}_i \times \delta P_i)$$

From this equation, it is possible to calculate the contribution that the changed structure of the workforce made to the increase in mean income. The total increase in mean income over the period is given by the sum of the second, third and fourth terms. The second term gives what the increase in mean income would have been had there been no change to the structure of the workforce, while the third and fourth terms together give the contribution that structural change made to mean income. The proportional contribution of structural change is therefore the combined value of the third and fourth terms as a proportion of the total increase.

Alternatively, this contribution can be calculated using a counterfactual. This involves calculating the amount by which total income would have risen over a given period had there been no structural change. The difference between this and the amount by which incomes actually rose is therefore the amount by which incomes rose due to structural change. To do this, total income in the years *a* and *b*, at the start and end of the period in question, are specified as

$$Y_a = \sum_{i=1}^{i=n} (\bar{y}_{ai} \times P_{ai} \times L_a)$$

and

$$Y_b = \sum_{i=1}^{i=n} (\bar{y}_{bi} \times P_{bi} \times L_b)$$

where the subscripts *a* and *b* refer to the values of the variables in each of these years. From these equations, it is therefore possible to calculate what the total income in year *b* would have been had the proportion of the population in each sector remained as it was in year *a* (Y_{b*}), by

$$Y_{b*} = \sum_{i=1}^{i=n} (\bar{y}_{bi} \times P_{ai} \times L_b)$$

The increase in total income due to the net movement of labour between sectors (δY_s) can then be calculated by

$$\delta Y_s = \frac{(Y_b - Y_{b*})}{(Y_b - Y_a)}$$

Algebraically, the two methods discussed here - decomposing the total income at the end of a period into starting value and increments, and creating a counterfactual - are identical. This can be shown by decomposing the counterfactual equation. The mean income per worker that would have been received had there been no structural change ($\bar{Y}_{b*}$) is given by

$$\overline{Y}_{b^*} = \sum_{i=1}^{i=n}(\overline{y}_{bi} * P_{ai})$$

but since

$$\overline{y}_{bi} = \overline{y}_{ai} + \delta\overline{y}_{ai}$$

where

$\delta\overline{y}_{ai}$ = the increase in mean income in the i^{th} sector over the period between year *a* and year *b*

then

$$\overline{Y}_{b^*} = \sum_{i=1}^{i=n}[(\overline{y}_{ai} + \delta\overline{y}_{ai}) * P_{ai}]$$

$$= \sum_{i=1}^{i=n}(\overline{y}_{ai} * P_{ai}) + \sum_{i=1}^{i=n}(\delta\overline{y}_{ai} * P_{ai})$$

which is identical to $\overline{Y}_a + \delta\overline{Y}_a$ when δP_{ai} is zero for all sectors (where δP_{ai} is the increase in the proportion of the workforce in the i^{th} sector since year *a*).

There is an advantage in using the counterfactual method in the case under consideration, since it can be used to give an approximate figure for how great a rise in income was received by those who moved between sectors. The first method discussed tends to be used by economists[374], and gives a macroeconomic picture, focussing on the values of the variables. It is not necessary to consider what these values may represent in terms of actual human activity. The counterfactual method tends to be used by demographers[375], and forces attention onto what the numbers represent in terms of net movements of people between sectors. In particular, it enables a distinction to be made between those who moved sectors and those who did not. This is important here, since what we are really looking for is the increase in income experienced by those who moved jobs, rather than the effect that this increase had an the mean income. A rough idea of this can be obtained from the mean increase in income received by those who moved sectors, which can be simply calculated by dividing δY_s by the number of people who made the move.

In practice, things are a little more complex than this. As Mookherjee and Shorrocks point out, where several changes occur simultaneously, it becomes difficult to identify, using shift-share analysis, the contributions of the individual factors to the overall movement[376]. In the case under consideration here, if other changes occurred to the structure of the

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[374] E.g. Nordhaus (1972) uses this method to decompose aggregate productivity by industry; Jenkins (1995) uses it to decompose income inequality by recipient of income.

[375] E.g. Falkingham (1989) uses this method to calculate the effect on the dependency ratio of changes in the age structure of the population.

workforce at the same time as the movement between sectors, this distorts the results. This does not, however, invalidate the exercise. If such distortions can be identified, then the results give some indication as to the nature of these other structural changes.

A number of net movements in the sectoral structure of the male labour force between 1947 and 1960 have already been noted. There was a net decline in the number of men working in agriculture, and a net increase in the number of men working in manufacturing. A large proportion of this increase in manufacturing employment occurred in the metal and chemical industries. In services, there was a fall in the sector's share of male employment at the beginning of the period, and a net rise towards the end.

Information on incomes by sector can be obtained from the CBS income distribution reports used previously. Figures on numbers of people and incomes by class of business are published for 1946, 1950, 1954, 1955, 1957, 1958, 1959 and 1960. There are, however, a number of provisos. The way that the class of business is categorised is not directly comparable with the categorisation of business in the 1960 census, and the method of categorisation in the income distribution reports actually changes from 1958 onwards. The income distribution data for 1960 is only available at the highest levels of summarisation. But the main problem is that income data by class of business are not divided by gender. This is potentially a problem, since, as has been shown, the male and female workforces developed differently. There is, however, no way around the problem, and it has to be kept in mind when interpreting the results.

The shift-share calculation seems to show - surprisingly, at first sight - that those who left agriculture did worse, in terms of their mean income, than those who remained in the sector. The calculation was made by comparing the total number and incomes of those working in agriculture with the total number and incomes of those that were not - a simple two-sector model. Data from 1946, 1950, 1954, 1955, 1957, 1958 and 1959 were used. Data from 1960 were not used, since the totals for agriculture in that year are aggregated with those for hunting and fishing. The numbers and incomes of those categorised as "pensioners" and "without occupation" were subtracted from the total figures for each year to give the numbers and income of the assessable working population. This population was then divided into agricultural and non-agricultural workforces, and the effect on incomes of the net movement from the agricultural into the non-agricultural workforces was calculated by means of shift-share analysis.

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[376] Mookherjee & Shorrocks (1982) p. 886.

	1946-50	1950-54	1954-55	1955-57	1957-58	1958-59
Mean income (f1000) at the start of the period	2.162	3.128	4.026	4.426	5.030	5.285
Increased income (f1000):						
due to exogenous factors	0.976	0.743	0.401	0.604	0.256	0.180
due to the movement out of agriculture	-0.003	-0.003	-0.002	0.000	0.001	-0.003
due to both together	-0.007	-0.002	0.001	0.000	-0.002	-0.005
Total	0.966	0.738	0.401	0.604	0.255	0.172
Percentage of the increase in mean income						
due to the movement out of agriculture	-1.07%	-0.61%	-0.21%	0.04%	-0.44%	-4.51%

Sources: *Inkomensverdeling 1946 en vermogensverdeling 1947 Aanvullende gegevens*, table 2.
Inkomensverdeling 1950 Aanvullende gegevens, table 3.
Inkomensverdeling 1954 en vermogensverdeling 1955, table 6.
Inkomensverdeling 1955, table 4.
Inkomensverdeling 1957 en vermogensverdeling 1958, table 7.
Inkomensverdeling 1958 en vermogensverdeling 1959, table 10.
Inkomensverdeling 1959 en vermogensverdeling 1960, table 9.
Inkomensverdeling 1960 Aanvullende gegevens, table 3.

Table 30: The effect of the decline in the numbers working in agricutulture on mean incomes, 1946-59.

The effect on the mean income of the assessable working population is shown in Table 30. This show the changes in mean nominal incomes between 1946 and 1959, broken down according the periods for which data are available. The increase in mean income due to the net movement of labour out of agriculture is calculated by decomposing the total increase into component parts. It shows that the contribution of this movement to the increase in nominal mean income was negative. This is, however, not necessarily a very helpful result, since we are not interested here in the mean income of the entire assessable working population but in the incomes of those who made the move between sectors. For this we need to use the counterfactual method of shift-share analysis.

The effects on the incomes of those who moved out of agriculture are shown in Table 31. Row A of this table shows the estimated number of those who left agriculture in each of the periods. This estimate is the number that needs to be added to the agricultural population at the end of the period in order for agriculture's share of the assessable working population to be identical to its share at the beginning of the period. Thus, the agricultural sector's share in 1946 was 18.54%. In order for its share of the 1950 assessable workforce to be 18.54%, there would have to have been 89819 more people working in the sector in that year. The decline in the agricultural workforce is defined this way, rather than using the actual difference in the numbers working in the sector at the two dates, in order to cope with the changing size of the assessable working population. The estimated decrease is the same figure as is used in the shift-share calculation.

	1946-50	1950-54	1954-55	1955-57	1957-58	1958-59
A)	89819	24497	40072	6286	15133	42355
B)	17.76%	5.26%	8.58%	1.44%	3.34%	9.67%
C)	2.50%	0.65%	1.04%	0.15%	0.37%	1.03%
D)	3.486	4.214	4.497	4.874	5.557	6.140
E)	1.733	3.271	4.134	4.673	4.570	4.802

Key: A) The estimated number who left agriculture during the period.
B) The proportional decrease in the number of the assessable working population in agriculture.
C) The proportion of the assessable working population who left agriculture.
D) The mean nominal income of the assessable population in agriculture at the end of the period (f1000 a year).
E) The approxiamte mean income of those who left agriculture (f1000 a year).

Sources: *Inkomensverdeling 1946 en vermogensverdeling 1947 Aanvullende gegevens*, table 2.
Inkomensverdeling 1950 Aanvullende gegevens, table 3.
Inkomensverdeling 1954 en vermogensverdeling 1955, table 6.
Inkomensverdeling 1955, table 4.
Inkomensverdeling 1957 en vermogensverdeling 1958, table 7.
Inkomensverdeling 1958 en vermogensverdeling 1959, table 10.
Inkomensverdeling 1959 en vermogensverdeling 1960, table 9.
Inkomensverdeling 1960 Aanvullende gegevens, table 3.

Table 31: The effect of the decline in the numbers working in agriculture on incomes, 1946-59.

Row B shows the estimated number who left the sector as a percentage of the number in the sector at the beginning of the period, demonstrating the decline of the sector over the period. Row C shows the estimated number who left agriculture as a percentage of the assessable working population at the end of the period. This is an estimate of the proportion of the working population involved in the move.

Rows D and E show the effect of the move on income. Row D shows the mean income of those who remained in agriculture at the end of the period. Row E shows the approximate mean income of those who moved out of agriculture. This is calculated by adding the mean income of those in agriculture at the beginning of the period to the mean increase in income received by those who moved out of agriculture, calculated from the shift-share analysis. This is intended to give an impression of how much was gained by those who left agriculture. It is only approximate because the sum of these means is not the same thing as the mean income of those who left agriculture at the end of the period. It is therefore not likely to be the same amount, but it is meant to give a general idea of the effect of the move out of the sector.

The effect, as with the effect on mean incomes generally, seems to have been negative. In every case, the approximate mean income of those who left agriculture was less than the

mean income of those who remained, and except in one case - that of the period between 1955 and 1957 - it was less than the (nominal) mean income of those in agriculture at the beginning of each period. Taken at face value, this suggests that people moved jobs for lower incomes - an unlikely occurrence in conditions of full employment.

The problem with this calculation is that it makes no distinction between employer and employee (i.e. between farmer and agricultural worker). We have already seen that the decline in numbers in each of these occupations differed, with the number of manual workers in agriculture falling by more than forty percent between 1947 and 1960, while the number of farmers fell by only eight. The decline in agriculture was therefore not constant across the sector as a whole. It was, in fact, largely a decline in the numbers of those employed as agricultural workers, whose mean income was less than half that of farmers[377]. Comparing rows D and E in Table 31 does not, therefore, compare like with like.

It is possible to repeat the shift-share calculation, restricting it to the net decline in the number of agricultural workers. CBS income distribution data are published by occupational category for 1952, 1953, 1954, 1957, 1958 and 1959. The occupational categories used are, once again, not directly comparable with the census data, but, unlike the data by business category, they are broken down by gender for some years: 1952, 1953, 1958 and 1959. The male data for these years were therefore used for the calculation, whose results are shown in Table 32. This shows that the approximate mean income of those who moved out of agriculture was considerably higher, by more than fifty percent, than the mean income of those who stayed. But it should not be thought that these results suggest that those who left agricultural employment received high earnings by other standards. "Higher" is, of course, a comparative adjective. The approximate mean income calculated here, in each period, was well below the mean income of the assessable working population as a whole. It was also the case that a minute proportion of the male working population took part in the move - less than two percent in the five years 1953-58.

The rate of decline was not constant. From 1952 to 1953, indeed, there was a rise in the number of agricultural workers, presumably a consequence of the fall in agricultural unemployment in 1953[378]. But between 1953 and 1958, the number of agricultural workers fell by more than a quarter[379], and, in 1958-59, the exodus became more rapid, with the

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377 Calculated from the same sources as used in Table 32.

378 CBS (1964) p. 79.

379 Comparing the percentage of the assessable workforce that this represented with the percentage of the assessable workforce that moved out of agriculture generally, as shown in Table 31, it seems that nearly all of the decline in the agricultural workforce during the boom of the mid-1950s was due to workers, rather than farmers, leaving the sector.

	1952-53	1953-58	1958-59
A)	-28250	52265	28298
B)		27.51%	18.38%
C)		1.75%	0.87%
D)	2.168	3.097	3.422
E)		5.247	5.998

Key: A) The estimated number who left employment in agricultural work during the period.
B) The proportional decrease in the number of agricultural workers.
C) The percentage of the male assessable working population who left agricultural employment.
D) The mean income of agricultural workers at the end of the period (f1000 a year).
E) The approximate man income of those who left agricultural employment (f1000 a year).

Sources: *Inkomensverdeling 1952 en vermogensverdeling 1953*, table 1.
Inkomensverdeling 1953 en vermogensverdeling 1954, table 1.
Inkomensverdeling 1958 en vermogensverdeling 1959, table 9.
Inkomensverdeling 1959 en vermogensverdeling 1960, table 16.

Table 32: The effect on incomes of the decline in the number of men employed as agricultural workers, 1952-59.

number leaving in this one-year period amounting to more than half the net decline in the previous five years. In this year, the exodus seems to have made a disproportionately large effect on male incomes, with a net movement out of manual work in agriculture of less than one percent of the workforce making a contribution of more than nine percent of the that year's increase in the income of the male working population.

We cannot make similar calculations to measure the effect on incomes of the net movement of labour into manufacturing. The problem flows from the fact that what we want to measure in this case is net movement *into* a sector and not *out of* it. It is possible to calculate the mean increase in income of those who began work in manufacturing, just as was done for the mean increase in income of those who left agriculture. But, unlike in the case of those who left agriculture, we have no figure for the mean previous income of those who entered manufacturing. We cannot, therefore, estimate what proportion of their previous incomes the mean increase represents, and there is therefore no way of knowing if this was a large increase or a small one.

However, the figures do suggest that the growth of employment in manufacturing may have contributed to the rise in incomes. This is implied by the way that both the share of the workforce in the sector and the mean income in the sector, relative to mean incomes as a whole, rose at various points in the period, never falling to their original level. Table 33 and Table 34 show three phases of growth for the manufacturing workforce as whole - from 1946 to 1955, from 1955 to 1957 and from 1957 to 1960. Table 33 shows the state of the manufacturing workforce - its size and mean income in relation to the rest of the assessable working population - in each year for which there are data, while Table 34 shows

	1946	1950	1954	1955	1957	1958	1959	1960
Manufacturing								
A)	29.06%	33.24%	33.50%	33.94%	32.62%	29.73%	30.17%	30.69%
B)	24.53%	28.65%	29.03%	29.28%	29.56%	27.05%	27.36%	28.04%
C)	84.40%	86.18%	86.67%	86.26%	90.62%	91.00%	90.68%	91.34%
Metal industries								
A)	9.05%	11.02%	12.32%	13.18%	13.09%	11.38%	11.22%	#N/A
B)	8.04%	10.28%	11.35%	12.05%	12.67%	11.01%	10.89%	#N/A
C)	88.90%	93.25%	92.18%	91.41%	96.79%	96.78%	97.06%	#N/A
Chemicals								
A)	1.24%	1.52%	1.62%	1.79%	1.76%	2.08%	1.96%	#N/A
B)	1.22%	1.59%	1.79%	1.87%	1.95%	2.22%	2.10%	#N/A
C)	98.16%	104.89%	110.27%	104.57%	110.94%	106.88%	107.00%	#N/A

Key: A) The percentage of the assessable working population in the sector.
B) The percentage of the total income of the assessable workforce earned in the sector.
C) Mean income in the sector as a percentage of the mean income of the assessable workforce.
#N/A = "Data not available"

Sources: *Inkomensverdeling 1946 en vermogensverdeling 1947 Aanvullende gegevens*, table 2.
Inkomensverdeling 1950 Aanvullende gegevens, table 3.
Inkomensverdeling 1954 en vermogensverdeling 1955, table 6.
Inkomensverdeling 1955, table 4.
Inkomensverdeling 1957 en vermogensverdeling 1958, table 7.
Inkomensverdeling 1958 en vermogensverdeling 1959, table 10.
Inkomensverdeling 1959 en vermogensverdeling 1960, table 9.
Inkomensverdeling 1960 Aanvullende gegevens, table 3.

Table 33: Manufacturing's share of the workforce and income, 1946-60.

how the manufacturing workforce[380] changed in size between each of these years. Between 1946 and 1955, the proportion of the assessable workforce in the sector rose. In the first part of this period, between 1946 and 1950, manufacturing's mean income (expressed as a percentage of the mean income of the entire assessable working population) rose, and then from 1950 until 1955 it remained roughly the same. Between 1955 and 1957, there was a small fall in the percentage of the workforce in manufacturing, although the actual number of people working in the sector rose quite sharply. However, their relative mean income rose. Between 1957 and 1960, the mean income remained at a higher level than in the first half of the decade, while the proportion of the workforce in the sector varied in the same manner as the number of people working in it. In 1957-58, the number of people and the proportion of the assessable workforce in manufacturing fell, both rising in 1958-59 and remaining about the same level in 1959-60.

Throughout the whole period, from 1946 to 1960, the changing pattern of employment and relative income in the metal industries was similar to manufacturing as a whole, with

[380] Manufacturing here is defined as those businesses classed in the income distribution data as "industrial", but omitting the figures for mining, building and construction, and the utilities (gas, water and electricity).

	1946-50	1950-54	1954-55	1955-57	1957-58	1958-59	1959-60
Manufacturing							
A)	244022	75512	40500	17800	-117400	32900	57839
B)	25.67%	6.32%	3.19%	1.36%	-8.84%	2.72%	4.65%
C)	6.79%	1.99%	1.05%	0.44%	-2.88%	0.80%	1.36%
Metal industries							
A)	100125	70931	42000	24000	-69500	-1000	#N/A
B)	33.83%	17.91%	8.99%	4.72%	-13.04%	-0.22%	#N/A
C)	2.79%	1.87%	1.09%	0.59%	-1.71%	-0.02%	#N/A
Chemicals							
A)	14129	6862	7700	2300	13100	-3600	#N/A
B)	34.88%	12.56%	12.52%	3.32%	18.32%	-4.26%	#N/A
C)	0.39%	0.18%	0.20%	0.06%	0.32%	-0.09%	#N/A

Key: A) The increase in the number of people in the sector over the period.
B) The proportional increase in the number of the assessable working population in the sector.
C) The proportion of the assessable working population who moved into the sector.
#N/A = "Data not available"

Sources: *Inkomensverdeling 1946 en vermogensverdeling 1947 Aanvullende gegevens*, table 2.
Inkomensverdeling 1950 Aanvullende gegevens, table 3.
Inkomensverdeling 1954 en vermogensverdeling 1955, table 6.
Inkomensverdeling 1955, table 4.
Inkomensverdeling 1957 en vermogensverdeling 1958, table 7.
Inkomensverdeling 1958 en vermogensverdeling 1959, table 10.
Inkomensverdeling 1959 en vermogensverdeling 1960, table 9.
Inkomensverdeling 1960 Aanvullende gegevens, table 3.

Table 34: The growth of the manufacturing workforce, 1946-60.

the difference that the industries' share of the assessable workforce kept on rising during the mid-1950s boom. In chemicals, the mean income was generally higher - as might be expected from relative wage levels in the industry - with the number employed growing until 1958-59[381].

What we have is a sector whose share of the workforce grew and whose mean income rose as fast or faster than the mean income generally. This seems to suggest that it must have made a contribution to the overall increase in income. This would, however, only have been the case if the increased share of the workforce was at the expanse of categories of business whose workers earned lower incomes. This is likely in conditions of full

[381] The metal industries, for the purposes of the shift-share analysis, are those defined in the reports for 1946-57 as "the metal industry, shipbuilding, and aircraft and vehicle manufacture"; those defined in the 1958 report as "the metallurgical industry", "the manufacture of metal products and machine building", "the manufacture of electrical machinery", "vehicle manufacture" and "other craft businesses in the metal industry"; and those defined in the 1959 report as "the metal industries", "the manufacture of iron, steel and metal products", "machine building", "manufacture of electrical machinery" and "vehicle manufacture". The chemical industries are simply those defined as "the chemical industry" in the data for 1946-57, but data for the petrochemical industry is listed separately in the 1958 and 1959 reports. These data were re-aggregated for the shift-share analysis.

employment, but there is no way of testing with these data if this was what actually happened.

Furthermore, the figures suggest that there was more than one movement of labour. The most important indication of this is the way that the sign of the growth of manufacturing employment differs in the period 1955-57, depending on whether growth is defined as growth of numbers employed or growth in share of the working population. The growth in numbers is positive, the growth in share is negative. The growth in share is used here to factor out the increase in the size of the workforce that occurred as the result of population growth, but using it as a measure of structural change inevitably builds in the assumption that the expansion of the workforce would, *ceteris paribus*, have affected all sectors equally. In reality, this was not the case.

It has already been noted that the female workforce expanded during the 1950s, and that it grew in different branches of the economy than the male workforce. As will be shown in Chapter 7, the female workforce expanded particularly rapidly during the mid-1950s boom, and this is the likely reason for the absolute expansion of employment in manufacturing appearing as a fall in share. There is, however, no way of testing whether this was the case, owing to the absence of income distribution data for category of business broken down by gender.

But there were also two movements within the male workforce, which need to be distinguished. It was noted in Chapter 4 that the male workforce in manufacturing in 1960 was younger than the male workforce overall. The implication here is that the manufacturing workforce expanded more as a consequence of employing new entrants than it did from the movement of workers from other sectors. The conclusion is that the structural changes in the younger male workforce - those who entered the workforce after the war - and the structural changes in the older male workforce - already employed - need to be analysed separately.

In addition, there were movements of labour within the manufacturing sector. This is particularly noticeable in the periods 1954-55 and 1955-57, when, according to Table 34, the proportion of the workforce that entered the metal industries was greater than the proportion of the workforce that entered manufacturing as a whole. one possible explanation of this is that workers moved into the metal industries from other areas of manufacturing. In principle, it would be possible to investigate this movement, since figures for manufacturing are broken down by industry, but this would still leave the other movements affecting the results needing to be factored out. In any case, the proportions of

the assessable working population involved seem, as with the movement of manual workers out of agriculture, extremely small - apparently in contradiction to what the census data show.

Similar conclusions about multiple movements of labour can be drawn from looking at the service sector. Again, just as in manufacturing, there is a difference, in some periods, in the sign for the growth in numbers in the sector and the growth in its share of the assessable working population[382]. The major difference with manufacturing is that, as the percentage of the workforce in the service sector grew, its relative mean income fell. This is consistent with a disproportionate number of women entering the sector, but, once again, lack of data means that the effect of this cannot be calculated.

It must be concluded, then, that a simple story of incomes rising because workers moved between sectors cannot be sustained. The analysis of the movement of labour out of manual work in agriculture shows that this process had some impact, with the effect in 1959 being disproportionately large given the numbers involved, but, in general, the numbers involved were too small to account for a general rise in incomes.

The analysis of the growth of manufacturing suggests that it is necessary to distinguish between the entry of younger workers, taking up their first jobs in the sector, and the movement from other sectors of older workers, already established in the labour force. These two groups of workers are therefore investigated separately. But this has a further implication on the argument, since age and earnings are associated. So first, we have to look at what this association is, and how it will have affected Dutch income levels.

6.2 Age and earnings growth.

Earnings tend to vary by age. This is a phenomenon that is found in all countries in the twentieth century. A cross-sectional survey of age and earnings across the workforce will show that, up to a certain age, earnings rise then level off or even fall. Plotting earnings against age for a given population therefore produces a hump-shaped curve. These curves vary by occupation, the age at which the rise in earnings comes to an end differing as well as the general level of earnings[383].

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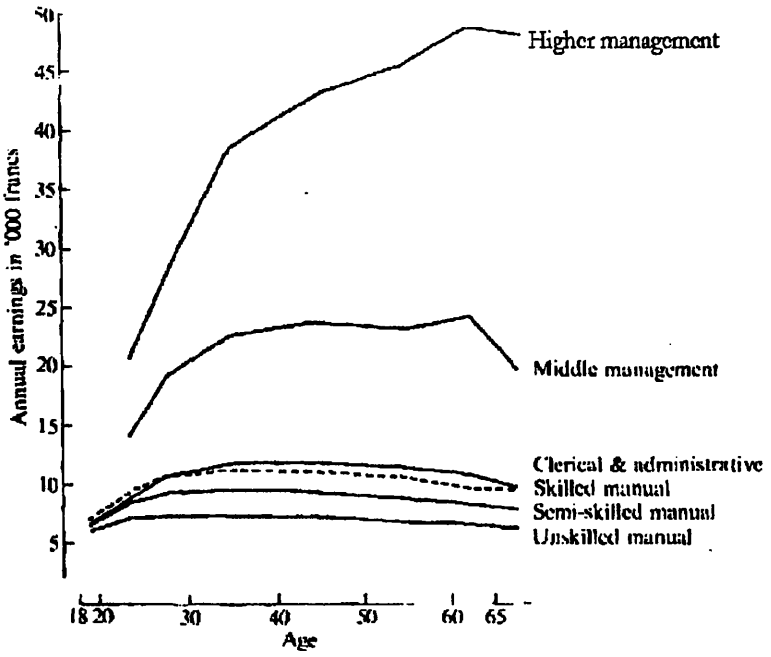
[382] Services are defined as everything that does not come under the heading of agriculture (including hunting and fishing) or industry (including building and construction, mining and the utilities, as well as manufacturing. The service sector is defined in this way because the data are categorised differently before 1958 than from 1958 onwards, and a match at a lower level of summarisation is, for this reason, impossible.
[383] Phelps Brown (1977) p. 263.



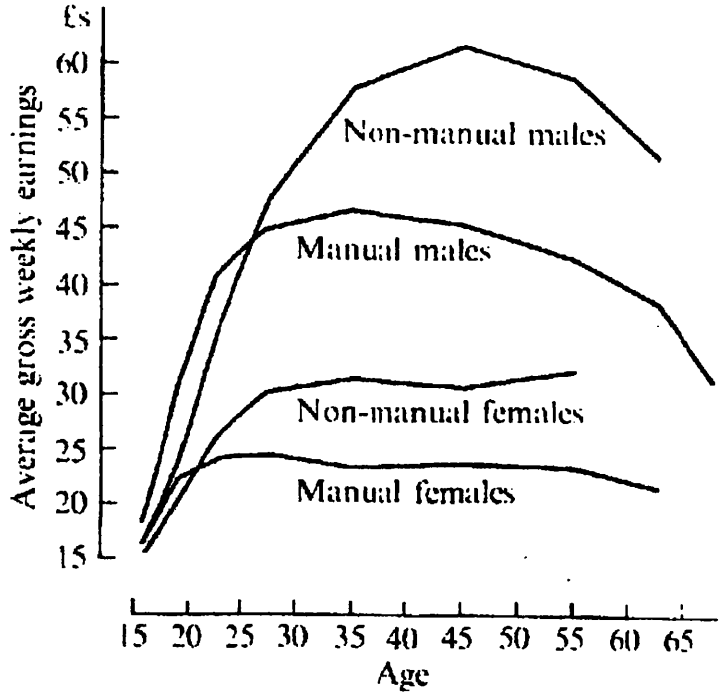
Source: Phelps Brown (1977) p. 263.

Figure 10: Age-earnings profiles of French employees, 1966.

As an example of this, Figure 10 shows the age earnings profiles of various categories of French employees in 1966. Here, the curves for manual workers and the lower grades of white-collar staff rise little and flatten before the age of 30, suggesting that there was little variation in mean earnings by age for these sorts of occupation. For higher management, on the other hand, the age-earnings curve only stops rising at the age of 60.

Age-earnings curves also vary by gender, as can be seen from Figure 11, which shows the different curves for the male and female workforces in Britain in 1974. The curves for female workers in this case show some similarity to those belonging to the lower-paid occupations of French employees, flattening out before the age of 30. In contrast, the curve for male manual workers rises much more sharply, but actually begins to fall from about the age of 35, while the curve for non-manual males continues rising, beginning to fall around the age of 45. It is also generally true that the curves for non-manual occupations reach higher than the curves for manual occupations.

The age-earnings curve is a snapshot, frozen at one point in time. It does not represent the growth of earnings of any given individual or even the average of an entire birth cohort. These are more complex and more varied in their paths. The growth pattern of average earnings by birth cohort changes over time. The historical circumstances under which people earn their livings change, and these circumstances affect those of different ages in different ways. Phelps Brown suggests the example of British children born in 1935, who - subject to evacuation, interruption of schooling, and absence of their fathers in the Second



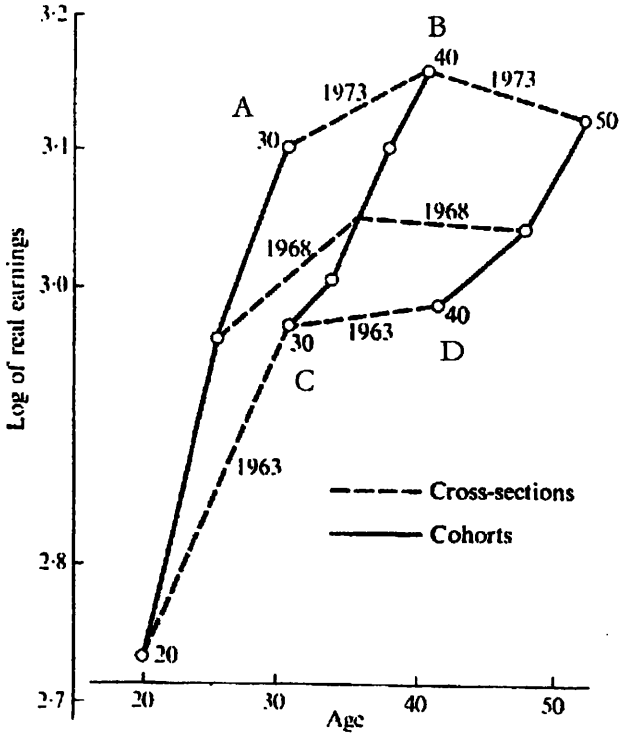
Source: Phelps Brown (1977) p.264.

Figure 11: Age-earnings profiles of British employees, April 1974.

World War - had a very different experience to those born ten years later[384]. Figure 12 follows those aged 20, 30 and 40 in 1963 for a period of ten years and gives a picture of the relationship between the mean income of birth cohorts and the age-earnings curve at different points in time. The age-earnings curve here is moving upwards, so the mean incomes of each birth cohort do not move along the curve but rise at a more vertical angle. The curve also changes shape over time, with the path between mean income at age 30 and mean income at age 40 in 1973 (represented by the dotted line between point A and point B) rising more sharply than the equivalent path for 1963 (represented by the dotted line between point C and point D).

In the context of this study, a comparable, or even greater, contrast can be made between Dutch children born in 1935, who experienced occupation and the "hunger winter" of 1944-45, and those born after the liberation. As far as working experience is concerned, those who entered the workforce in 1952, just as the demand for industrial labour began to increase substantially, started their working lives very differently than those fifteen years older who reached working age in a period of mass unemployment, or those ten years older, who began work under the threat of forced labour in Germany. Those who entered the workforce at the end of the 1950s, when the demand for service sector employment

[384] Ibid. pp. 263-4.



Source: Phelps Brown (1977) p. 264

Figure 12: Earnings growth of birth cohorts in Britain, 1963-73.

began to increase, had yet a different experience. And this latter group will have experienced the boom of 1959 onwards differently from those already in the middle of their working lives. These different experiences will have had an effect on the income each worker received.

Demographic factors, and how they interact with other economic developments, therefore play a role in the growth of mean earnings. There are two major processes involved: those associated with changes in the age structure of the entire workforce and those associated with changes in the occupational structure of each age group. Changes in the age structure of the entire workforce affect the growth of mean earnings because younger workers have lower mean earnings than older ones. If the mean age of the workforce gets younger - say as the consequence of increased numbers of young workers entering it - then, *ceteris paribus*, mean earnings will fall. Conversely, if the number of young workers entering the workforce declines, then the mean age of the workforce will rise, and along with it mean earnings.

But, since the age-earnings curve for each occupation tends to differ, then the level of mean earnings of each age group is itself dependent on the mix of occupations followed by those within it. If this mix changes, the mean earnings received by the age group changes. This in turn affects how changes to the age structure of the workforce alter the level of mean earnings. So, for example, if the workforce expands by taking on a larger number of

young workers than in previous years, but in higher-paid jobs, then, from an analytical viewpoint, the level of mean earnings will move in opposing directions. On the one hand, the decline in the mean age of the workforce reduces mean earnings. On the other, the rise in the level of mean earnings of the youngest age group or groups has the reverse effect. The actually observed movement will be, *ceteris paribus*, the resultant of these two movements.

6.3 The changing age structure of the workforce.

It is possible to use census data to investigate the changes in the age structure of the workforce. Table 35 shows that the proportion of the population in the workforce fell between 1947 and 1960. For men, this fall is almost completely accounted for by a drop in the participation rate of the youngest and oldest age groups. The female workforce saw a slight increase in the participation rate of the 14-24 year-old age group, but the participation rate of those aged 25 and over declined, reflecting the lower participation rate of married women. There were two reasons for this decline. Firstly, as we have already seen, the number of wives working in the family business fell. Secondly, the age at which women married also fell. The average age of women at the time of their marriage declined during the period from 27.2 years in 1947[385] to 25.6 years in 1960[386].

The usefulness of the census data is, however, limited. It is not possible to directly compare changes in the age structure of the workforce at the level of occupations, since occupations were categorised differently in the 1947 and 1960 censuses[387]. Unlike in the case of the

	1947			1960		
Age	Male	Female	Total	Male	Female	Total
14-19	66.00%	48.74%	57.52%	55.14%	51.78%	53.49%
20-24	92.15%	50.71%	71.42%	91.15%	52.79%	72.30%
25-39	97.80%	23.62%	60.17%	98.12%	17.76%	57.75%
40-49	97.72%	20.68%	58.19%	98.31%	16.45%	56.56%
50-64	89.50%	16.89%	52.30%	91.15%	13.53%	50.78%
65-69	51.70%	9.18%	29.82%	33.19%	4.31%	17.91%
70+	23.86%	4.41%	13.57%	11.62%	1.58%	6.25%
Total 14+	85.13%	26.66%	55.45%	80.98%	22.46%	51.25%

Source: *13e Algemene Volkstelling, Deel 10A*, page 17.

Table 35: The working population as a percentage of the population by age, 1947 and 1960.

[385] *Jaarcijfers voor Nederland, 1951-1952*, table 34.
[386] *Jaarcijfers voor Nederland, 1959-1960*, table 40.

	1947						
	Age:						
	14-19	20-24	25-39	40-49	50-64	65 and over	Total
Agriculture	25.31%	14.71%	16.16%	18.61%	22.33%	44.12%	19.72%
Mining and quarrying	1.53%	1.86%	2.03%	1.96%	1.29%	0.40%	1.74%
Manufacturing	38.83%	26.13%	29.85%	27.37%	24.14%	18.07%	28.40%
Building & construction	6.01%	5.12%	8.87%	9.49%	10.41%	8.02%	8.44%
Public utilities	0.35%	0.50%	0.93%	1.37%	1.61%	0.17%	0.99%
Trade, banking and insurance	10.06%	8.75%	13.72%	15.24%	14.62%	15.32%	13.20%
Transport & associated industries	5.70%	6.65%	9.07%	10.69%	11.25%	5.47%	8.95%
Services	3.44%	7.68%	12.88%	11.85%	11.43%	6.66%	10.45%
Unknown	0.06%	0.08%	0.06%	0.04%	0.03%	0.04%	0.05%
Temporarily unemployed	8.71%	28.52%	6.44%	3.38%	2.87%	1.73%	8.05%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: *12e volkstelling, 31 mai 1947, Serie A Deel 2*, table 3.

	1960						
	Age:						
	14-19	20-24	25-39	40-49	50-64	65 and over	Total
Agriculture	12.19%	10.04%	10.37%	11.75%	15.72%	30.04%	12.51%
Mining and quarrying	1.95%	1.79%	2.29%	2.00%	1.16%	0.07%	1.83%
Manufacturing	34.90%	31.84%	34.82%	31.31%	29.66%	19.59%	32.24%
Building and construction	13.32%	13.20%	11.47%	12.29%	13.09%	9.76%	12.31%
Public utilities	0.38%	0.76%	1.46%	1.65%	1.81%	0.35%	1.36%
Trade, banking and insurance	11.00%	11.95%	13.81%	14.89%	15.01%	22.60%	14.05%
Transport & associated industries	7.00%	9.11%	9.37%	8.06%	7.36%	3.00%	8.24%
Services	18.95%	20.77%	16.01%	17.59%	15.47%	14.56%	16.98%
Unknown	0.31%	0.54%	0.41%	0.47%	0.70%	0.02%	0.48%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: *13e Algemene volkstelling, Deel 10A*, table 4.

Table 36: The sectoral structure of the male workforce by age, 1947 and 1960.

overall figures for occupations, the 1947 data were not recalculated on the 1960 basis. It is, however, possible, to look at broad categories. Table 36 shows the proportion of the male population working in each sector, by age, in 1947 and 1960, and some conclusions can be drawn from these figures.

Male manufacturing employment expanded at all ages[388]. The expansion of technical education for the young may have supplied new, skilled workers to the workforce, but there also seems to have been movement into manufacturing by older workers. In both years, there was a higher proportion of the younger age groups in manufacturing than of older ones. The most striking feature is the rise in the proportion of the 25-39 year-old age group working in manufacturing, from just under thirty percent in 1947 to nearly thirty-five percent in 1960. Of those industries that made the biggest contributions to the net increase in jobs, most had, in 1960, younger workforces than the average for manufacturing as a

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[387] *13e Algemene volkstelling, Deel 10B*, pp. 7-8.

[388] With the exception of those under the age of 20. The most likely explanation for this is that a large proportion of those training for industrial work did so full-time, and so did not appear in the employment statistics.

whole. The manufacture of metal products, the manufacture of machinery, the manufacture of electrical machinery and vehicle manufacture together account for about forty percent of the manufacturing workforce under the age of forty. Chemicals show a slightly older workforce, as in 1947[389].

Men working in agriculture tended to be older, in both years, than the workforce as a whole. With the exception of those under the age of 20, the proportion of the population working in agriculture rose along with age. The pattern, however, changed over time. Between 1947 and 1960, the proportion of the entire male workforce taking part in agriculture fell at all age levels, but the fall was greatest amongst the younger age groups. The fall in the proportion of those aged 65 and above working in the sector was also larger than average. This seems to have been associated with the introduction of old-age pensions, and is discussed further in Chapter 7. The result of these above average falls in numbers amongst the youngest and oldest was a distinct narrowing of the age range of the male agricultural population. This had the consequence that, while those aged between 50 and 64 formed just over a quarter of the male agricultural population in 1947, by 1960 they formed almost thirty percent.

Changes in the age structure of the male workforce in the service sector can also be seen. There was a higher proportion of those working in commerce, banking and insurance in the older age groups than the younger, in both years, but the proportion working in jobs categorised as belonging to the "service sector" was higher at the younger end of the age range in 1960, the reverse (ignoring those aged 65 and over) of the situation in 1947. This rise is consistent with the growth of the service sector from 1958, but the figures should also be treated with caution. "Services" tended to be a general bucket into which jobs were put that could not be categorised elsewhere, and the category is not exactly the same in both years. For example, the 1960 figure includes conscripts, while the 1947 figure does not.

The female workforce differed from the male in age as well as occupational structure. It has previously been noted that around half the female working population was under the age of 25, that the proportion of women in manufacturing was lower than that of men and that the proportion in services was higher. As can be seen by comparing Table 36 with Table 37, the differences between the occupational structures of men and women were to be found in all age groups.

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389 *13e Algemene volkstelling, Deel 10A*, table 4.

1947

	Age:						
	14-19	20-24	25-39	40-49	50-64	65 and over	Total
Agriculture	13.34%	11.51%	18.13%	23.53%	28.09%	41.02%	17.90%
Mining and quarrying	0.17%	0.18%	0.13%	0.08%	0.04%	0.02%	0.13%
Manufacturing	29.47%	23.34%	14.35%	9.59%	7.58%	5.14%	18.43%
Building and construction	0.32%	0.41%	0.49%	0.70%	0.63%	0.35%	0.47%
Public utilities	0.09%	0.16%	1.07%	0.78%	0.57%	0.47%	0.52%
Retail in shops	10.74%	10.18%	14.99%	19.15%	17.74%	15.38%	13.76%
Other trade, banking & insurance	5.30%	5.45%	4.11%	3.96%	3.19%	2.70%	4.54%
Transport & associated industries	3.97%	5.33%	5.68%	7.38%	9.23%	9.84%	5.90%
Household services	25.75%	22.89%	15.13%	12.46%	13.57%	13.55%	18.88%
Other services	8.41%	18.12%	23.83%	21.02%	18.24%	11.26%	17.45%
Unknown	0.02%	0.02%	0.02%	0.01%	0.02%	0.01%	0.02%
Temporarily unemployed	2.41%	2.41%	2.09%	1.34%	1.11%	0.25%	1.98%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: *12e volkstelling, 31 mai 1947, Serie A Deel 2*, table 3.

1960

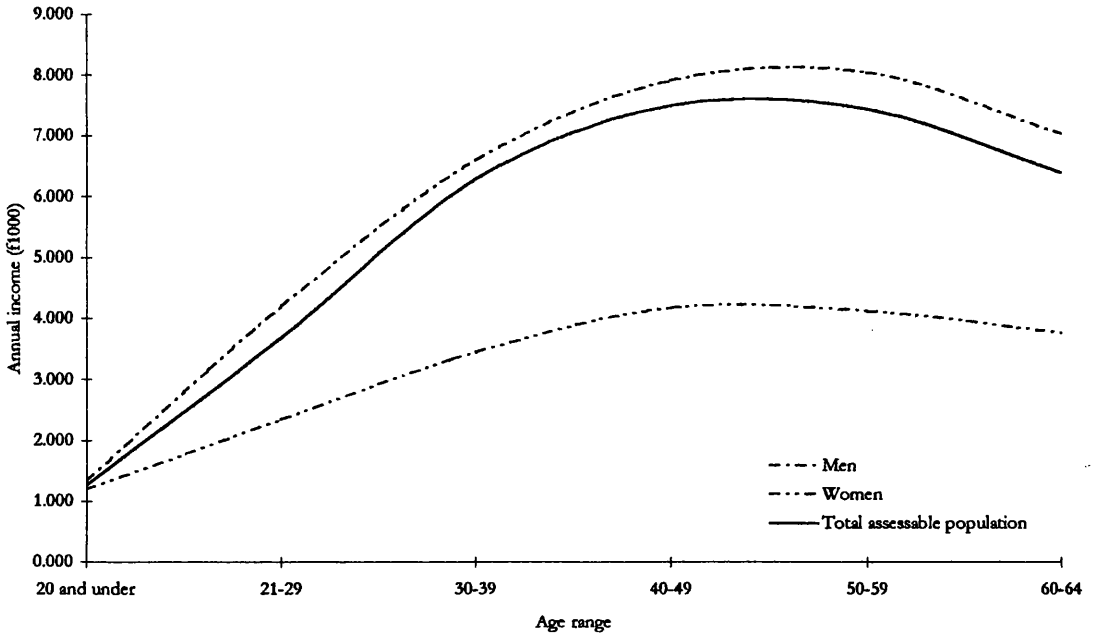
	Age:						
	14-19	20-24	25-39	40-49	50-64	65 and over	Total
Agriculture	2.59%	3.15%	5.35%	6.87%	6.51%	7.52%	4.40%
Mining and quarrying	0.12%	0.16%	0.11%	0.09%	0.02%	0.00%	0.11%
Manufacturing	30.08%	26.49%	18.30%	12.32%	10.70%	7.24%	21.81%
Building and construction	0.53%	0.80%	0.68%	0.47%	0.42%	0.28%	0.60%
Public utilities	0.19%	0.23%	0.21%	0.22%	0.24%	0.00%	0.21%
Retail in shops	18.66%	14.48%	15.04%	19.37%	19.25%	21.73%	17.13%
Other trade, banking and insurance	7.97%	8.09%	6.68%	5.31%	4.96%	3.76%	6.96%
Transport & associated industries	1.62%	2.49%	3.14%	2.36%	2.09%	0.97%	2.29%
Household services	17.65%	10.89%	7.03%	8.59%	14.09%	26.18%	12.40%
Other services	20.41%	32.89%	43.13%	44.24%	41.51%	32.17%	33.85%
Unknown	0.17%	0.33%	0.32%	0.16%	0.21%	0.14%	0.24%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: *13e Algemene volkstelling, Deel 10A*, table 4.

Table 37: The sectoral structure of the female workforce, by age, 1947 and 1960.

What all this confirms is that, in order to calculate the effect on earnings of changes in the age structure of the workforce, it is necessary to have earnings data summarised not only by age but also by occupation and gender. This is because the census data show that structural change to the workforce was neither simply a question of workers of all ages moving between jobs, nor a question of new entrants to the workforce taking up new jobs, but a combination of the two. Furthermore, the male and female workforces differed radically in both their age and occupational structures.

These criteria are partly met by the CBS income distribution reports. As with earlier calculations, relevant data are not available for every year. Income data are summarised by age only for the years 1950, 1952, 1953, 1954, 1957, 1958, 1959 and 1960, and the age ranges by which they are summarised are inconvenient and inconsistent. Data are summarised in the age ranges 30-39, 40-49, 50-59 and 60-65 in all cases, but those in their twenties are defined as 21-29, not 20-29, and the figures are divided at the age of 25 for the



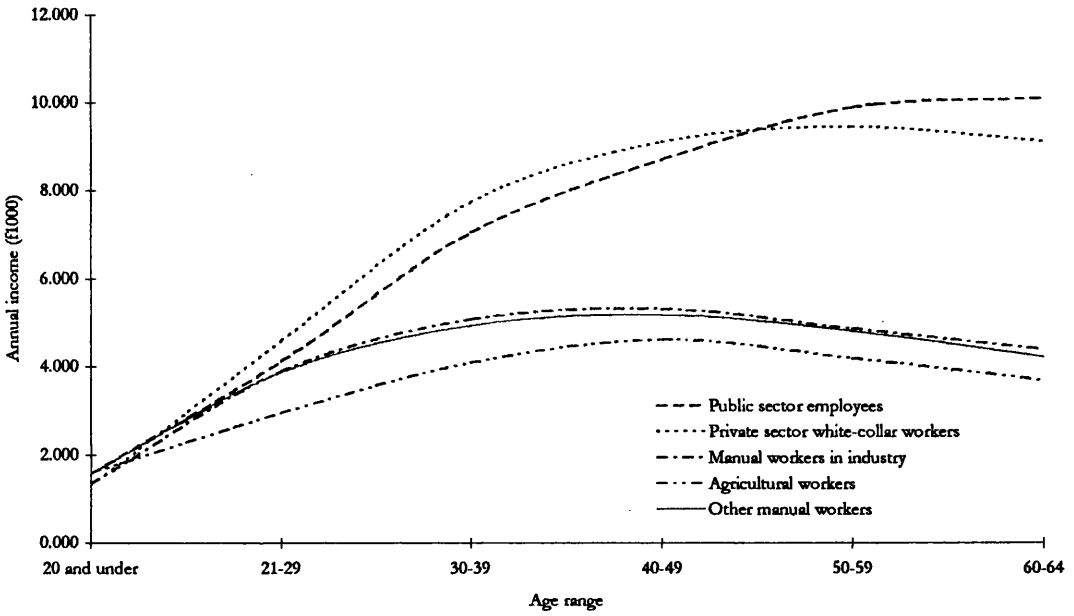
Source: *Inkomensverdeling 1959 en vermogensverdeling 1960*, table 15.

Figure 13: The relationship between age and income, 1959.

earlier years only. The data are summarised by age and occupation in only six out of the eight years - 1952, 1953, 1954, 1957, 1958 and 1959 - and the occupational categories are also inconsistent over time, making it impossible, for example, to follow the mean incomes of private-sector white-collar workers or of industrial workers by age group over the whole period. There are no data summarised by age and business sector.

A major problem is that, for most years, data are not summarised by both age and gender. Separate reports for men and women by age are only available for 1950 and 1959, which means that the only data summarised by age, gender and occupation are those for 1959. Because of the different structures of the male and female workforces, this is a potentially serious problem. The only solution to this is to be aware of the distortions that are produced in calculations that do not differentiate between the male and female workforces. The extent of this distortion varies. Men formed such a large proportion of the workforce that, in some circumstances, the female workforce has little effect on the figures. This is the case, for example, when considering the older sections of the workforce. On the other hand, the high proportion of working women in the younger age groups means that using figures for the total workforce as a proxy for the male workforce when considering those aged under 30 - and even more so when considering those under 25 - might seriously misrepresent what happened.

The income distribution reports can be used to draw age-income curves for the Dutch workforce. Figure 13 shows the curves for men and women in 1959. These curves cover



Source: Inkomensverdeling 1959 en vermogensverdeling 1960, table 15

Figure 14: Age-incomes curves for selected occupational categories in the male workforce, 1959.

the assessable population as a whole, not just those who received most of their income from their occupation. The numerically dominating influence of the male workforce on the total workforce can be seen by the way the line for the total assessable population closely follows that of the male population, while the fall in the participation rate of women on marriage, combined with the inclusion of married women's incomes with their husbands', reveals itself by the way that the line for the total population moves closer to the male line in the 30-39 age range.

There are considerable differences in the curves for different categories of occupation. Figure 14 shows the curves associated with selected occupational categories, covering the majority of the male workforce, in 1959. White-collar workers in both the private and public sectors[390] have curves that rose more sharply than those of the manual occupations, and that rose to considerably higher incomes. This is partly due to the inclusion of managerial grades in white-collar categories. Managers generally receive higher earnings than those they manage, and their numbers tend to be greater in the older age ranges. But not all white-collar workers had relatively high earnings. For example, male shop personnel have an age-earnings curve with values not much greater than that of male industrial

390 "Public sector employees" are those defined as "teaching personnel" (all levels), "general civil servants", and "police and military personnel"; "private sector white-collar workers" are those defined as "administrative personnel", "shop personnel", "travelling salesmen, representatives, etc." and "other white-collar workers".

workers. In the case of male shop personnel, the figures will almost certainly contain a high proportion of managerial and supervisory staff, since the retail sector's workforce tends to be one in which men manage women.

The curves reveal differences within the male manual workforce. The mean income of agricultural workers in their twenties was just over two-thirds that of industrial workers of the same age group, while the mean income of industrial and other non-agricultural manual workers in their twenties was little different from that of white-collar workers. The shapes of the curves are also different, with the curve for agricultural workers rising for longer than that of industrial workers. On the face of it, this is peculiar, since the opposite would be expected. The grading system for industrial workers' wage rates would be expected to cause industrial workers' earnings to rise continuously as they became more experienced, at least up to some moderately late peak; piece-rate systems would be expected to produce the same results. There were no such systems in operation in the agricultural workforce. Two explanations, not exclusive, suggest themselves. The first is that what is being measured here are incomes, not earnings, and it may be that older agricultural workers were more likely than younger ones to own or rent a piece of land with which they could supplement their earnings. This is speculation, since there do not appear to be data for land ownership or rental by age. The second explanation is that, as was noted above, a larger percentage of industrial workers in their twenties and thirties were to be found in jobs with relatively sharp, high-paying curves than was the case with industrial workers in older age groups. Conceptually, the curve for industrial workers should be regarded as two curves welded together: one for the older industrial workforce, to be found mostly in traditional industries, the other for the younger workforce, a greater proportion of whom worked in the industries that expanded during the 1950s.

There are also major differences between the male and female curves for the same occupation, with the female age-income curves tending to be flatter.

The consequence of all this is that, in order to calculate the effect on earnings of increased employment in manufacturing, it is necessary to deal with younger and older workers separately. It has already been noted that the movement of those already in the labour force into higher-paid jobs in manufacturing tends to raise the level of mean earnings. On the other hand, the entry of large numbers of new workers, who have previously been too young to be in the labour force, tends to reduce it. The census data shows that both movements of labour occurred, and that therefore contradictory effects on the level of mean earnings are to be expected.

6.4 Employment growth of younger workers in manufacturing.

In principle, shift-share analysis could be used to calculate the contribution that increased levels of employment in manufacturing made to the rise in earnings. This could mean both its contribution to the rise in earnings of the young and its contribution to the overall rise in earnings. To do this, it would be necessary to break down the workforce, not just by business sector, but also by age group and, because of the differing structures of the male and female workforces, by gender. Data from at least two years, preferably one year somewhere around the beginning and one year around the end of the 1950s would be needed, in order to have both starting values and increments for incomes and for proportions of the workforce in each business sector/age/gender element of the calculation.

In practice, however, the appropriate data are not available. As was noted above, no income distribution data by age and business sector are available. The nearest equivalent to this are reports broken down by age and occupation, which are available for some years - 1952, 1953, 1954, 1957, 1958 and 1959. Of these, only the data for 1959 are broken down by age, occupation and gender, meaning that any attempt to use these data will involve mixing the male and female labour markets. It is questionable whether occupation can be used as a proxy for sector, but in the case of manufacturing, manual workers in industry will tend to dominate the numbers employed. Unfortunately, while this may therefore be possible in principle, the data are not available to do this in the case of the Netherlands during the 1950s. Figures for the number of industrial workers in 1959 are published, as was shown in Figure 14, but their numbers are not separated out in the reports for the years in the first half of the decade, being included in "other (i.e. non-agricultural) workers".

The hypothesis can, however, be tested in a less formal manner by means of a two-stage process. This does not give a figure - even a rough one - for the contribution to growth in mean income that the increased employment of the young in manufacturing made, but it does enable the hypothesis to be falsified. What we have to do is to calculate by how much the mean income of the 21-29 year-old age group, expressed as a proportion of the mean income of those aged 30 and above, changed over the period. If this rose, it means that the mean income of those aged in their twenties increased by more than the mean income of the older age group. If it fell, then the mean income of those aged 30 and above rose faster than the younger age group. We can then check whether this relative mean income rose or

	Age				
	21-29	30-39	40-49	50-59	30 and above
Total assessable population	83.12%	75.92%	71.20%	70.24%	72.02%
Assessable male population	84.05%	74.94%	70.85%	71.54%	70.86%
Assessable female population	75.57%	74.77%	69.11%	63.05%	73.23%

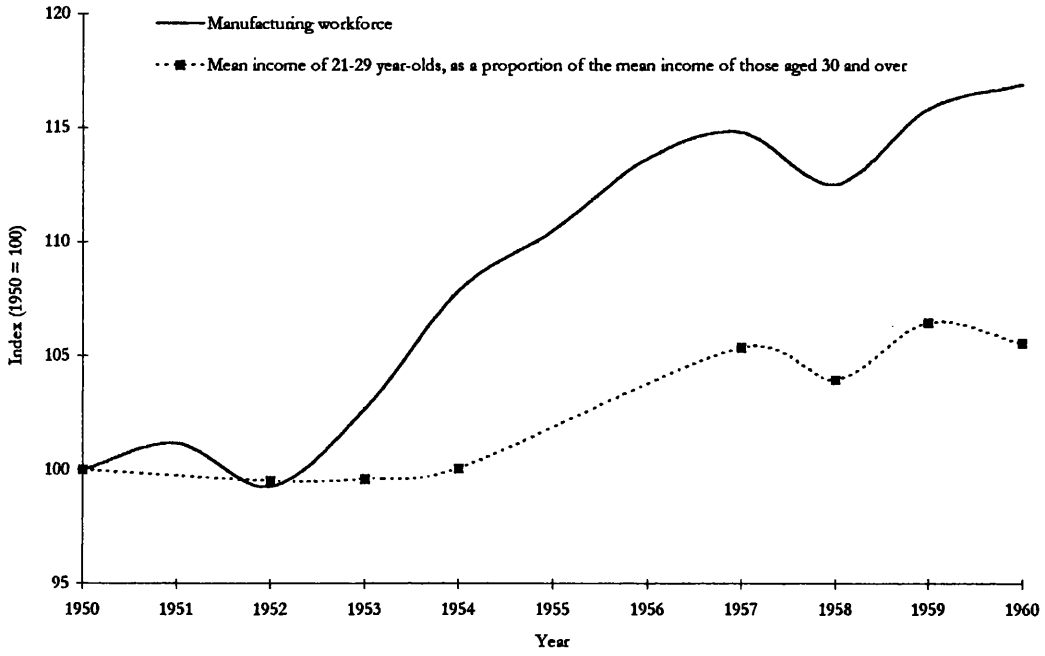
Sources: *Inkomensverdeling 1950, Aanvullende gegevens*, table 4.
Inkomensverdeling 1959 en vermogensverdeling 1960, table 15.

Table 38: Percentage increase in nominal income, by age, 1950-59.

fell together with the growth of manufacturing employment. A positive association between the movements of the two would be consistent with the hypothesis.

The mean income of the 21-29 year-old group grew faster than the mean income of those in the older age groups. Table 38 shows the increases in the nominal mean incomes of the 21-29 year-old age group - men, women and both together - between 1950 and 1959. The increases shown do not refer to the growth in incomes of some group or groups of individuals, but rather the differences between the mean nominal income of those aged between 21 and 29 in 1950 and the mean nominal income of those aged between 21 and 29 in 1959. 1959 is used here, rather than 1960, because the 1960 figures are not broken down by gender. The table also shows the increase in the nominal mean incomes of older age groups. What it demonstrates is that the increase in the mean income of men aged 21-29 rose by more than the mean income of men in older age groups. In other words, men in their twenties received higher incomes in 1959, relative to the incomes of those in older age groups, than they did in 1950. On the other, hand, women's mean incomes were less different across the age groups.

This faster growth appears to be connected with the growth in employment in manufacturing. The relative growths of both are shown in Figure 15. The figures for manufacturing are those taken from the *Algemene industriestatistiek*. As these figures are from quarterly reports but are being used to compare annual income figures, the maximum quarterly number of people employed in manufacturing in a specific year is used as the annual figure. Once again, the figures include mining and, since annualised data are used, the numbers employed in food processing have been left in. Since male income data by age are only available for 1950 and 1959, the relative mean income of the 21-29 year-old age cohort was calculated from the whole assessable population. Both sets of figures were converted to an index, with 1950 = 100.



Sources: *Algemene industriestatistiek*
Inkomensverdeling 1950, Aanvullende gegevens, table 4
Inkomensverdeling 1952 en vermogensverdeling 1953, table 2
Inkomensverdeling 1953 en vermogensverdeling 1954, table 2
Inkomensverdeling 1954 en vermogensverdeling 1955, table 2
Inkomensverdeling 1957 en vermogensverdeling 1958, table 2
Inkomensverdeling 1958 en vermogensverdeling 1959, table 2
Inkomensverdeling 1959 en vermogensverdeling 1960, table 2
Inkomensverdeling 1960, Aanvullende gegevens, table 4

Figure 15: Employment in mining and manufacturing, and the mean income of 21-29 year-olds, 1950-59.

The curves are similar in shape, although the curve representing relative mean income does not rise as sharply as the one representing manufacturing employment. There are two reasons why the mean incomes of those in their twenties might be expected to show a slower rate of growth than manufacturing employment, even if manufacturing employment did contribute to mean income growth in the manner suggested. Firstly, the income figures used in Figure 15 cover the entire population, not just the male workforce. This means that they include the effects of the rapid increase in female workforce participation that occurred during the mid-1950s boom. Since women were paid less than men, the increase in the proportion of women receiving their own incomes would have tended to exert downward pressure on the value of mean income - particularly, as we have seen, on the mean income of the under-25s. This effect can be seen in Table 38. It can also be seen from the data used in Figure 15. Calculation of the index number for the relative mean income of men in 1959 gives a value of 108. The equivalent value for men and women together, actually used in Figure 15, is 106.

Secondly, those in their twenties at the beginning of the 1950s will have reached their thirties by the end. Those in higher-paid manufacturing jobs will have tended to raise the relative mean income of the 21-29 year-old age group at the beginning of the decade, but these same people will have tended to reduce it at the end, since their incomes will have contributed to the mean income of the over-29s. This effect, too, may be visible in Table 38. The mean income of the 30-39 year-old age group also rose by be more than the mean income of the thirty-plus age group. Thirty is a somewhat arbitrary dividing line, defined as much by the available data as anything else, and it was previously suggested that the age-income curve for male industrial workers in 1959, shown in Figure 14, is consistent with the new higher-paying industries employing those in their thirties as well as those in their twenties.

These reasons notwithstanding, the two curves in Figure 15 begin to move more or less together from the point where the expansion in manufacturing employment took off. The mean income of those in their twenties remained fairly static, relative to the mean income of those aged 30 and above, for the first few years of the 1950s. But it began to rise in 1953-54, through the mid-1950s boom, briefly falling during the 1957-58 recession[391], rising again in 1958-59. Only after 1959 did it fall when manufacturing income rose. This strongly suggests, therefore, that for most of the decade, increased employment in manufacturing by the young pushed up mean incomes.

6.5 Occupational change in the older workforce.

There were also substantial changes in the structure of the older male workforce. As can be seen from Table 36, no age group escaped the relative industrialisation of the male workforce, with the proportion of men working in manufacturing and construction increasing in all age groups. Likewise, the percentage of men working in agriculture fell in all age groups. But the changes were not the same in all age groups. For example, the proportion of men aged between 40 and 65 who worked in the trade, banking and insurance sector remained more or less constant across the period. Only in the 20-24 year-old age group did the proportion of men working in this sector rise.

This section looks at the effect on incomes of occupational changes to the older workforce. The difference with the younger workforce is that, while the structure of the younger

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[391] Because the figures represent the amounts earned during the year as a whole, the 1957 figure reflects the boom conditions at the beginning of the year.

workforce changed as the structure of initial entry into the workforce changed, the structure of the older workforce changed as (for the most part) men moved jobs.

The manual and white-collar workforces are investigated separately. Changes in the manual workforce are used as a proxy for the growth of employment in manufacturing and the decline of employment in agriculture. The older workforce, in this case, is defined as those in their forties and fifties. Those in their thirties are excluded because, by the end of the 1950s, the earliest new entrants to the workforce at the beginning of the 1950s will - as was pointed out at the end of the previous section - have passed their thirtieth birthdays. Including the group aged between 30 and 39 would therefore pick up some of the effects of the younger workforce. Three net movements of manual workers are considered: movement out of agricultural employment, movement out of self-employed industrial work, and movement into non-agricultural manual employment[392].

The growth of white-collar employment is used as a proxy for the growth of service sector employment, and is also intended to capture the effects of the growth of white-collar employment in manufacturing. The older workforce in this case includes those in their thirties. These are included here because of the possibility that some manual workers who joined the workforce at the beginning of the 1950s may have moved into white-collar work at the end of the decade as employment in this sort of occupation increased. A likely move might have been from a manual supervisory role on the factory floor into a related office job.

The scope of the investigation is, once again, restricted by the availability of data. It looks at occupational, rather than sectoral, changes because income data by age are not available by business sector. It looks at the whole labour force, not just male workers, because income data by occupation, age and gender is only available for 1959. However, as has been pointed out previously, the low rate of female participation amongst the over-25s means that these data can be used as a proxy for the male workforce.

The incomes of those who left agricultural work rose by considerably more than the incomes of those who remained. Table 39 shows how many workers left and what happened to their mean incomes. The number of those estimated to have left the agricultural workforce is given in row A of this table. This figure is what is needed be added to the number of those that remained as agricultural workers, in order that the proportion of the age group is constant across the period. For example, in 1954, some

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[392] As in Chapter 4, "employment" in this chapter is used in the strict sense of working for wages or a salary - i.e. employed by someone else - rather than the looser sense of merely working.

Age-group	1952-53	1953-54	1954-57	1957-58	1958-59
40-49 years old					
A)	-6561	1420	8513	307	3076
B)		4.37%	26.60%	1.23%	12.56%
C)		0.21%	1.18%	0.04%	0.43%
D)	2.831	3.250	4.080	4.286	4.577
E)		5.361	6.317	7.265	7.378
50-59 years old					
A)	-5575	-70	6496	1325	6100
B)			22.40%	5.20%	24.90%
C)			1.06%	0.21%	0.96%
D)	2.604	2.883	3.780	3.759	4.132
E)			6.263	7.617	7.455

Key:
A) The estimated number who left manual work in agriculture during the period.
B) The proportional decline in the agricultural manual workforce during the period.
C) The proportion of the assessable workforce at the end of the period who left manual work in agriculture during the period.
D) The mean nominal income of manual workers in agriculture at the end of the period (f1000 a year).
E) The aproximate mean income of those who left agricultural work (f1000 a year).

Sources:
Inkomensverdeling 1952 en vermogensverdeling 1953, table 2
Inkomensverdeling 1953 en vermogensverdeling 1954, table 2
Inkomensverdeling 1954 en vermogensverdeling 1955, table 2
Inkomensverdeling 1957 en vermogensverdeling 1958, table 8
Inkomensverdeling 1958 en vermogensverdeling 1959, table 8
Inkomensverdeling 1959 en vermogensverdeling 1960, table 15

Table 39: The effects on the income of those aged 40-59 who left agricultural employment, 1952-59.

4.66% of the 40-49 year-old age group were employed as agricultural workers. In order for the proportion in 1957 to have been the same, there would have to have been 8513 more agricultural workers, and so this is given as the estimated number who left agricultural employment over the period 1954-57. This estimate is equivalent, as noted in row B, to more than a quarter of the 40-49 year-old employed agricultural workforce in 1954. Row C shows the proportion of the assessable working population in the age group who moved out of agriculture. Thus, the 8513 people estimated to have left employment as agricultural workers between 1954 and 1957 amounted to slightly more than one percent of the assessable working population in 1957.

The decline shows some variation over time. For those in their forties, the agricultural unemployment of 1952 did not recover until 1953, with the period 1952-53 showing an expansion in the number of agricultural workers. For those in their fifties, recovery took longer, with numbers in the occupation increasing until 1954. But, once recovery had occurred, numbers declined, from nearly five percent of the assessable workforce in the 40-49 year-old age group to about three percent between 1953 and 1959, and from over five percent of the assessable workforce in the 50-59 year-old age group to, again, about three percent, between 1954 and 1959. In both cases, the largest annual fall was in 1958-59.

We can use shift-share analysis to look at the effects of these changes on income. Because the data are now categorised by age group, this minimises the possibility of other trends affecting the answers. Rows D and E in Table 39 show the results. Row D contains the mean income of those employed as agricultural workers at the end of each period, and row E contains an estimate of the mean income of those who left agricultural work. This is calculated as the sum of the mean income of agricultural workers at the beginning of the period and the mean increase in income received by those who moved out of the job.

For those in their forties, the approximate mean income of those who left agricultural work was more than fifty percent higher than the mean income of agricultural workers. For those in their fifties, it was higher still, although this may reflect a slightly different income structure in this age group. While the mean income of all those in their fifties was consistently higher than that of those in their forties, the mean income of agricultural workers alone was consistently lower. The greater rise may therefore simply reflect the scope for larger increases in earnings amongst the older age group. However, in both cases, the approximate mean income of those who made the move out of agriculture was less than the mean income of the age group. They just moved up the ranks of the lower-paid.

The effect on incomes of the decline in the numbers of self-employed industrial workers was more complex. It is possible to identify several different movements. It is clear that the lower-paid moved out, presumably into employment for wages or a salary, and also, again presumably, for higher earnings. But it is also possible to identify, within the space of a few years, both the higher-paid self-employed industrial workers doing well in terms of rising incomes by remaining in this area of work and then doing badly, compared to others in their age group.

This group of workers is important, because the decline in their numbers accounts for half the decline in the numbers of the self-employed (excluding the professions) in the 40-49 and 50-59 year-old age groups between 1952 and 1959. On the other hand, the share of the assessable working population that these workers held together with employed manual workers, both agricultural and non-agricultural, remained fairly stable over time - around fifty percent of the assessable workforce in their fifties, slightly more for those in their forties - raising the possibility that there could have been net movement between these occupational groups. As can be seen from Table 40, at the same time that the share of self-employed manual workers in the assessable workforce fell, their mean income, expressed as a percentage of the mean income of the assessable workforce in the age group, rose. This suggests that it was the lower-paid leaving self-employed industrial work and the higher-

	40-49 year-olds		50-59 year-olds	
Year	A	B	A	B
1952	7.39%	122.83%	7.36%	117.36%
1953	7.04%	130.91%	6.93%	129.76%
1954	6.77%	132.18%	6.41%	136.07%
1957	6.33%	146.40%	6.30%	141.34%
1958	6.17%	143.26%	6.46%	138.36%
1959	4.71%	158.35%	5.62%	140.83%

Key: A) The number of self-employed industrial workers, as a proportion of the assessable working population in the age group.
B) The mean income of self-employed industrial workers, as a percentage of the mean income of the assessable working population in the age group.

Sources: *Inkomensverdeling 1952 en vermogensverdeling 1953*, table 2
Inkomensverdeling 1953 en vermogensverdeling 1954, table 2
Inkomensverdeling 1954 en vermogensverdeling 1955, table 2
Inkomensverdeling 1957 en vermogensverdeling 1958, table 8
Inkomensverdeling 1958 en vermogensverdeling 1959, table 8
Inkomensverdeling 1959 en vermogensverdeling 1960, table 15

Table 40: The numbers and incomes of self-employed industrial workers, 1952-59.

paid that were staying. The rising mean income therefore says nothing about the growth of actual incomes.

The income growth of self-employed industrial workers changed dramatically over time. This can be shown by attempting to estimate the minimum mean income of those who left the area. The assumption used here, once again, is that, in conditions of full employment, workers moved jobs for equal or higher incomes. We know the mean income of everyone together - those who left self-employed industrial work and those who remained - at the beginning of the period. For example, if we are looking at the period 1952-53, we know that the mean income for self-employed industrial workers in the 40-49 year-old age group was 122.83% of the mean income of the assessable workforce in this age group. We can estimate the number who left, this being the number necessary to make the 1953 share of the workforce 7.39%. And we know that the mean income of those who stayed was 130.91% of the mean income of the age group. From this, we can calculate what the mean income of those who left would have to have been, in order for the mean income of all those who were self-employed industrial workers in 1952 - both those who left and those who remained - to be 122.83% of the mean income of the assessable workforce in 1953. This process can be repeated for all periods and both age groups. Each estimate derived in this way should also be expressed as a percentage of the mean income of the assessable workforce in the age group.

The size of the estimated mean income gives information about the growth of incomes of those who remained as self-employed industrial workers. If it is negative, it means - since it

is clearly not possible for those who left to have received negative earnings - that the mean income of those who remained rose faster than the mean income of the rest of the assessable workforce in the age group. If, on the other hand, the estimate is greater than the mean income of those who remained, this is likely to mean that the incomes of those who remained rose less than the incomes of other workers in the age group.

On the basis of these estimates, it appears that self-employed industrial workers did both better and worse, at different points in time, than other workers in the same age group. During the mid-1950s boom, the estimates for both age groups are negative, implying that earnings of self-employed industrial workers did better than the average. However, for those in their forties, the estimate in 1958 was greater than the mean income of those still working in the area. This was followed, the next year, by a sharp fall in the number of self-employed industrial workers. This pattern suggests that, in general, self-employed industrial workers did not do well in the 1958 recession, and large numbers took advantage of the renewed demand for labour in 1959 to move into employed work.

In general, the numbers involved in the movement between manual occupations does not seem to have been great. As was the case with agricultural workers, the numbers that left self-employed industrial work were not large. For both of these groups, the year in which the decline was greatest was 1958-59, when the number that left agricultural work amounted to less than one percent of workers in their forties and the number that left self-employed industrial work, while greater, was still less than one and a half percent. Looking at the movement into non-agricultural manual employment, shown in Table 41, it seems that the total movement into this occupational group between 1952 and 1959 amounted to three percentage points for those in their forties and some four and a half percentage points for those in the fifties. The biggest growth was in 1953-54, when the increase in the area amounted to nearly three percent of the 40-49 year-old assessable working population and almost four percent of the 50-59 year-olds. After this sudden surge - part of which may have been due to the decline in unemployment that year - the proportions of the two age groups involved in the growth of this area of employment were smaller. But those who worked in non-agricultural manual occupations seem to have done better than the average for their age group. Mean incomes, as a proportion of the mean income of the assessable workforce in the age group, rose until 1957, although they subsequently fell to around their 1952 levels by 1959.

The growth in the number employed as white-collar workers seems to have been slightly greater than the growth of non-agricultural work. The term "white-collar worker" here is meant to refer to routine white-collar work - i.e. it does not include such people as teachers

Age-group		1952	1953	1954	1957	1958	1959
40-49 years old							
	A)	40.84%	39.25%	41.96%	43.54%	43.04%	43.87%
	B)	27.17%	26.22%	28.38%	29.80%	28.36%	29.20%
	C)	66.53%	66.81%	67.64%	68.43%	65.89%	66.56%
50-59 years old							
	A)	38.13%	35.50%	39.34%	41.38%	41.82%	42.72%
	B)	23.08%	21.48%	24.42%	25.65%	25.03%	25.58%
	C)	60.54%	60.52%	62.09%	61.99%	59.85%	59.87%

Key: A) The proportion of the assessable workforce in the age group who were non-agricultural manual workers.
B) The proportion of the total income of the age group from non-agricultural manual work.
C) The mean income of non-agricultural manual workers as a percentage of the mean income of the age group.

Sources: *Inkomensverdeling 1952 en vermogensverdeling 1953*, table 2
Inkomensverdeling 1953 en vermogensverdeling 1954, table 2
Inkomensverdeling 1954 en vermogensverdeling 1955, table 2
Inkomensverdeling 1957 en vermogensverdeling 1958, table 8
Inkomensverdeling 1958 en vermogensverdeling 1959, table 8
Inkomensverdeling 1959 en vermogensverdeling 1960, table 15

Table 41: The growth of the older non-agricultural manual workforce, 1952-59.

or those in the professions - and is intended cover occupations that manual workers might have moved into[393]. Table 42 shows the growth in numbers as being between three to five percentage points of the assessable working population in each of the age groups defined as "older". The main part of this increase occurred in the years 1954-57, with the figures only changing slightly outside this period.

But white-collar income seems to have fallen relative to other incomes during the mid-1950s boom. Between 1952 and 1954, while the proportion of the workforce in white-collar work remained steady, there was a sharp rise in the mean white-collar income. But, in the mid-1950s boom, when the white-collar share of the workforce expanded, the mean income of the white-collar workforce fell, relative to the mean income of the assessable workforce in all three age groups. From then to the end of the decade, there was a steady further decline in relative mean incomes. This fall is almost certainly due to the increase in white-collar employment having been in relatively lower-paid jobs. One possibility is that this was a consequence of the expansion of female employment in these years. But this is unlikely to be the entire explanation, since the proportion of men in the white-collar workforce was extremely high in all three age groups - around eighty-five percent. It would seem, therefore, that the growth of the service sector and the increase in white-collar employment in manufacturing led to an increase in the number of male jobs at the lower-paid end of white-collar incomes. There is, however, no way of telling what effect these

[393] For the years 1952 and 1953, "white-collar worker" is defined as those in the categories "general civil servants", "administrative personnel", "sales personnel", and "other white-collar workers". The figures for 1954-59 also include those categorised as "police and military personnel" and the figures for 1957-59

Age-group		1952	1953	1954	1957	1958	1959
30-39 years old							
	A)	25.73%	26.41%	26.83%	30.22%	30.40%	30.55%
	B)	27.35%	28.59%	29.84%	33.39%	33.57%	33.35%
	C)	106.32%	108.26%	111.21%	110.50%	110.42%	109.18%
40-49 years old							
	A)	19.51%	20.45%	20.83%	23.68%	24.60%	25.03%
	B)	20.90%	22.50%	23.64%	26.12%	26.78%	27.10%
	C)	107.15%	110.05%	113.48%	110.31%	108.82%	108.28%
50-59 years old							
	A)	17.81%	18.60%	18.71%	20.44%	20.10%	20.31%
	B)	19.87%	21.33%	22.12%	23.89%	23.19%	22.87%
	C)	111.56%	114.63%	118.20%	116.86%	115.34%	112.62%

Key: A) The proportion of the assessable workforce in the age group who were white-collar workers.
B) The proportion of the total income of the age group from white-collar work.
C) The mean income of white-collar workers as a percentage of the mean income of the age group.

Sources: *Inkomensverdeling 1952 en vermogensverdeling 1953*, table 2
Inkomensverdeling 1953 en vermogensverdeling 1954, table 2
Inkomensverdeling 1954 en vermogensverdeling 1955, table 2
Inkomensverdeling 1957 en vermogensverdeling 1958, table 8
Inkomensverdeling 1958 en vermogensverdeling 1959, table 8
Inkomensverdeling 1959 en vermogensverdeling 1960, table 15

Table 42: The effects on income of the growth in the number of older white-collar workers, 1952-59.

had on the incomes of those that moved into them, since, once again, we do not have any indication of what was earned by those who moved into these jobs before they made the move.

In general, then, there is little evidence that the incomes of most of the older age groups rose as a consequence of the changing structure of the workforce. In this respect, these results are consistent with the conclusions drawn from looking at the younger workforce. It was amongst the younger workers where the highest income growth was to be found. It is not clear how the figures reported in the tables in this section should be aggregated, but it seems that perhaps less than ten percent of the older workforce was involved in movement between categories. There may well have been, of course, movements within the various occupational categories that had an effect on incomes, but it is not possible to calculate the extent, or effect, of this. It is clear, however, that, at least in some cases, those who moved between occupational categories were able to increase their incomes considerably.

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additionally include "shop personnel". It is assumed that these last two groups are included in "other white-collar workers" in the data for 1952 and 1953.

6.6 The growth of individual incomes over time.

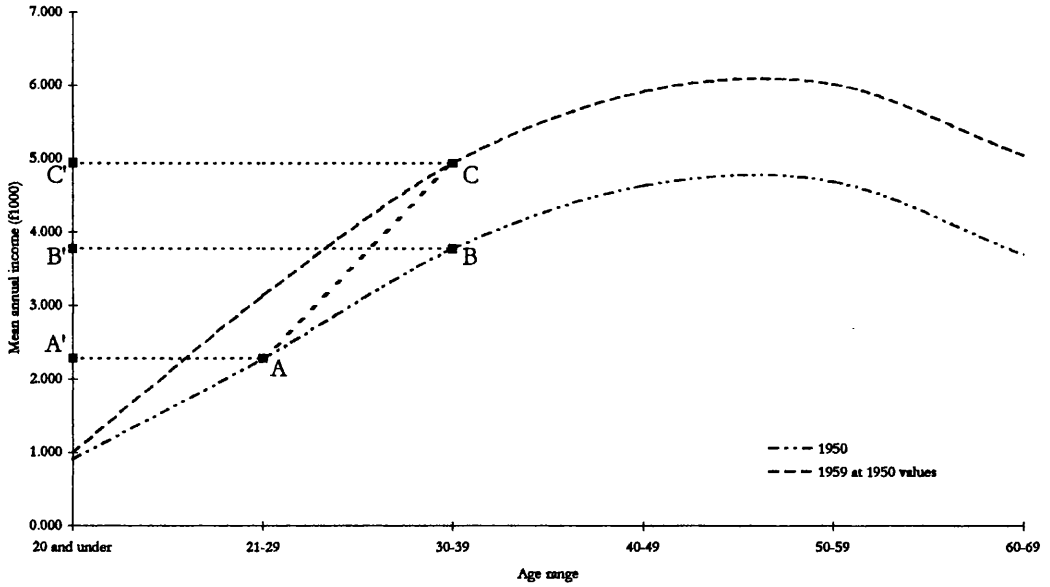
Changes in the mean incomes of age groups give an incomplete picture of income growth. They do not represent the income growth actually experienced by those who received the incomes. An age group consists of a continually changing population. So, just to emphasise the point again, those who were 21 in 1950 were 30 in 1959, and thus out of the 21-29 year-old age group. The age groups used in this chapter continually changed their composition every ten years.

A better picture can be gained by following mean incomes by birth cohort. As was noted in section 6.2, the income growth of two birth cohorts can be radically different. In this chapter, it has been argued that changes to the structure of employment pushed up incomes, and it was shown that this was the case for men who entered the workforce during the 1950s, less so for those who were already in the labour force. What the story really concerns, therefore, is the income growth of different birth cohorts.

The rise in mean income experienced by each ten-year birth cohort over the period can be approximated using the 1950 and 1959 data. While 1960 would give a more accurate answer to the calculations as the last year of the period than 1959, 1959 has to be used for the simple reason that 1950 and 1959 are the only two years for which male data by age are tabulated separately. The assumption that has to be made when tracing the income growth of cohorts across the period is that the individuals composing the cohorts remained the same throughout - i.e. they remained in the workforce throughout the entire period. This is not, as we have seen, generally true of women, who tended to leave employment in their mid-twenties. Older women in the workforce, such as there are, may well have previously left on marriage or the birth of their first child and then returned to work later. Some men experienced unemployment during the 1950s, breaking their continuity within the workforce, but the numbers involved were small enough for their effect to be ignored.

The cohorts are approximated by identifying each age group in 1950 with the next oldest one in 1959. The rise in income of each is then the percentage increase in real income between these. Figure 16 shows this in graphical terms. The two curves show the mean incomes of the various age ranges, expressed in 1950 guilders: the 1959 figures were, as with the wage data in Chapter 5, converted to 1950 values by use of the index used in the national accounting statistics

The difference in magnitude between the increase in the mean incomes of age groups and the mean incomes of birth cohorts can be clearly seen. For example, the mean incomes of the 30-39 year-old age group in 1950 and 1959 respectively are marked by points B and C.



Sources: *Inkomensverdeling 1950, Aanvullende gegevens*, table 4
Inkomensverdeling 1959 en vermogensverdeling 1960, table 2
Jaarcijfers voor Nederland, 1961-1962, table 335.

Figure 16: The relationship between age and income in the male workforce in 1950 and 1959.

Since those who were in this age group in 1959 were, for the most part, in the 21-29 year-old age group in 1950, the approximate path that the mean income of these people followed is therefore represented by the dotted line between points A and C. Its value increased, not by the amount along the y-axis B'-C', but by the much greater amount A'-C'. This is only an approximation for two reasons. Firstly, it is not possible to take into account the tremendous variation in the shape of the curves of different occupations, since the data necessary for this are not available for 1950. Secondly, while those aged 21 in 1950 were actually aged 30 - i.e. were nine years older - in 1959, the other age ranges do not match up so neatly, and there is a one year discrepancy in all other cases. Nonetheless, there is no reason to suppose the results of the calculations are misleadingly inaccurate.

The magnitude of the rises of the younger cohorts was to a large part a consequence of the shape of the age-income curves at both dates. This magnified the effect of the overall rise in incomes. This can be shown using the numerical values of the mean incomes represented by the points A', B' and C' in Figure 16. The mean income of the 30-39 year-old age group in 1950 is the income at point B' (Y_b), the mean income of this group in 1959 is the income at point C' (Y_c). The percentage increase in the mean income of this age group is therefore calculated as:

$$\frac{(Y_c - Y_b)}{Y_b} = \frac{(f4935 - f3772)}{f3772} = 31\%$$

Age group	Mean income (1950 values)		
	1950	1959	Increase
20 and under	0.905	0.997	10%
21 - 29 inc	2.279	3.138	38%
30 - 39 inc	3.772	4.935	31%
40 - 49 inc	4.627	5.912	28%
50 - 59 inc	4.687	6.013	28%
60 - 64 inc	4.289	5.259	23%
65 - 69 inc	3.647	4.773	31%
70 and over	2.981	3.970	33%
Total male assessable population	3.457	4.517	31%

Sources: *Inkomensverdeling 1950, Aanvullende gegevens*
Inkomensverdeling 1959 en vermogensverdeling 1960

Table 43: Real increases in men's mean incomes by age group, 1950-59.

The rises in mean income by age group are shown in Table 43. But these figures are misleading, since, as noted previously, the cohort who were in the 30-39 year-old age group in 1959 were in the earlier age group in 1950, and were receiving the income at point A' (Y_a). This means that the rise in mean income experienced by the cohort aged 30-39 in 1959 should be calculated as

$$\frac{(Y_c - Y_a)}{Y_a} = \frac{(f4935 - f2279)}{f2279} = 117\%$$

giving over three times the rise.

It should be noted that the age-income curve can also reduce the experienced rise in income. The mean income of the 60-64 year-old age group rose twenty-three percent between 1950 and 1959, yet those who moved into their sixties by 1959 only experienced an eight percent increase.

These calculations confirm that it was the youngest section of the population that experienced the largest rises in income. Table 43 shows that the nominal mean income of the 21-29 year-old age group rose by considerably more than that of older age groups. Table 44 shows even sharper differences between birth cohorts. The later a man was born, the higher the mean rise in his income across the 1950s was likely to have been. The magnitudes of the rises experienced by the youngest were much greater than might be inferred from the rises in mean income by age group. Furthermore, demographic growth meant that the youngest were a substantial section of the working population. Almost half the male working population in 1959 was born after 1920 - i.e. were under the age of forty in 1959. Of these, a good number of those born after 1930 may not have been in the workforce in 1950, and so are likely to have experienced the rapid rise in incomes

Born	% of assessable pop in 1959	(cum)	Mean nominal income (f1000) 1950	1959	Mean income (f1000) 1959 at 1950 values	Real increas
1939 and after	9.90%			1.333	0.997	
1930-1938	18.29%	28.20%	0.905	4.195	3.138	247%
1920/21-1929	20.77%	48.97%	2.279	6.599	4.935	117%
1910/11-1919/20	17.88%	66.85%	3.772	7.905	5.912	57%
1900/01-1909/10	15.98%	82.83%	4.627	8.040	6.013	30%
1890/91-1899/1900	11.09%	93.92%	4.687	6.744	5.044	8%
Before 1890/91	6.08%	100.00%	3.692	5.308	3.970	8%
Total assessable male population			3.457	6.039	4.517	31%

Sources: *Inkomensverdeling 1950, Aanvullende gegevens*, table 4.
Inkomensverdeling 1959 en vermogensverdeling 1960, table 2.
Jaarcijfers voor Nederland 1959-1960, table 328.

Table 44: The rise in men's mean income by birth cohort, 1950-59..

associated with the first years of work[394]. Those men born between 1920 and 1930 saw their real incomes rise by more than a hundred percent in less than ten years. This can perhaps be summed up by saying that the mean incomes of the younger half of the male working population at the end of the 1950s had doubled in real terms since the beginning of the decade. In contrast, those who were fifty or more in 1950 experienced little in the way of a real increase in income.

To put these figures into historical context, it is perhaps useful to compare them to a recent study of male earnings in Britain between 1978/9 and 1992/3, which shows much smaller rises. This used the Lifetime Labour Market Database - which holds details of a one percent sample of the British workforce by National Insurance number[395] - to follow the earnings of men aged between 25 and 44 on 1 January 1978[396]. Distinct trends were noted: earnings of those aged 25 in 1978 were 57% higher in real terms in 1992/3 than 1978/9, earnings of the 1978 35 year-olds were 27% higher, whilst those aged 44 at the beginning of the period saw their earnings first rise and then fall back to the level of 1978[397].

6.7 Conclusion.

In general, then, the largest rises in income were received as the result of structural changes within the younger part of the workforce. Employment in the new manufacturing industries expanded more as the consequence of recruiting new entrants into its labour

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394 The fact that some of those in this birth cohort may not have been in work in 1950 makes the calculated rise of this birth cohort problematic, in that it does not compare the same population at two points in time. However, there is no reason to doubt that the mean rise experienced by these men would have been greater than that experienced by earlier birth cohorts.
395 Ball and Marland (1996) p. 33.
396 Ibid. p. 6.

force, than by recruiting workers from other sectors. This appears to be the reason that each successive birth cohort entered into higher-paid occupations than previously, and the mean income of the youngest age group rose more quickly than that of older ones.

These rises in income were boosted by the tendency of earnings to rise with age. Because earnings tend to rise with age, the increased earnings of young workers in the new manufacturing industries increased further with time. The combination of these two factors meant that those in the younger half of the population in 1959 - roughly those born in 1920 and after - experienced rises in real income of over a hundred percent during the 1950s.

But it should be noted that full employment also played a role. If the demand for labour in the new manufacturing industries had been less, then the number of those who received higher incomes from working in them would have been fewer. Mean incomes of the youngest birth cohorts would therefore have risen by less, and the rises would have been distributed amongst a smaller proportion of their members. Independently of the effect that full employment had on the level of incomes, therefore, it made sure that the rises in income from increased industrialisation were spread to the maximum extent amongst the male working population.

However, as was noted previously, earnings are not the same as disposable income. Disposable income is mediated through the household, and so the next chapter looks at the growth of household income.

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[397] Ibid. p. 22.

Chapter 7. The Growth of Household Income.

Up to this point, this study has looked solely at the growth of male incomes. It has shown that the majority of male incomes in the post-war period came from wages and, to a lesser extent, salaries. The previous chapter showed that the median rise in men's real incomes across the 1950s was greater than 100%, and that it seems probable that a large part of this growth was due to the changes in the structure of the labour force brought about by industrialisation.

But the growth of male incomes will not necessarily have been identical to the growth of what people had to spend. It may not even have been identical to what men who received incomes had to spend. Society is not composed only of male recipients of income. There are also female recipients of income, as well as those who do not receive money incomes: children, full-time housewives, etc. Income gets redistributed amongst these, and the growth of personal disposable income is the growth of this redistributed income.

The growth of household income is perhaps a better proxy for the growth in disposable income. For the most part, wage and salary earners live in multi-person households. What the proportion is at any given point in time will vary according to circumstances, but in the period under discussion this proportion formed the overwhelming majority. The household is where the redistribution of income takes place. The redistribution involves both accounting for common household costs and the distribution between the household members of income brought in by some of them. This income is not composed merely of wages and salaries, but can come from self-employment, profits and the like, as well as from sources not directly consequential on economic activity, such as pensions or charity.

It is probably not possible to get a closer estimate of personal income than household income. Atkinson notes that very little is known about the degree of income-sharing within the family[398]. The household is an area in which non-market exchange predominates, what Offer refers to as the "economy of regard". Exchange in this form of economy is not direct in the way that buying and selling is. It begins with a gift for which reciprocity is expected, but this reciprocity is usually delayed, its value and timing left to discretion, although often tightly regulated by custom and convention. The reciprocity can also be indirect, taking the form of a contribution to the community. The community in question could, of course, be a household[399]. In the case of successive generations in the household,

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[398] Atkinson (1983) pp. 47-48.
[399] Offer (1997) p. 451.

sociological studies have shown that - at least in the case of North America - reciprocity is asymmetrical, with offspring getting more in financial, household and emotional resources than they return[400]. Offer notes that the gift economy is difficult to model[401]. In the case of this study, it would be impossible to make even a beginning with the data to hand[402].

It will be assumed, therefore, that personal disposable income grew broadly at the same rate as household income. But although this assumption is dictated by the data, it should also be noted that it is probably not true. The rules by which income-sharing in the household is carried out almost certainly change with circumstances. For example, Goldin suggests that when a woman works for pay outside the home it alters the power relationship between husband and wife, and therefore alters the distribution of goods within the family[403].

However, even merely estimating the growth of household incomes is itself not straightforward, since household income data for the period do not exist. The CBS income distribution data are largely individual. The only exception is in the case of married women's incomes, which are, with a few exceptions, included with their husbands'[404].

Furthermore, calculation of household income involves defining the terms "household" and "income". Both are contentious. Does a household comprise all those living under one roof? Or do they have to be related? And if so, in what way? Is an income just the money brought into the household, or can it also refer to goods and services provided directly by household members? A study of household income needs, at the very least, to use definitions of these terms that are not only consistent throughout the discussion but also consistent with the available data.

The calculation also involves looking at individual incomes in terms of household structure. Which categories of household members got what, and how did the their rates of income growth differ? For example, it has previously been established that men and women had different patterns to their working lives. Women tended to drop out of the labour market after marriage, leaving their husbands to become the family breadwinners. Gender division therefore provides one aspect of this household structure. But other aspects need to be considered, such as the contribution to household income of those who had not yet married and remained living in their parents' homes, and the effect of changes to the

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[400] Ibid. p. 461.
[401] Ibid. p. 456.
[402] Although it should be noted that some of the evidence considered here does support the idea that intergenerational transfers are asymmetric
[403] Goldin (1990) p. 11.

pensions system, both on how long people continued working into old age and on household incomes generally. All this then needs to be related to the structure of the income-receiving population.

So, before attempting to measure how household income grew and why, this chapter first tries to build a theoretical model relating household structure and the labour force. It begins by attempting a definition of the household and looks at how, theoretically, changes in household structure can alter the level of household income, before looking at how women's and men's household roles affect the income they bring in, including a discussion of non-monetary income. It then looks at the structure of the Dutch household, as represented in the 1947 and 1960 censuses, and attempts to relate this structure to the structure of the assessable population - particularly the assessable working population.

The chapter then attempts to measure, using CBS income distribution data, the effect of individual income growth on the growth of household income. It measures the effect of changes to the pensions system, in order to clarify what happened independently of changes in the labour market. It goes on to measure the effect on household income of changes to the incomes of unmarried sons, testing the hypothesis that the incomes of households containing working sons will have risen faster than those of households purely dependent on a male head of household. It ends by attempting to measure the effect of changes in the participation rate of women. It explains why the increased participation of wives in the paid workforce was perhaps more important than the raw figures suggest, before noting that it is impossible to test this, owing to the lack of data on wives' monetary incomes. It then looks at the increased participation of daughters, and attempts to measure what proportion of households were affected by this and by how much their income rose.

7.1 Households and household income.

This section attempts to define the terms "household" and "household income". What we need is a definition of these that will enable us to use the census and income distribution data in such a way as to give some sense - preferable a measurable sense - of how household income grew. The section looks at the various forms that households can take, and how these can change, before investigating the way the structure of the household, and the way this changes, can affect household income. The section concludes by looking at the various components of household income, both monetary and non-monetary.

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[404] This exception, as will seen below, makes the problem worse rather than alleviating it.

A household is essentially a living arrangement. This is the definition used by the UK census[405], although precise agreement as to what this means is perhaps not possible. As Schwarz notes, a uniform definition for the household has not yet been found for Europe, let alone the rest of the world[406]. Living together is certainly a minimum part of the definition. The 1960 US census defined a household as merely being those persons occupying a housing unit[407], but arguably income-sharing in some form should also be an integral part of the definition. The former West German census seems to satisfy this, defining a household as a unit aimed at making arrangements to secure the satisfaction of the common needs of a group of people[408]. Schmid suggests several important components in the definition: the use of a dwelling as a household, as indicated by, for example, the presence of cooking equipment; the privacy of a household, usually meaning a separate entrance; and the presence of a number of related and non-related persons[409].

Households can take a variety of forms - this is one of the reasons why a single definition is so difficult - and the form a household takes should always be considered in its historical context. As de Haan suggests, households should be regarded as being composed of social, cultural, economic and demographic elements[410]. Each of these elements will have a different relative effect depending on the context, thereby affecting the form. But, in general, it is possible to recognise a distinction between "family" and "non-family" households. This distinction uses the UN definition of a family as "members of a household related by blood, adoption or marriage". A "family household" is one composed of a married couple, with or without a child or children, a man or a woman with a child or children, or any other combination of relatives. A "non-family household" consists of an individual living alone or sharing quarters with one or more non-related persons[411]. Pott-Buter notes various sorts of family households. A nuclear family is composed of a married couple, with or without children, living under the same roof, while an extended family consists of a nuclear family living either with relatives other than offspring or with servants. Additionally, she identifies the multiple family household[412].

The form of the household is continually changing. It can change in two ways. Firstly, each individual household changes over time. Its personnel changes, the source of its means of

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405 Schmid (1988) pp. 14-15.
406 Schwarz (1988) p. 67.
407 Schmid (1988) pp. 14-15.
408 Ibid. pp. 14-15.
409 Ibid. pp. 14-15.
410 De Haan (1980) p. 61.
411 Schmid (1988) p. 15.
412 Pott-Buter (1993) p. 168.

existence changes, etc. Because of this, as de Haan notes, dated documents are always therefore a frozen record of a single moment in a far-from-fixed situation[413]. Thus, for example, the family history that would have been regarded as typical in the Netherlands during the post-war period was: first the family would consist of a young married couple, both working for a monetary income; they would have children and only the father/husband would bring in an income; as the children grew up, these would go out to work, so that both the father/husband and some or all of the children would bring in incomes; finally, the children would leave to set up their own homes, leaving the couple once again to live on a single male income.

The typical form of the household can also change over time. For example, an extended family form, consisting of a married couple, their brothers and sisters, their children, one or both parents, and uncles and aunts, was identified in a number of communities in 1956. Hofstee argues that this was the dominant family pattern throughout the Netherlands during the eighteenth century[414]. In other words, he posits a historical development over the course of two centuries in the form of the typical family, from extended to nuclear[415].

The first type of change can be confused with the second. For example, if the number of young married couples increases for demographic reasons, it can appear from the figures that the number of children per family is declining. Care needs to be taken, therefore, when attempting to interpret what the data actually mean.

The form of the household can also have appeared to change because its definition has changed over time. As Schmid puts it: "A household is... always what a census is able or willing to record... Even slight differences in definitions of a household will yield different data"[416]. At various times and places, these differences have involved changes in the criteria for classifying people with more than one house or dwelling, for classifying lodgers such as sub-tenants or employees, and for determining the heads of households[417]. But the historian is dependent on the record, and, as de Haan points out, has to work with the definitions used by the religious or secular authorities of the period being studied[418]. This means that, in comparing censuses across time, it is essential to establish whether or not, or in what ways, the definitions have changed, before interpreting changes apparently revealed

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[413] De Haan (1980) p. 52.
[414] Van der Woude (1972) pp. 300-301.
[415] As is discussed below, he is wrong. But the example is too striking not to use as an illustration.
[416] Schmid (1988) p. 14.
[417] Schwarz (1988) p. 67.
[418] De Haan (1980) p. 52.

by the data. As will be seen below, this is particularly important when comparing the Dutch 1947 and 1960 censuses.

Change in the structure of the household can affect the level of household income. This can occur at the level of the individual family. For example, in the case of the "typical" family described earlier, when the wife ceases work, household income will fall (assuming the husband's income remains constant), while when a child begins work, gross family income will rise. When a working child leaves the parental household to set up his or her own home, then household income will fall again. Therefore, across the population as a whole, demographic changes will have an effect on household incomes, as the proportion of, for example, children of working age in the population rises and falls. Household incomes are also affected by changes in the proportion of each type of household within the population as a whole. For example, a fall in the number of multiple-family households (assuming no change in the number of people earning incomes) will cause average household income to fall.

All this is, of course, dependent on the availability of employment, and its nature. The situation will, for example, be changed by an increase in the availability of employment for women. It will be changed as the jobs offered to new entrants into the workforce change, and it will also be affected by changing levels of unemployment. These changes will affect the various members of the household in different ways. The level of women's employment affects, of course, women, while changes in youth employment affect the young.

Women's employment is closely connected with their role in the household. This is a consequence of how women are socially defined. Tilly and Scott argue that the word "woman" takes in a whole series of social and biological categories. The "biological given" of the female sex is transformed into a set of social categories by women's associations with men. This becomes clear by looking at women's life cycles. They begin as daughters and virgins, become sexually mature, leave the family for husbands or lovers, and become mothers of children. If they live long enough, they see their own children leave and marry, and they become mothers-in-law and grandmothers. The deaths of their husbands make them widows[419]. But, as Tilly and Scott point out, not every woman has lived a "normative" life. Some girls are orphans, and have never lived with their own parents. Some women never married because they died young, while others live an unmarried life because of choice or circumstances. The fact that these latter women are single has an important

influence on their economic position[420]. It follows from this that the history of women's work must be the history of the family. The age at which a women marries, the number of children she bears, the size of the household in which she lives, the value of the children to the family all directly influence a woman's working life. The time spent on the household and on child-bearing affect the amount of time available for economically productive work[421]. Tilly and Scott's study deals with French and British women, but, as will be seen, their model helps make sense of the Dutch data. Their model also shows, conversely, that, because a woman's economic activity is closely connected with her position in the household, a woman's position in the household has a direct impact on the monetary income she brings into the household at any point in time.

Less obviously, men's contributions to household income are also associated with their household positions. A man's lifetime career is not so intertwined with the family as a woman's, since typically, in most if not all historical periods, he would have few or no responsibilities internal to the family. But nonetheless there is a family pattern to his life. For example, using once again the "typical" Dutch family mentioned earlier: the man begins life as a child, completely dependent on his parents and on his father's income; he starts to work for his living and brings income into the parental household; he then marries, sets up his own home and becomes a breadwinner, the only source of income for the family when his children are young, the main source later; later still, he retires, becoming dependent on savings or a pension; he may become a widower, with no dependants. Again, as with women, not every man follows the "normative" life cycle. For example, he may not marry. A man's working life is not associated, therefore, with child-raising responsibilities, but with his role in bringing income into the household. There are three basic roles. As a young, unmarried man, he brings additional income into the family; as a married man, he is the main breadwinner of the family as it goes through its life cycle; and as a retired man, possibly still living with his wife, he is dependent on his savings or a pension. In each of these roles, he contributes to household income in a different manner.

The construction of household income has therefore to take the structure of the household into account in a number of different ways. It is necessary to establish the extent of the different types of household, the proportion of single person household, the proportion of households containing children of working age, and the proportion of households

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[419] Tilly & Scott (1978) p. 4.
[420] Ibid. p. 5.
[421] Ibid. p. 7.

containing working wives. It is also necessary to establish by how much all these things changed.

Contributions to household income do not, of course, come exclusively from the labour market. It should be remembered that, in the majority of cases, individuals earned their incomes from wages or salaries. But not every household will have received incomes from these sources. There existed households without wage or salary earners. And even households containing wage or salary earners may have included members who had other sources of income. Incomes can come from self-employment or the ownership of businesses, or they can come from interest earned from savings. A household income can, theoretically, be made up of contributions from any combination of any source of income.

Nor do contributions to household income have to be monetary. This is particularly important to note when discussing women's contribution to household incomes. So far the discussion has implicitly assumed that all income is monetary, but this may not cover every economic contribution that a particular woman makes to the household. It has already been noted that a woman's main role within the household may be child care, along with such things as meal preparation - activities which, if performed outside the household, would generate an income. It is a problem noted by Pigou in the 1920s. Goods and services bought for money, he points out, do not differ fundamentally in their nature from those that are not bought. However, national income - the sum total of activities regarded as "economic" - only includes those goods and services that are bought. A man may therefore reduce the national income by marrying his cook[422]. The problem of calculating a woman's economic contribution to the household, as Tilly and Scott point out, is most important when looking at those times and places where work does not mean wage earning. In these circumstances, the jobs that were performed to help support a family did not always bring in money. These included such things as growing vegetables, raising animals, making clothes, and helping with the farm or with craft work. This kind of work merged imperceptibly with women's household chores. In the Netherlands of the 1950s, this is specifically a problem when attempting to define the changing contribution to household income of wives working in the family business.

Ignoring the non-monetary contribution of housework in this study may not, however, give an inaccurate picture. This study is investigating the *change* in income. In the absence of

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[422] Pigou (1929) pp. 32-33. Newland points out that child care and meal preparation have an opportunity cost, suggesting that this go into national accounts [Newland (1980) p. 9.]. Offer attempts to calculate the economic contribution of unpaid carers to the British economy. Using local authority pay scales as a basis, he

evidence that there was significant change in the effective income resulting from child care, meal preparation, etc, it must be assumed that, although the level of this income was non-zero, it did not rise or fall by any substantial amount. Housework is therefore considered to have made no contribution to the *changed* level of household income.

Ignoring women's non-monetary contribution to economic activity, traditionally defined, may be more problematic, although no more problematic than the question of married women's income overall. In the case of a woman helping her husband on the farm, her labour would have resulted in income for her husband. But if she had had received an income for her effort, this would have appeared aggregated with her husband's in the income distribution data anyway. The two cases are therefore identical, and the problem of non-monetary contributions of wives to monetary household income is part of the general problem of the lack of data on wives' incomes.

On the other hand, changes to the level and extent of pensions are measurable, and may have had important effects in two ways. Firstly, if pensions had had their intended effect of reducing poverty, then they would certainly have raised the overall income figures. In order to investigate the effects of changes in the labour market on incomes, it is therefore necessary to calculate how big this rise was. Secondly, increased numbers of people receiving pensions and increased sizes of pensions may have had a knock-on effect on household incomes. This will have depended on the extent to which those who received pensions lived in households with others.

7.2 Measuring Dutch household income.

This section looks at how changes in Dutch household income during the 1950s can be measured. The theoretical insights discussed in the previous section can be used to interpret the census data, but what is really needed is a means by which these insights can be applied to the income distribution data. That is, we need to relate figures on income received by individuals to their position in the household structure - e.g. breadwinner, member of a single-person household, etc - and we need to be able to do this in a consistent manner across the period.

What is wanted from the census data, then, is some means of relating the CBS income distribution data to household structure. There are no income data by position in the

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suggests that, in 1985, unpaid care had a market value equivalent to around 7.5% of national income [Offer (1997) p. 462].

household, but there are data for income by marital status for the years 1952, 1953, 1957, 1958, 1959 and 1960 - all but 1957 and 1960 broken down by gender. These data are usable if marital status was strongly correlated with position in the household in the Netherlands during the 1950s.

The 1960 census suggests that marital status is a good proxy for position in the household in that year. It is obvious that marital status is a good proxy for position in a nuclear family - a married man is the head of the family, a married woman his wife, and the never-married are their children - and it can be established, using the census data, that the nuclear family was the most common form of household.

The 1960 census was the first Dutch census to make a distinction between the household and the family. Previous censuses had treated the two words as referring to the same thing, and, as a consequence, a number of important studies of the Dutch household do not go back any further than 1960[423]. The 1960 census uses three distinct terms: the multi-person household, the single-person household[424] and the family. A multi-person household is defined as a group of two or more people living together in a domestic relationship and carrying on a common domestic life, as shown by common living rooms, and by cooking and eating together. Single-person households comprise not just those living alone, but also include those who live in the same dwelling as others if they do not have a common domestic life. A family either is a married couple living together, without children or with unmarried children, in a domestic relationship, or is a father or mother living with unmarried children in a domestic relationship. Parents living with married children are not considered a single family[425]. From the context, it is inferred that "unmarried" here refers to those who had never married, as opposed to those who were widowed or divorced.

Several types of multi-person household are distinguished. There existed, under these definitions, two forms of one-family household. The simple one-family household was one where the head of the household was the head of the only family, as for example in the cases of a married couple and of a married couple with children. The compound one-family household was one where the head of the household was not the head of the only family, such as in the case of a mother with her married son and his family living in her household. Two forms of multiple-family households are also identified. The first is where the head of the household is also head of one of the families, as when a married couple live with their

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[423] Faessen (1987) pp. 17-18.

[424] In fact, the census uses the Dutch words *huishouden*, meaning household, and *alleenstaande*, meaning someone living alone. But the terms used above are more in line with English-language usage than the literal translations.

Marital status of head		Male-headed households		
	Primary unit:	Family	One person	Other
never-married		0.01%	0.08%	0.96%
married		89.39%	0.04%	0.12%
widowed		1.18%	0.19%	0.40%
divorced		0.09%	0.04%	0.11%
	Total	90.66%	0.36%	1.59%

		Female-headed households		
	Primary unit:	Family	One person	Other
never-married		0.10%	0.02%	1.00%
married		0.51%	0.01%	0.05%
widowed		3.88%	0.23%	0.82%
divorced		0.64%	0.02%	0.13%
	Total	5.12%	0.27%	2.00%

Source: *13e Algemene volkstelling Deel 5A* table1.

Table 45: Households in 1960 (1960 definition) by gender of head and type of primary unit.

married daughter and her husband. The second form is where the head of the household is not head of one of the families, as for example a widowed mother with the families of two of her children living in her house. There also existed non-family households, such as a widow with a lodger, two friends sharing a house, or two brothers living together[426]. (In all these cases, "children" refers to the relationship to the parents, not to age: the census recorded 126 male and 151 female "children" over the age of 70[427].)

The census also makes a distinction between the "primary" and "secondary" units in the household. The primary unit is the unit containing the head of the household. Examples are the nuclear family in a simple one-family household, a single person living alone and elderly parents in a multiple-family household. The secondary units were the others, such as the family of a married son living in his widowed mother's house, a man living in his married brother's house or a lodger[428].

Despite this varied and thorough typology, the overwhelming majority of households were one-family households headed by a married man. This can be shown by establishing that

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[425] *13e Algemene volkstelling Deel 5 A.* p. 9.
[426] Ibid. pp. 10-11.
[427] Ibid. table 1.
[428] Ibid. p. 10.

	Male-headed families		Female-headed families	
	Primary unit in household	Seconday unit in household	Primary unit in household	Seconday unit in household
Marital status of head				
never-married	0.01%	0.00%	0.10%	0.09%
married	90.78%	2.00%	0.52%	0.16%
widowed	1.20%	0.11%	3.94%	0.19%
divorced	0.09%	0.02%	0.65%	0.16%
	92.07%	2.12%	5.20%	0.60%

Source: *13e Algemene volkstelling Deel 5A* table1.

Table 46: Families in 1960, by gender of head and relationship to the rest of the household.

most primary units were nuclear families headed by married man[429] and that most families were primary units. That these were the case can be clearly seen from Table 45 and Table 46. Table 45 shows the distribution of forms of household, categorised by type of primary unit and gender of household head. Some ninety percent of primary units were male-headed families, all but one percent headed by married men. The next most common category consisted of households in which the primary unit was a family headed by a widow - what would have been families headed by a married man had he not died. Table 46 shows how families were distributed among the units that formed households. Around ninety percent of families were primary units headed by married men. The next most common category, once again, consisted of primary units headed by widows. Fewer than three percent of families were secondary units, and only about two percent were secondary units headed by married men.

It was also the case that virtually all married adults lived in single-family households. This is, of course, not the same thing as the majority of multi-family households being headed by married men, since it could possibly have been the case that substantial numbers of married men lived apart from their families[430]. In fact, fewer than two percent of married men were not head of a family, and more than ninety-six percent were both head of a family and head of household. More than ninety-eight percent of married women were

[429] The way the data are presented, it is not possible for a married woman to be recorded as the head of household if she was living with her husband.

[430] Such as, for example, may have been the case in Britain during the final quarter of the eighteenth and the first half of the nineteenth centuries. See Humphries (1998) pp. 31-65.

	Male (aged 15 and over)		
	Living in private households	Living alone	In institutions and homes
15-24	94.47%	2.14%	3.39%
25-34	96.29%	2.48%	1.23%
35-44	97.49%	1.48%	1.03%
45-54	96.88%	2.03%	1.09%
55-64	95.26%	3.46%	1.28%
65-69	92.35%	5.64%	2.01%
70 and older	81.85%	10.36%	7.79%
	94.83%	3.00%	2.17%

	Female (aged 15 and over)		
	Living in private households	Living alone	In institutions and homes
15-24	93.93%	1.85%	4.22%
25-34	95.86%	2.34%	1.80%
35-44	95.92%	2.26%	1.82%
45-54	93.43%	4.19%	2.37%
55-64	86.55%	10.81%	2.64%
65-69	76.26%	19.72%	4.02%
70 and older	62.38%	24.98%	12.64%
	90.15%	6.35%	3.50%

Source: *13e Algemene volkstelling Deel 5A* table1.

Table 47: Distribution of the population by age in 1960 amongst the different sorts of household (1960 definition).

classified as "spouses", that is, as living with their husband[431]. It is therefore concluded that married status, for men, is a good proxy for head of household.

In most cases, those who had never married lived as members of other people's households. Some three-quarters of never-married males and two-thirds of never-married females lived with their parents, with a handful living with relatives. The other large groups of never-marrieds were those classified as "other household members", those living alone and those in institutions[432]. "Other household members" should be left out of consideration, since they include domestic servants, who will have taken income out of the household, rather than brought it in.

The greatest proportion of those living outside the family were to be found amongst the oldest age groups. The figures in Table 47 show that the young did not generally leave home to live alone. Only in the older age groups did the proportion of the population living inside the multi-person household fall below ninety-five percent. Living alone was

[431] *13e Algemene volkstelling Deel 5A*, table 1.

something that the old did. All this is consistent with the high proportion of the widowed and divorced living alone. About thirty percent of divorced men and women lived alone, and about a quarter of widowed men and three-eighths of all widowed women. A large proportion of those in institutions and homes were aged between 15 and 24, but these formed only about four percent of this age group. More than a quarter of those who lived in institutions were aged 70 and above. It seems reasonable, therefore, to assume that the never-married working young would be living in their parents' household, and contributing a secondary income, rather than contributing the main income in their own household.

It seems likely that the structure of the household in 1960 had remained more or less unchanged throughout the 1950s. The suspicion that this might not have been the case was raised by the discovery of extended family households in the eastern part of the country, referred to above. The evidence was uncovered in 1956 in a survey of ten thousand farming households in twenty-three eastern communities. The results of this survey showed that nearly twenty-six percent of these households were formed out of extended families, and that in some communities the proportion of such households was as high as sixty percent of the total[433]. Hofstee argued that this was a remnant of a pattern of reproduction that had dominated the Netherlands in the eighteenth century, and his argument became strongly rooted in the Dutch sociology of the family[434]. This viewpoint was reproduced in a number of works, not necessarily consciously. For example, in a work cited earlier, by de Liagre Böhl *et al*, looking at the post-war adoption of the industrialisation policy, the authors refer, without argument, to the disappearance of the three-generation family after the Second World War[435]. Hofstee's argument, however, has come under strong criticism. Van der Woude's investigation, using data from the eighteenth century, concludes that the theory is untenable[436].

But just because it can be shown that the extended family was not dominant in the eighteenth century does not mean that it was not previously more widespread than in 1960. The twentieth century has seen a decline in the size of the multi-person household in the Netherlands[437]. While this would be consistent with a fall in the number of children in the average nuclear family, for example, it would also be consistent with a decline in the extent of the extended family. It is not possible to distinguish between these two possibilities by

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[432] Ibid. table 1.
[433] Van der Woude (1972) p. 300.
[434] Ibid. p. 301.
[435] De Liagre Böhl *et al* (1981) p. 270.
[436] Van der Woude (1972) p. 317.
[437] Faessen (1987) p. 26.

comparing the household data in the 1947 and 1960 censuses, since the 1947 census treated the family and the household as being synonymous. It is further not possible to use data from any earlier census since the 1947 census contained the first complete household survey of the Netherlands[438]. What can be compared using data from the 1947 and 1960 censuses are the number of families sharing dwellings and the stability of the family structure. Multiple family households will have been recorded in 1947 as multiple occupancies, and so changes in the extent of multiple occupancy may reveal changes in the household structure. The extended family household included unmarried brothers and sisters. These will have been recorded in 1947 either as children, if the dwelling belonged to their parents, or as living alone if they lived with their married brothers or sisters. Comparing the family structures revealed by the 1947 and 1960 censuses will bring out any major change here.

It is possible to compare households in 1947 and 1960 using the 1947 definition. The relationship between the two definitions is well-defined, and, although it is not possible to convert 1947 household data into 1960-definition households, it is possible to convert data from the 1960 census into 1947-definition households. In fact, this is done in the 1960 census in a number of tables that make comparisons between the two years. The difference in the definitions affect both multi-person and single-person households. The relationship is defined as

$$H_{47} = H_{60} + S - P_a$$

and

$$A_{47} = A_{60} + P_a$$

where

H_{47} = the number of multi-person households, according to the 1947 definition

H_{60} = the number of multi-person households, according to the 1960 definition

A_{47} = the number of single-person households, according to the 1947 definition

A_{60} = the number of single-person households, according to the 1960 definition

S = the number of secondary families, according to the 1960 definition

P_a = the number of primary units of one person, according to the 1960 definition.

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[438] *12e Volkstelling, annex woningstelling, Serie A Deel 3* p. 11.

	1947	1956	1960
Single household in a dwelling			
Number	1639407	2092607	2339072
Percentage	84.95%	90.04%	92.05%
Shared dwellings			
Number	290417	231508	202124
Percentage	15.05%	9.96%	7.95%
Total number	1929824	2324115	2541196

Sources: *12e Volkstelling, annex woningstelling Serie A Deel 3* table 17.
Algemene woningtelling, 1956 Serie B deel 1, pp. 166-167.
13e Algemene volkstelling Deel 5A table 12.

Table 48: The decline in the number of shared dwellings, 1947-60.

These formulae therefore enable households at the broadest level of categorisation - multi-person or single-person households - to by re-categorised by re-aggregating data at the second-highest level of category. So, to calculate the number of 1947-definition multi-person households in 1960, the number of secondary families must be added to the number of 1960-definition households. This is because the 1947 definition of the multi-person household regards secondary families as households in their own right. But it regards primary units of one person as single-person households, so their number must be subtracted to get the final 1947-definition figure. And to calculate the number of 1947-definition single-person households, the number of single-person primary units are added to the number of 1960-definition single-person households.

These formulae enable the number of 1947-definition households - both single- and multi-person - in 1960 to be calculated. This calculation need not be restricted to the total number, and can be used on any well-defined subset of the population, such as, for example, households headed by women.

There was a decline over the period in the proportion of families sharing dwellings. Table 48 shows the decline. "Dwelling" (*woning*) here means a house or flat, but does not include caravans, houseboats, etc. These latter accounted for about two percent of all households (1947 definition) at all points in the period. The numbers of single households in a dwelling in the table are taken from the numbers, in the sources cited, of households living alone. The numbers of shared dwellings are not specifically given, so the numbers used are the numbers of main households within shared dwellings. The number of families sharing dwellings fell not only relatively but also absolutely. This might indicate a fall in the number and proportion of multiple-family households, but is more likely the result of intensive

	Percentage of households (1947 definition)	
	1956	1960
Sole household in the dwelling	80.35%	83.36%
Main household in shared dwelling	8.89%	7.20%
Living in same dwelling:		
As separate household, because of:		
housing shortage	6.59%	3.72%
other reasons	2.30%	1.24%
As secondary family		2.60%
In other inhabited space	1.87%	1.88%
	100.00%	100.00%

Sources: *Algemene woningtelling, 1956 Serie B deel 1*, pp. 166-167.
13e Algemene volkstelling Deel 5A table 12.

Table 49: Households and dwellings, 1956 and 1960.

house building. More than twenty percent of inhabited dwellings in 1956 had been built since 1946[439]. Even so, as can be seen from Table 49, the majority of families sharing dwellings reported that they did so as a consequence of a shortage of housing, even as late as 1960. While the two columns[440] in the table are not strictly comparable, since the 1956 housing survey did not recognise the concept of "secondary family", the trend is clear. The proportion of families that lived alone increased as the housing shortage eased, not because of structural change to the household.

It is even possible that the number of secondary families in 1960 is overstated. The census data show that the proportion of heads of secondary families in 1960 were overwhelmingly to be found among those below the age of 45, with the largest concentration in the 25-34 year-old age group. Only after the age of 70 does the proportion rise again[441]. This is consistent with younger families not being able to afford to live in their own home and thereby living as "secondary families", and with elderly parents moving into their children's households as "secondary families". Comparison of the two columns in Table 49 also provides evidence that secondary families might not have been all they were made out to be. Although the category of the secondary family was not used in 1956, such families would have been noted as sharing dwellings, and it would be expected that they would be included in the category of "sharing dwellings for other reasons". However, adding the proportions for "other reasons" and "secondary family" in 1960 gives a higher figure than for "other reasons" in 1956. This suggests that some who would have been categorised as secondary families in 1960 were, in fact, categorised in 1956 as sharing because of the

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[439] *Algemene woningtelling, 30 juni 1956 Serie B. Deel 1* pp. 166-167.
[440] The 1947 census did not report any data along these lines.
[441] *13e Algemene volkstelling Deel 5A*, table 1.

	31 May 1947	30 June 1956	31 May 1960
Family households with married couples			
without children	182.3	220.2	232.0
without children, but with others	24.1	19.3	23.4
with children	570.8	595.7	582.0
with children and others	80.4	56.5	56.5
Total	857.6	891.7	893.9
Family households without married couples			
with male head			
with children	20.3	13.6	12.2
with children and others	6.5	3.0	2.6
Total	26.8	16.6	14.8
with female head			
with children	62.6	49.7	48.6
with children and others	13.1	7.8	7.5
Total	75.7	57.5	56.1
Non-family households			
with male head	20.0	15.5	15.5
with female head	19.9	18.7	19.7
Total	39.9	34.2	35.2
Grand total	1000	1000	1000
with children	753.7	726.3	709.4

Note: Excluding the travelling population.

Source: *13e Algemene volkstelling Deel 5A* p. 32.

Table 50: Household composition (1947 definition) per 1000 households, 1947, 1956 and 1960.

housing shortage. This in turn suggests that the line between living in a dwelling as a secondary family and sharing because of the housing shortage was not as clear-cut as the literature might make us believe, and that some of those classified as secondary families in 1960 may have moved out to live on their own had housing been available. The alternative is to take the columns in Table 49 literally, and conclude that there was a small *increase* in the number of three-generation households at the end of the 1950s. Either way, the numbers involved are small enough to ignore.

In other respects as well, the household structure seems to have remained stable throughout the period. Table 50 shows comparisons of family structure in 1947, 1956 and 1960. Most households were headed by a married couple, with a rise in the proportion of these in 1947-56. This was matched by a fall in the number of single-parent families over the same period[442]. Both these figures remained constant between 1956 and 1960. There was a fall in the proportion of households with children, which may not have been entirely

[442] The relatively high number of single-parent families in 1947 was probably a consequence of the war, since, according to Pott-Buter, the level of illegitimate births in the Netherlands was low until the 1980s [Pott-Buter (1993) p. 176].

due to a fall in fertility, since the age of marriage also fell over the period. Earlier marriage meant that children remained in the home for a shorter period, which meant that, in the population as a whole, the number of children living in their parents' households would decline. Otherwise, the overall picture is one of very little change.

In conclusion, then, marital status seems to be a reliable proxy for position in the household, not just for 1960 but for the whole period. The vast majority of households were composed solely of nuclear families with a married man at the head of the household. Secondary incomes were potentially brought into the household by married women, never-married men and never-married women. The elderly largely lived apart from their offspring, either as married couples or as the widowed and divorced living alone. There existed a large number of exceptions, but this model encapsulates the broad picture.

7.3 Changes in incomes from pensions.

This section looks at the effects on household incomes of changes in pension provisions. It does not just consider the effect on the incomes of households containing those who received pensions, but also any possible knock-on effects on households of children of the elderly, etc. It begins by describing the changes that were made to pension provisions, and looks at the effect of these on working patterns, before considering the effect on incomes.

There were three changes to pension provisions during the post-war period. The first change occurred in 1947 with the *Noodwet Ouderdomsvoorziening*, a temporary measure under which everyone aged 65 and above with an income that was deemed too low received a state pension[443]. Prior to this, there had existed a contributory old-age pensions system that covered only a part of the population. Under the 1913 Invalidity Law, all workmen and labourers aged 70 or over who contributed to the scheme were awarded an old-age pension. The minimum age at which a pension could be awarded was lowered to 65 in 1919. That same year, the Voluntary Old-age Insurance Law allowed all those of "working class status" aged 65 or over to receive a pension after making a required number of contributions[444]. Public relief also existed, but was only available to those who could not depend on certain specified relatives or on charity[445]. A full old-age pension system was introduced on 1st January 1957 under the General Old-age Act, the *Algemene Ouderdomswet*, a

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[443] Van Loo (1992) pp. 115-166. The name of the law is not easily translatable into English, but is best rendered as "Emergency law for the provision of the elderly".
[444] Bulder (c. 1993) pp. 88-90.
[445] Ibid. p. 176.

law intended to guarantee the old a basic standard of living[446]. The Dutch refer to the old-age pension as the "AOW", from this law's initials. The following year, 1958, the Widows and Orphans Act came into operation, giving widows a pension[447].

The growth in the number receiving pensions in the late 1950s is captured in the CBS income distribution data. These data are broken down by occupation for the years 1952 to 1959 inclusive, with the exception of 1955 and 1956. "Pensioners" count as an occupation, although it seems, from the context, that their number includes those receiving such things as disability pensions, as well as old-age and widows' pensions. Those with "no occupation" are also categorised as an occupation if they received an income, although there is no indication in the data as to what the origin of the income might have been. This group does, however, play a part in this story.

Although an individual can in practice carry on more than one occupation, he or she is categorised under a single occupation in the data. The category given is the one from which the major part of an individual's income is derived, and individuals can receive incomes from more than one source. For example, a farmer over the age of 65 will have received a pension from the beginning of 1957. Whether he is categorised as a farmer or a pensioner depends on whether he received more from farming than he did from his pension, or vice versa. This is not a serious problem when discussing employment as a whole. Very few farmers would also have had jobs as metalworkers. But it is entirely feasible that people continued farming while actually receiving a pension. The data will have to be interpreted in this context.

There are also a couple of restrictions in how the data are categorised. Firstly, since there are data by occupation, gender and age only for 1959, it is not possible to create a series for women's pensions by age. This in turn makes it impossible accurately to differentiate the effects of the AOW and of widow's pensions, except by inference. There exist, however, data by occupation and gender, and by occupation and age for several years, thus making inference easier than it might have been.

Secondly, the numbers of those with no occupation and no income are not included in the data. This has implications for creating a series reflecting the changed income of those who began receiving pensions, since there is no indication of where these people came from. They could have received income from some other source, from working or from charity,

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[446] Rossem *et al* (1993) p. 46.
[447] Van Loo (1992) p. 116.

Year	Total assessable population	Pensioners		No occupation		Pensioners plus no occupation	
		Number	% of total	Number	% of total	Number	% of total
1952	814700	117000	14.36%	58500	7.18%	175500	21.54%
1953	843700	122000	14.46%	64000	7.59%	186000	22.05%
1958	1039350	195000	18.76%	25000	2.41%	220000	21.17%
1959	1053350	208000	19.75%	20000	1.90%	228000	21.65%

Sources: *Inkomensverdeling 1952 en vermogensverdeling 1953*, table 1.
Inkomensverdeling 1953 en vermogensverdeling 1954, table 1.
Inkomensverdeling 1958 en vermogensverdeling 1959, table 9.
Inkomensverdeling 1959 en vermogensverdeling 1960, table 16.

Table 51: The growth in the number of female pensioners, 1952-59.

for example, or they might have been regarded as having had no income. Both might be expected.

The figures suggest that slightly more than half the number of women who received pensions for the first time in the late 1950s had previously received incomes from outside the labour force. Table 51 shows the growth in the proportion of pensioners amongst the assessable female population. There is a clearly-noticeable jump in the proportion of women receiving pensions between 1953 and 1958, but this is matched by a fall in the proportion of those receiving income from no occupation[448]. The combined proportion of the two categories remained constant. At first sight this suggests that there was a straightforward substitution. However, the size of the female assessable population rose over the same period, and the fall in the absolute number of those with no occupation accounts for little more than fifty percent of the rise in the number of pensioners

A substantial number of men, on the other hand, may have left the labour force as a consequence of the introduction of old-age pensions. As Table 52 shows, the proportion

Year	Total assessable population	Pensioners		No occupation		Pensioners plus no occupation	
		Number	% of total	Number	% of total	Number	% of total
1952	3175100	163000	5.13%	50500	1.59%	213500	6.72%
1953	3210400	152000	4.73%	64000	1.99%	216000	6.73%
1958	3562800	301000	8.45%	11500	0.32%	312500	8.77%
1959	3634300	324000	8.92%	11500	0.32%	335500	9.23%

Sources: *Inkomensverdeling 1952 en vermogensverdeling 1953*, table 1.
Inkomensverdeling 1953 en vermogensverdeling 1954, table 1.
Inkomensverdeling 1958 en vermogensverdeling 1959, table 9.
Inkomensverdeling 1959 en vermogensverdeling 1960, table 16.

Table 52: The growth in the number of male pensioners, 1952-59.

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[448] There are, unfortunately, no data for income by occupation and gender for 1957, which would have made it easier to distinguish between the effects of the AOW and the widows' pension.

	1952	1953	1954	1957	1958	1959
Self-employed in:						
Agriculture	11.02%	11.05%	10.69%	7.43%	6.87%	6.24%
Trade and transport	6.51%	6.53%	7.14%	5.20%	4.56%	4.32%
Other	5.08%	5.16%	4.40%	3.20%	3.48%	3.34%
Total self-employed	22.61%	22.74%	22.22%	15.83%	14.91%	13.91%
Company directors, etc	0.52%	0.66%	0.58%	0.57%	0.62%	0.57%
Public sector employees	0.41%	0.59%	1.21%	0.66%	0.64%	0.65%
Private sector white-collar workers	2.64%	2.83%	2.64%	2.43%	2.62%	2.20%
Agricultural workers	1.64%	1.70%	1.38%	0.79%	0.72%	0.72%
Other manual workers	6.68%	6.73%	6.87%	4.73%	5.11%	5.02%
Unknown occupation/vacation workers	1.04%	0.15%	0.00%	0.00%	0.00%	0.00%
Assessable working population	35.54%	35.40%	34.91%	25.01%	24.62%	23.07%
Pensioners	46.11%	47.13%	48.94%	74.49%	75.29%	76.93%
No occupation	18.35%	17.47%	16.15%	0.50%	0.10%	0.00%
Assessable population	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Sources: *Inkomensverdeling 1952 en vermogensverdeling 1953*, table 2
Inkomensverdeling 1953 en vermogensverdeling 1954, table 2
Inkomensverdeling 1954 en vermogensverdeling 1955, table 2
Inkomensverdeling 1957 en vermogensverdeling 1958, table 8
Inkomensverdeling 1958 en vermogensverdeling 1959, table 8
Inkomensverdeling 1959 en vermogensverdeling 1960, table 15

Table 53: The assessable population aged 65 and over, by occupation, 1952-59.

of pensioners and those without occupations rose in the period 1953-58, but the fall in the number of those without occupations was only about a third of the increase in the number of pensioners. But there was also a considerable fall in the number of over-65s in the workforce, and it seems likely that the introduction of the pension was a cause of this. Table 53 shows how the occupational structure of the over-65 assessable population changed between 1952 and 1959[449]. The proportion of the population classified as pensioners rose from just under a half in the first part of the decade to around three-quarters from 1957, with a huge fall in the proportion of those classed as having no occupation, from one in six of the over-65 population in 1952 to zero in 1959[450]. But there was also a large fall in the percentage of those who were working, from over thirty-five percent to less than a quarter.

The sharpest drop is to be seen between 1954 and 1957, but there are also further declines in the proportion working in 1958 and 1959. It is not clear why this should have been the case, but the fall did not occur across all occupations in the same way. The underlying data for Table 53 also shows that the proportions of each occupation in the assessable working population were fairly similar in 1954 and 1957. This means that the fall in working

[449] The data in Table 53 cover both men and women.

Year	Those age 65 and over who were			
	Working	Pensioners	Without occupation	Total
1952	145	69	83	98
1953	146	64	83	96
1954	146	69	88	99
1957	175	81	124	105
1958	178	81	113	105
1959	162	77		97

Mean income of the whole assessable population for the year = 100

Sources: *Inkomensverdeling 1952 en vermogensverdeling 1953*, table 2
Inkomensverdeling 1953 en vermogensverdeling 1954, table 2
Inkomensverdeling 1954 en vermogensverdeling 1955, table 2
Inkomensverdeling 1957 en vermogensverdeling 1958, table 8
Inkomensverdeling 1958 en vermogensverdeling 1959, table 8
Inkomensverdeling 1959 en vermogensverdeling 1960, table 15

Table 54: The growth in mean income of those aged 65 and over, 1952-59.

numbers when the AOW was first introduced was fairly evenly spread across all sectors. But between 1957 and 1958 the proportions of those working as self-employed in agriculture, and those working in trade and transport (most likely in retail, since this formed the biggest proportion of the sector as regards self-employment) both fell. In other words, taken over two years, the introduction of old-age pensions caused a larger fall in the self-employed working population than in the workforce as a whole. These figures are consistent with Bulder's findings that, in the period before 1947, paid labour was important for men as an element in maintaining income until the age of 70[451], and that self-employed people stayed in work longer than others[452].

The data confirm that the introduction of the general old-age pension raised the incomes of the over-65s. Table 54 shows the growth in the relative average income of those of pensionable age. The income of the average pensioner rose from around seventy percent of average income to around eighty percent. The income of the average working over-65 and the average over-65 with no occupation also rose[453]. This is consistent with the lowest paid in these groups having their incomes boosted by pensions. This could have occurred in two ways. People could either have given up their previous source of income and become

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[450] This figure is different from the ones cited above for men and for women, since the proportions quoted by gender cover all ages.
[451] Bulder (c. 1993) p. 79.
[452] Ibid. p. 88.
[453] Except in 1959, when there was no one aged 65 or above deriving an income from "no occupation".

entirely dependent on pensions, or it could have been that, from 1957, they received more than fifty percent of their income from pensions.

It seems unlikely, however, that changes in pension provisions had much effect on the incomes of others, with the exception of pensioners' direct dependants. The introduction of widows' pensions would have had an effect on orphans as well as widows, and where pensions are recorded as being given to married men, this will have included pensions received by their wives. But pensions - or at least old-age pensions - are not likely to have affected others. It has already been shown that a large proportion of the elderly lived outside the context of the family household at the end of the 1950s. Earlier studies have shown that there was not much in the way of inter-generational transfers between the elderly and their children. A study by Milland in 1898 into the conditions of the elderly in the Netherlands argued that only unmarried employed children had sufficient income to make substantial transfers to their parents. However, unmarried children sharing their parents' household often consumed their entire contribution to the family income themselves, and married children took elderly parents into their household only when the parents made direct or indirect contributions to the family economy[454]. This picture is partly confirmed by two enquiries carried out in Zaandam in 1947 at the time of the introduction of the *Noodwet Ouderdomsvoorziening*. These showed that, prior to the introduction of emergency pensions, in early old age, the majority of incomes came from the person's own resources - generally from paid labour or from capital. The more elderly were dependent on charitable and poor relief institutions. Following the introduction of emergency pensions, income from pensions replaced income from labour and from poor relief, while income from capital remained at the same level[455]. There is no talk of monetary transfers from children, and Bulder can find none in any of the other data she uses[456]. If these transfers did not exist, then the introduction of general old-age pensions would not have affected children's household income.

7.4 The income growth of working sons.

In Chapter 6, it was established that the average income of the 21-29 year-old age group rose faster than incomes as a whole. This section tests the hypothesis that, because of this, the average income of households containing working sons will have risen at a faster rate

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[454] Bulder (c. 1993) pp. 62-63.
[455] Ibid. pp. 132-133.
[456] Ibid. p. 135.

than the average income of households without working sons. Clearly, *ceteris paribus*, a household containing working sons will have had an income higher than one without, but what is important here is the comparative rate of increase. The question under consideration is whether the average income of working sons rose faster than the average income of men in general. If this was the case, then it would mean that the presence of working sons in a household would, on average, cause its total household income to rise at a faster rate than if they were not present. This in turn would mean that - subject to the provisos made earlier concerning income distribution within the family - rising income from industrialisation affected more people than just the individuals working in industry and their direct dependants. It might, for example, have affected their parents.

Around a quarter or so of households contained sons of working age. The 1960 census data show that the number of sons of working age still living with their parents in 1960 amounted to about thirty-four percent of the number of heads of household, both male and female[457]. The proportion of households that contained a son of working age would, however, have been less than this, since it would have been the case that a number of households would have contained two or more of them. There are no data for the distribution of children across households for 1960, but they do exist for 1947. These show that over half (58%) of all families containing children aged 14 or over had only one of these, slightly more than a quarter (27%) contained two, and ten percent contained three.

Working on the assumption, argued above, that the structure of the family remained more or less constant between 1947 and 1960, these figures can be used in combination with the 1960 data to calculate the proportion of families with one or more sons of working age. The data are not broken down by gender, so an assumption will be made that the numbers of sons and daughters were approximately equal[458]. This means that half the number of families with one child aged 14 or over will have had one son (the other half will have had one daughter). A quarter of the families with two children will have had two sons, while a half of them will have had one son (and one daughter). Of the families with three children, three out of eight will have had one son, an equal number will have had two sons, and one out of eight will have had three sons. The percentage of families with more than three children aged 14 or over is so small that they are ignored.

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[457] *13e Algemene volkstelling Deel 5A*, table 1.

[458] This is probably incorrect, since the average age of marriage for men was higher than the average age of marriage for women. Since children stayed in the home until marriage, this means that there would have been more sons than daughters in the later age groups. But the intention here is only to get a rough approximation.

Period	Rise in mean income: Never married	Married (current and previously)
1952-53	2.50%	3.73%
1953-57	41.13%	38.75%
1957-59	6.64%	7.18%
1959-60	5.69%	9.85%

Sources: *Inkomensverdeling 1952 en vermogensverdeling 1953*, table 1.
Inkomensverdeling 1953 en vermogensverdeling 1954, table 1.
Inkomensverdeling 1957 en vermogensverdeling 1958, table 3.
Inkomensverdeling 1959 en vermogensverdeling 1960, table 16.
Inkomensverdeling 1960 Aanvullde gegevens, table 1B.

Table 55: The growth in mean nominal income of never-married and married men, 1952-60

Using these proportions to divide up the thirty-four percent of households in 1960 that contained sons of working age, gives, in approximate terms, sixteen percent of households with one son aged 14 or above, eight percent with two sons and two percent with three or more sons[459]. This adds up to twenty-six percent of households containing at least one son of working age. Not all of these will have been working. Forty-three percent of males aged between fourteen and nineteen, and nearly eight percent of those between twenty and twenty-four were in full-time education at the time of the 1960 census[460], but the calculation gives a rough idea of the number of households concerned.

The hypothesis is tested by comparing the growth in the average income of never-married men with the growth in mean married male incomes. "Married" here means those who have been married at one point - i.e. it includes those classified as "widowed" and "divorced". The figures for income by marital status and gender can be obtained from the CBS income distribution data for 1952, 1953, 1957, 1958, 1959 and 1960. The results are shown in Table 55.

In fact, the figures do not support the hypothesis - at first sight in contradiction to the earlier results. In general, the mean income of married men rose by slightly more than the mean income of never-married men. The exception is that the mean income of never-married men rose very slightly more than that of married men during the four year period 1953-57. But, over the period as a whole, the relative mean income of never-married men fell from forty percent of that of married men in 1952 to thirty-eight percent in 1960.

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[459] These figures add up to thirty-eight percent not thirty-four: (16*1) + (8*2) + (2*3) = 38. But, to emphasise, what is being calculated here is a ballpark estimate.
[460] *13e Algemene volkstelling Deel 10A* p. 18.

The explanation seems to be that, as incomes rose, men got married at an earlier age. Between 1947 and 1960, the average age at which men married fell by nearly two years[461]. This is partly apparent from the data behind Table 55. This shows that the proportion of the never-married in the assessable male population fell, from over twenty-eight percent in 1952 to twenty-six percent in 1959, with a slight rise in 1959-60. Because mean income rose with age, a falling average age of marriage reduced the mean income of the never-married.

It seems, therefore, that, while household incomes did not rise faster than male incomes as a result of the increase in young male incomes, the disposable incomes of household members did. This apparent contradiction was a consequence of the earlier formation of new households, itself the result of the higher earnings than previously of young males. But the earlier formation of these new households may have boosted the disposable income of parents, because it reduced amount of income transferred to their children. The extremely rapid fall in the age of marriage suggests that young men in 1950 could not afford to set up their own households as early as they would have like to. The higher earnings available to the later birth cohorts removed or reduced the economic barrier. But this in turn implies that rises in the incomes of young men were not redistributed amongst their parents' households, but were largely retained by the sons themselves. This goes some way to back up the idea that children with their own incomes did not share these with their parents, and that intergenerational transfers were largely one-way - from the older to the younger generation. If this was the case, then the earlier age of marriage would have meant that parents ceased to make these transfers, on average, nearly two years earlier. To put this another way, their disposable income would have risen by the amount involved some two years earlier than was the case at the end of the 1940s.

7.5 Increased women's participation and household income.

This section investigates the effects on household income of the increase in women's participation in the paid workforce. It confines itself to the effects on monetary incomes, for the reasons stated earlier in the chapter. The section begins by reviewing the pattern of increased participation, before looking at the effects of increased participation by married and never-married women separately.

The absolute number of economically-active women declined between 1947 and 1960 as a consequence of two conflicting trends. On the one hand, the number of women working

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[461] *Jaarcijfers voor Nederland*, table 34; *Jaarcijfers voor Nederland*, table 35; *Jaarcijfers voor Nederland*, table 40.

	1947		1960	
	Working family members	Economically-active outside the family	Working family members	Economically-active outside the family
Agriculture, fishing & hunting	15.05%	2.85%	3.31%	1.06%
Mining and quarrying	0.01%	0.12%	0.00%	0.12%
Manufacturing	0.45%	16.49%	0.32%	21.78%
Building & construction	0.06%	0.21%	0.03%	0.56%
Public utilities	0.00%	0.13%	0.00%	0.23%
Retailing in shops	7.12%	7.07%	4.64%	12.41%
Commerce (excluding retail in shops), banking & insurance	0.39%	3.62%	0.23%	6.45%
Transport & communications	0.15%	1.73%	0.23%	2.04%
Domestic service	0.00%	18.88%	0.00%	12.29%
Services (excluding domestic service)	1.95%	23.18%	1.35%	32.70%
Unknown type of business	0.00%	0.54%	0.00%	0.24%
Total	25.18%	74.82%	10.11%	89.89%

Source: *13e Algemene volkstelling, Deel 10 A*, table 2.

Table 56: Changes in the number of economically-active women, by sector, 1947-60.

in the family business fell by over sixty percent, while, on the other, there was an eighteen percent increase in the number of women working outside the home[462]. As a consequence of these trends, as can be seen from Table 56, the number of women working in the family business fell from a quarter to a tenth of the economically-active female population. The pattern of occupations followed by women changed. Of the working family members, about three-quarters of the fall in numbers took place in agriculture and about a sixth in retail work in shops. Together, these sectors made up ninety-five percent of the fall in numbers.

The rise in numbers of those who worked outside the family was, again, the result of two contradictory trends, with a fall in some sectors and a rise in others. There was a fall in the numbers working in agriculture and in domestic service. The number working in agriculture fell by sixty percent - although the size of the fall was not large in absolute terms and certainly not to compare with the fall amongst those working on the family farm. The thirty-five percent fall in the number working in domestic service, on the other hand, did form a significant proportion of the employed female workforce, amounting to the equivalent of nine percent of the number of women working outside the home in 1947.

Other sectors experienced a rise in the numbers of women working in them. Manufacturing received a thirty percent rise in numbers, retail work in shops seventy-three percent, and a similar rise in other forms of commerce, banking and insurance. The largest component in the total rise was in services, which experienced nearly a forty percent rise in

[462] The male workforce increased in number by about eleven percent over the same period.

numbers. This change in the pattern of employment left the same sectors important - manufacturing, retail work, other forms of commerce together with banking and insurance, and domestic services and other forms of service - but changed the order of their importance.

As with the male workforce, the majority of the increase in numbers occurred amongst wage and salary earners. The proportion of women who were heads of businesses and self-employed fell from just under ten percent of those working outside the home to around six percent, while their absolute number fell by over a quarter[463].

The changed pattern of employment is partly reflected in the pattern of the supply and demand for female labour. Table 16 shows the total numbers at the end of September each year of women registered as looking for work and of employers' registered demand, along with the figures for the major sectors. In general, the overall pattern was the same as the male one. There was a fall in demand for labour in the early 1950s, a rise in the mid-1950s, a fall in 1957-58, and a rise thereafter. However, unlike the demand for male labour, the demand for female labour did not fall below its registered supply in 1958.

The pattern varied between sectors. This, it seems, was at least in part a reflection of preference for working in certain sectors over others. For example, as Table 16 suggests, the decline in numbers of women working as domestic servants does not seem to have been driven by a decline in demand. Once there was full employment, from 1953, the number of women registered as wanting such work plunged dramatically, while demand for domestic servants rose in equal measure. The reverse pattern can be seen with office work and with commercial work. In each case, registered supply exceeded demand at the beginning of the 1950s, and only after 1954 did demand exceed supply. In the case of manufacturing, the cycle of demand shows the same pattern as for male work in manufacturing, but hardly any women registered as looking for industrial work. Apparently manufacturing could have made a stronger contribution to the growth of the female labour force, but this was limited by reluctance of women to look for work in the sector.

These changes still left married women as a very small proportion of the workforce. The overall participation of married women declined because, once again, the proportion of women working in the family business fell while the proportion of those working outside the home rose. This is shown in Table 57. The number of wives working in the family business fell from just under eight percent of all married women in 1947 to two and a half

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[463] *13e Algemene volkstelling Deel 10A* table 2.

	1947			
	Total	Living with husband		Not living with husband
Age		Working in the family business	Other	
15-19	8.69%	2.17%	4.08%	2.45%
20-24	8.48%	3.36%	3.74%	1.37%
25-29	8.24%	5.01%	2.44%	0.79%
30-34	9.52%	7.07%	1.91%	0.54%
35-39	12.02%	9.54%	2.02%	0.46%
40-44	11.97%	9.61%	1.93%	0.44%
45-49	12.04%	9.79%	1.81%	0.44%
50-54	11.22%	9.36%	1.50%	0.36%
55-59	10.03%	8.62%	1.14%	0.27%
60-64	8.12%	7.16%	0.76%	0.21%
65+	4.83%	4.40%	0.30%	0.13%
Total	10.00%	7.67%	1.82%	0.51%

	1960			
	Total	Living with husband		Not living with husband
Age		Working in the family business	Other	
15-19	13.45%	0.91%	10.06%	2.48%
20-24	12.47%	1.64%	9.23%	1.61%
25-29	7.74%	2.00%	5.23%	0.51%
30-34	6.59%	2.44%	3.89%	0.26%
35-39	7.30%	2.98%	4.09%	0.23%
40-44	8.08%	3.47%	4.36%	0.25%
45-49	8.08%	3.71%	4.11%	0.26%
50-54	7.12%	3.34%	3.51%	0.28%
55-59	5.31%	2.58%	2.48%	0.25%
60-64	3.04%	1.56%	1.32%	0.16%
65+	0.83%	0.47%	0.31%	0.05%
Total	6.76%	2.52%	3.88%	0.36%

Source: *13e Algemene volkstelling Deel 10A* table 19.

Table 57: Economically-active married women, as a proportion of the total number of married women in each age group, 1947 and 1960.

percent in 1960. The proportion of married women who worked outside the home more than doubled from just under two percent to just under four. The proportion of wives in the paid workforce rose at all age levels, with around ten percent of married women under the age of 25 working in 1960.

The relatively high proportion of younger wives - those who married below the average age - is probably part of the explanation as to why a higher proportion of wives worked when the husband was on a lower income. Table 17, above, gives some indication of the relationship between a wife working and her husband's income. Three-quarters of men

Occupational category	Heads of multi-person households		Living alone	
Head of agricultural of horticultural business	3318	1.56%	648	0.25%
Other heads of business with personnel:				
Shops	2766	1.30%	1032	0.39%
in industry with				
10 or more employees	113	0.05%	66	0.03%
5-9 employees	130	0.06%	52	0.02%
1-4 employees	363	0.17%	197	0.07%
other businesses	1960	0.92%	886	0.34%
Heads of businesses with no employees				
Shops	2407	1.13%	2235	0.85%
Industry	713	0.34%	1170	0.44%
Other businesses	2573	1.21%	2319	0.88%
Scientific professions	259	0.12%	375	0.14%
Other professions	1180	0.56%	2582	0.98%
Higher employees	878	0.41%	2645	1.00%
Other white-collar workers:				
income of f7,500 p.a. and over	2019	0.95%	4632	1.75%
income of f5,500 - < f7,500 p.a.	3760	1.77%	12602	4.77%
income of f3,750 - < f5,500 p.a.	5315	2.50%	19560	7.41%
income of < f3,750 p.a.	5102	2.40%	12004	4.55%
Agricultural workers	146	0.07%	146	0.06%
Other manual workers:				
income of f7,500 p.a. and over	11	0.01%	30	0.01%
income of f5,500 - < f7,500 p.a.	59	0.03%	150	0.06%
income of f3,750 - < f5,500 p.a.	884	0.42%	1509	0.57%
income of < f3,750 p.a.	15457	7.27%	16095	6.10%
Working in the family business:				
Agriculture	24	0.01%		
Other businesses	20	0.01%		
No occupation	163082	76.73%	183023	69.34%
Total	212539	100.00%	263958	100.00%

Source: *13e Algemene volkstelling Deel 10A* table 9.

Table 58: The occupational distribution of female heads of household (1947 definition), 1960.

with working wives earned less than f7500 a year[464] and nearly sixty percent less than f5500. The exception to this pattern was with those men working in the "non-scientific" professions[465].

There was also a low proportion of households headed by a woman with an occupation.

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[464] As is noted later in this section, the mean income of men in their forties and fifties in 1959 was around f8000.

[465] There are slightly different figures for the percentage of married women working outside the home and the percentage of male heads of household working outside the home because there were slightly more male heads of household (1947 definition) than married women.

The distribution of female-headed households in 1960 according to the occupation of the head of household is shown in Table 58. As can be seen, more than three-quarters of women who headed multi-person households (1947 definition)[466] and more than two-thirds of women living alone had no occupation. The large number of older women in these groups probably explains this. Of those female heads of household who did have jobs, the largest numbers were to be found in the lowest income groups.

Unmarried women, on the other hand, increased their participation in the paid workforce. Once again, there was a decline in the number working in the family business. However, unlike in the case of married women, this decline was not large enough to offset the growth in numbers working outside the home, which amounted to more than ten percent[467]. This resulted in the female workforce growing younger. By 1960, more than fifty percent of the economically-active female population was under the age of 25, up from forty-six percent in 1947[468], despite a rise in the proportion of 14 to 19-year olds in full-time education from just under a quarter to almost a third[469].

The increased participation of married women may have had a larger impact on the growth of household incomes than the simple figure suggests. The figure of four percent of wives working outside the home needs to be taken in the context of two provisos. The first has already been noted. The participation rate of married women under the age of 25 was nearer to ten percent than four, and so married women's income will have been more important to the income of households of young married couples than to those of more established couples.

The second proviso is the point made by Goldin already noted in Chapter 4: the level of labour force participation as measured by a census is ambiguous. This figure says nothing about the homogeneity or heterogeneity of women's labour[470]. In the Dutch case, the 1960 census was taken on 31st May, and the four percent participation rate actually means that four percent of wives worked outside the home in the previous week. Complete heterogeneity means that some wives worked outside the home for the whole year, while others did not work at all. If this were the case, the four percent figure would be exactly the proportion of wives who worked in 1960. On the other hand, complete homogeneity

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[466] The 1960 occupational census used the 1947 definition of the household.
[467] This is nowhere stated explicitly, but can be calculated from data in *13e Algemene volkstelling Deel 10A* tables 2 and 19. The number of unmarried women working outside the home in each of the years is calculated by subtracting the number of wives economically-active outside the home from the total number of women economically-active outside the home.
[468] *13e Algemene volkstelling Deel 10A* p. 25.
[469] Ibid. p. 18.
[470] Goldin (1990) pp. 28-29.

means that all wives worked an identical amount in the year, with four percent working at any one time - i.e. each wife worked for about a fortnight in 1960. It seems therefore to be probable that more than four percent of wives worked during the year. It is certain that not all wives worked identical amounts of time, since young wives and those whose husbands earned low incomes were more likely to work than others. But it was probably also the case that these groups themselves were not completely heterogeneous, and that more than ten percent of young wives worked at some point during the year.

It seems likely, then, that increased participation by married women had some effect on the growth of average household income. But because married women's incomes are included in their husbands' in the CBS income distribution data, this bald statement is all that can be concluded from the data used in this study.

It is, however, possible to make an approximate calculation of the effect on incomes of increased participation by never-married women. The difficulty in doing this is that before they joined the workforce these women received no income, and that those who earned no income do not appear in the income distribution data. Their number is therefore not known, but the change in their number can be estimated. To do this, it is necessary to make the assumption that the potential workforce among never-married women and never-married men remained at a more-or-less constant ratio throughout the period. That is, the number of never-married women who could have earned an income (not necessarily those who did) remained at approximately the same ratio to the number of never-married men who could have earned an income (again, not necessarily those who did). On the basis of this assumption, an increase in the ratio who actually did earn an income, as represented by the assessable working population, therefore represents increasing participation, rather than an actual change in the ratio of men and women. The number of never-married women in the assessable working population in any specified year as a result of increased participation since a base year can therefore be calculated from

$$w-(m*r)$$

where

w = the actual number of never-married women in the assessable working population in the specified year

m = the actual number of never-married men in the assessable working population in the specified year

	A	B	C	D
1952	579000	65.65%		
1953	596000	68.07%	21136	3.55%
1958	747900	82.93%	155835	20.84%
1959	752000	81.56%	146673	19.50%

Key: A) The number of never-married women in the assessable working population.
B) The ratio of never-married women in the assessable working population, to never-married working men in the assessable working population.
C) The number of never-married working women due to increased participation since 1952.
D) The increase in workforce participation, as proportion of the number of never-married working women

Sources: *Inkomensverdeling 1952 en vermogensverdeling 1953*, table 1.
Inkomensverdeling 1953 en vermogensverdeling 1954, table 1.
Inkomensverdeling 1958 en vermogensverdeling 1959, table 9.
Inkomensverdeling 1959 en vermogensverdeling 1960, table 16.

Table 59: The increased participation of never-married women, 1952-59.

r = the ratio of never-married women to never-married men in the assessable working population in the base year

From this, it is possible to calculate how many households in the specified year were affected by increased participation by comparing the result to the distribution of daughters of the appropriate age.

This calculation shows that the income of more than one household in twenty-five, at the end of the 1950s, rose as a consequence of this increased participation. The income distribution data show a substantial increase in the ratio of never-married women to never-married men during the mid-1950s boom, from just under seventy percent to over eighty percent. Row C in Table 59 shows the number of never-married women that must be subtracted from the actual total each year to keep the proportion at the 1952 level. This number is taken as the number of never-married women who entered the labour force as a result of increased female participation. It shows that this increase was, by 1959, equivalent to about twenty percent of the never-married female workforce. To put it another way, the never-married female workforce expanded by some twenty-five percent over those seven years. The size of the increase in 1959 is equivalent to nearly six percent of the number of heads of household (1960 definition) in 1960. Using the same proportions for the distribution of the number of daughters as was used above for the number of sons (for every sixteen households that had one son of working age, eight households had two and two household had three or more), then the incomes of nearly four and a half percent of all households must have been higher because of the increased number of daughters working for pay. Assuming, as with sons, a figure of twenty-six percent of households contained a

daughter or daughters of working age, then about one in six of these households experienced rises in household income simply as a result of the increased employment of never-married women.

The rise in income will have been substantial. If those who were working as a consequence of increased participation were all aged 20 or under, their average annual income would have been f1190. This would probably be an underestimate for the group as a whole, since some of these women would almost certainly have been in the 20-25 year-old group, and so the figure should perhaps be considered as a lower limit. The male heads of households, most likely their fathers, would have probably been in the 40-59 year-old age group, with an average income of around f8000[471]. This means that that the incomes of such households will have been some fifteen percent higher, per daughter, than their equivalents seven years previously. It is possible that this increased income went to the daughters rather than being shared within the household, as has been suggested occurred with the increased income of sons[472], but there is a difference. The daughters in question would have being bringing no income at all into the family seven years previously, but would nevertheless have been consuming some of the household resources. They needed to be clothed and fed. It is inconceivable that working daughters did not contribute something towards their food and clothing while they lived in their parents' households. Increased participation can therefore be said, in this respect, to have at least reduced a demand on household incomes.

Over a period, this will have affected a larger number of households. It affected around four and a half percent of them in 1959, but, as has been pointed out, households are dynamic. Daughters leave to get married, while, in other households, daughters grow up to be of working age. Therefore, a larger number will have experienced the higher incomes that increased female participation brought. It is not possible to calculate the extent of this from the data under consideration, but it clearly will have made a substantial difference to household incomes over the lifetime of a family.

7.6 Conclusion.

This chapter has tried to move away from a simple identification of the growth in disposable income with earnings growth. It has done this by attempting to uncover what

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[471] *Inkomensverdeling 1959 en vermogensverdeling 1960*, table 2.

[472] Although it is by no means certain that the rules for distributing the incomes of sons and daughters within the family were even remotely alike.

happened to household incomes: how they were constructed, how this changed. This flowed from the argument that those who directly receive incomes, whether earned from wages and salaries, or from elsewhere, are not the only people with disposable incomes, and that it is in the household that the redistribution of income between earners and non-earners takes place.

The chapter has shown that disposable incomes rose faster than this identification would suggest. Those who began to receive pensions as a result of the changed legislation saw their incomes rise relative to mean incomes, although this seems to have had little or no knock-on effect on the income of others, such as their children - the old, in particular, seem to have lived alone. Sons, living with their parents, who began to work for their living were able to get married and set up their own homes earlier than previous birth cohorts, presumably as a consequence of higher earnings from industrialisation. In this case, it seems likely that there will have been a knock-on effect on their parents' disposable incomes, as the cost of maintaining a son was removed nearly two years earlier than previously was the case. Increased workforce participation by women brought additional income into the household. In the case of working wives, it is not possible to make even a ballpark estimate as to how much this was, since there are no figures available on wives' incomes. But the evidence suggests that increased participation here made some difference to the incomes of households of the lowest-paid men. The increased participation of daughters between 1952 and 1959 affected approximately one in six of the households in 1959 that contained daughters of working age, increasing the income of these households, on average, by something of the order of fifteen percent. There may also have been a further effect on parental disposable income due to the fall in the average age at which women married.

But, because of the short period under investigation, it is not possible to say by how much these changes caused disposable incomes to rise. Although some estimates have been made, it is not possible to total these up - because there are figures that are unavailable, such as those for wives' incomes, and because it is not absolutely certain how the figures should be added up, even if all of them were available. But the figures that have been estimated are, in any case, snapshots of changes that had ongoing effects, altering the long-term economics of running a household. Old-age pensions increased the income that people could expect at the end of their lives, perhaps allowing them to spend more at an earlier stage rather than saving. But, perhaps more significantly, the increased incomes of the young - both male and female - and the earlier average age at which they left the parental home would have reduced the costs of raising children. This would have affected

parental disposable income over the lifetime of the parents themselves. To calculate the effect of this would therefore involve looking at changes in lifetime disposable incomes, by definition over a period much longer than the scope of this study. It would inevitably take us into entirely new territory. The extent of this rise in disposable income will therefore, for the moment, have to remain unmeasured.

Chapter 8. Conclusion.

This study has attempted to explain the massive rise in the level of consumption in western Europe in the 1950s. This rise involved not just an increase in the quantity of goods consumed, but also an increase in the proportion of the population buying consumer durables. This increase meant a radical change to people's lives.

The explanation for rising levels of consumption has been sought in the way that the labour market responded to economic growth. Higher consumption meant that people were buying more, which meant, in turn, that incomes were rising. Because most people received their incomes in the form of wages or salaries, this means that the origins of the increase in consumption have to be sought in the labour market. But at the same time that levels of consumption were rising, western Europe was experiencing unprecedentedly high growth rates. The thesis has therefore attempted to explain the rise in consumption in terms of the effect that economic growth had on the labour market, in particular on its structure, as new high-wage industries were developed and the proportion of the population involved in the labour market increased.

The Netherlands has been used as a case study. No country was typical. They were all different in their various ways, and there are probably good reasons for using or rejecting any or all as examples. But the Netherlands had growth rates fairly typical of north-west Europe as a whole, and, despite its unique set of institutions governing its labour market, Eichengreen has argued that the Dutch merely formalised what other countries did informally. Furthermore, the Netherlands has a very good set of data on the labour market during the period.

This chapter sums up the conclusions of this study, and then attempts to look beyond the Netherlands. The first section summarises the conclusions of the research on the Netherlands, the second considers how typical the Dutch experience was, and the third looks at the more general implications.

8.1 Rising incomes in the Netherlands.

This study raised the question of how it was possible for incomes to have risen if wages were held down. In the case of the Netherlands, we saw that the rise in consumption was of the same sort as that in western Europe generally, but that this occurred in the context of a wage control system. The wage control system regulated the growth of wage rates by

means of a system of institutions involving the participation of government, trade unions and employers' associations. The aim of this system was to ensure that funds were available for investment in industry, something that was regarded as necessary to provide jobs for an expanding population and to eliminate a threatened structural balance of payments deficit.

Two positions were rejected. The first was that workers deferred increases in income in order to allow economic growth to feed into increased investment. The argument was proposed by Eichengreen in order to explain where the funds for increased investment came from. This part of his overall argument seems, however, to be wrong. It is clear that the necessary funds for investment in industry were made available, and that industry was able to grow. The figures for industrial production and industrial exports show that, in this respect, the ultimate objectives of wage control were achieved. But Eichengreen's argument that this was due to workers deferring wage increases appears to be contradicted by the growth in the consumption of consumer durables. Not much in the way of income growth seems to have been deferred. It is possible, of course, that this consumption might have been higher in the absence of wage control, but this objection still leaves unanswered the question of why it grew so rapidly to such a high - by previous standards - level.

The other position that was rejected was that wage control failed to hold down wages. This was the general position of Roberts in the 1950s, van Hulst in the 1980s and Brander, Mieras and van Hulst in the 1990s. There are differences between them. Roberts and van Hulst both argue that wage control failed to hold down workers' earnings. This, however, was not its intention. Indeed, the trade unions hoped that, by increasing the number of jobs available, wage control would actually raise earnings. Brander *et al*, on the other hand, deal with wage rates. They argue that wage control failed to hold the growth of wage rates below their long-term trend, except for short periods. What they fail to show, however, is that the long-tern trend was unaffected by wage control. But, in any case, they accept that wage control did have some effect in the 1950s, which means the rise in consumption cannot be put down to its failure. Figure 9 also suggests that wage control had some effect. It shows that, whilst wage drift clearly existed, particularly in years of a low level of unemployment, the growth path of wage rates nonetheless followed that of regulation wages.

It was suggested in the thesis, therefore, that wage rates and disposable incomes grew at different rates. Despite the fact that disposable income, for a wage worker, is dependent on a wage rate, it is also dependent on other things. Disposable incomes will only grow at the same rate as wage rates if the job composition of the workforce remains static, if everyone remains in the same job, if every job pays a single rate (which can change its value, but is

the only thing that does change), and workers do not have to share their earnings with non-workers. This is a useful counterfactual, but in reality all these things change. The composition of the workforce changes. People change jobs. Jobs themselves have pay scales, rather than single wage rates, and people move their positions within pay scales - and at different rates. Finally, workers live within households, and their earnings are distributed amongst the household members.

The most important driving force behind these changes in the 1950s Netherlands was the expansion of manufacturing. Industrial production was ninety-nine percent higher in 1960 than in 1949, and had expanded in all industries. The smallest increase was the expansion of textile production by more than fifty percent, while the output from metal working expanded by almost one hundred and seventy-five percent. Industrial exports increased in value by a hundred and eighty percent between 1948 and 1962, and the proportion of the economically-active population in manufacturing increased from twenty-five percent to thirty percent between 1947 and 1960.

The changes this brought about to the structure of the labour force did not affect all sections of the population equally. The expansion of employment in manufacturing was at the expense of agriculture, whose workforce declined from nineteen to eleven percent of the economically-active population. But the expansion of employment in manufacturing affected different sections of the population in different ways. It had a greater effect on men's employment than on women's, being responsible for three out of five new male jobs, but only one out of three of the increased number of women's jobs. It had a greater effect on young men than on older ones, with a higher percentage of men in the younger age groups being found in manufacturing. It also affected different industries in different ways. Some industries saw a decline in male employment. In the cases of the tobacco industry and the leather and leather goods industries the decline was absolute, with a fall in the number employed. In many more industries, the decline was relative, as the number employed grew slower than the growth of the manufacturing workforce as a whole, and their shares of the manufacturing workforce fell. It was the newer industries that grew most, with the majority of the new jobs appearing in metal working and chemicals.

In particular, the increased employment of younger workers in manufacturing appears to have been a major factor in pushing up earnings. This was shown in two steps. Firstly, the mean income of successive birth cohorts rose relative to mean incomes generally. The only exception to this was in the recession of 1957-58. Secondly, this rise in relative mean income moved together with the growth in numbers of those employed in manufacturing. Since it was also shown that the industries whose workforces expanded their share of

manufacturing employment paid above-average wage rates, this implies that the main force pushing up earnings was the growing number of *young* workers in these industries. Since we also know that it was the new, non-traditional, industries whose workforces grew, this implies, in turn, that earnings growth was driven by the growth in the numbers of young workers in these new industries.

The impact was even greater when median income growth is considered. There are two factors behind this. Firstly, mean income tends to rise with age, and rises more sharply across the younger age ranges than the older. Secondly, the rapid population growth in the Netherlands reduced the median age of the workforce. Median earnings are measured by creating synthetic birth cohorts: identifying the range of years in which an age group was born, and using income data by age group to follow the mean income of each birth cohort thus identified across the 1950s. This gives a better measure of what people earned and how it changed over time than measures of mean income by age group. Individuals pass through age groups, but they remain in their own birth cohort. Measuring the growth of income by birth cohort therefore gives a rough indication of how people actually experienced income growth.

By 1959, almost half the economically-active male population had been born in or after 1920, and the mean income of those born after 1920 had more than doubled in real terms since 1950. In other words, although wage rates rose by less than per capita national income between 1950 and 1959, because of the combined effects of the changing age and occupational structure of the workforce, most men experienced much greater rises in their earnings.

Increased female participation in the labour force added to the growth of disposable income. This is because disposable income is mediated through the household. Those who receive income as a result of their own economic activity - whether they are wage earners or receive other kinds of income - are not usually just providing for themselves. This income is added into a household income, which is then distributed within the household. *Ceteris paribus*, the greater the number of people in a household that are earning an income, the greater the household income will be. The crucial increase in the proportion of household members within the Dutch workforce during the 1950s occurred amongst daughters. Between 1952 and 1959, the number of working daughters grew by about twenty-five percent. These young women were low-paid, but previously, being outside the workforce, they would have brought no monetary income into the household at all. A rough estimate suggests that each additional daughter in the workforce increased household income by an average of around fifteen percent.

The consequences of all this was that disposable income grew more rapidly than wage rates. Male earnings rose faster than wage rates because workers moved into higher-paying industries and occupations - and specifically because young workers went into these. Household incomes rose faster than male earnings because more women went into the paid workforce, thereby increasing the amount of income that came into the household at a faster rate than the growth of male earnings.

This has implications for the discussion of workers' attitudes to wage control. Wage control operated on wage rates. However, workers' reactions to it will have been based on what happened to their disposable incomes. It is disposable income that is spent and determines the level of consumption, and workers - along with the other members of their households - will have judged their own wages growth by the growth of their disposable incomes, not by the growth of the underlying wage rates. The fact that disposable incomes rose faster than wage rates will, at the very least, have taken some of the upward pressure off wage rates.

8.2 International comparisons.

Was the Netherlands an exception? This study began with a general question about the rise in living standards across western Europe as a whole, but has concentrated on the case of the Netherlands. It has shown how changes to the structure of the Dutch labour market during the 1950s caused disposable income to rise. But the Netherlands had specific economic problems in the period relating to its rapid population growth and the loss of its empire in Indonesia. It also had specific solutions to these problems in the shape of a set of economic institutions and practices not found elsewhere. This then raises the question as to whether the conclusions are specific to the Netherlands.

Census data suggest that, in fact, the same broad features of the Dutch labour market can be found elsewhere in western Europe during the period. This is something that can only be stated broadly using these data without further qualification for two reasons. Firstly, labour force census data in this period are not necessarily comparable between countries to any degree of precision: industries and occupations were not defined in the same way internationally. Secondly, as we have seen with the Netherlands, these data are not necessarily compatible between two censuses across the 1950s for the same country. Only where published data are described as such, can they be considered as comparable.

	Year	Total	Aged 40 and under	Aged 30 and under
Belgium	1961	36.16%	39.06%	42.76%
France	1962	29.72%	#N/A	#N/A
Italy	1961	22.37%	26.01%	30.10%
The Netherlands	1960	32.24%	34.22%	34.04%
West Germany	1961	41.23%	45.72%	48.27%

Key: #N/A = data not available

Sources: *Recensement général de la Population au 31 décembre 1961, Tome 8*, table 11.
Recensement Général de la Population de 1962, Population Active, table 2.
10 Censimento Generale della Popolazione, Volume VI Professioni, table 6.
13e Algemene volkstelling, 31 mei 1960, Deel 10A, table 4.
Volks- und Berufszaehlung vom 6. Juni 1961, Heft 12, pp 80-185.

Table 60: The proportion of the male workforce in manufacturing in selected countries c. 1960.

But two important features are evident at the beginning of the 1950s. The male manufacturing workforce was biased towards the young, and female employment had grown since the Second World War.

The same age pattern in men's employment in manufacturing can be seen in a number of countries. Table 60 shows the five large countries that originally signed the Treaty of Rome - Luxembourg, being substantially smaller than the others, is omitted as not comparable. In the case of France, there are no data for employment by sector and age in the census of 1962. But in the case of the others, it can be seen that there was a higher proportion of young males in manufacturing then there was of men as a whole. The table shows the proportion of the total male workforce - all economically-active men - in manufacturing, together with the proportions of economically-active males under 40 and under 30 in

		Proportion of manufacturing workforce	
	Year	Aged under 40	Aged under 30
Belgium	1961	56.30%	32.21%
France	1962	#N/A	#N/A
Italy	1961	66.96%	44.17%
The Netherlands	1960	59.00%	34.43%
West Germany	1961	60.82%	39.39%

Key: #N/A = data not available

Sources: *Recensement général de la Population au 31 décembre 1961, Tome 8*, table 11.
Recensement Général de la Population de 1962, Population Active, table 2.
10 Censimento Generale della Popolazione, Volume VI Professioni, table 6.
13e Algemene volkstelling, 31 mei 1960, Deel 10A, table 4.
Volks- und Berufszaehlung vom 6. Juni 1961, Heft 12, pp 80-185.

Table 61: The male manufacturing workforce by age in selected countries c. 1960.

	c. 1950	c. 1960
Belgium	14	14
Denmark	23	24
France	17	19
West Germany	#N/A	14
The Netherlands	13	14
Sweden	18	24
United Kingdom	25	27

Source: Pott-Buter (1993) p. 127.

Table 62: Labour force participation rates of women in waged and salaried employment in selected countries c. 1950 and c. 1960.

manufacturing. In all four cases, the proportion of men under 40 who were employed in manufacturing was higher than the proportion of men of all ages, and the proportion of men under 30 was higher still. The difference in percentage points between the columns seems to be slightly less for the Netherlands than for the other countries, suggesting that the growth in young male employment was less in this country than was the case for the others. This may be due to the rapid population growth, as can be seen from Table 61. Here, the proportion of the male manufacturing workforce under the age of 40 is very similar in the Netherlands and West Germany. Italy, with a smaller proportion of economically-active males overall in manufacturing, has a much higher percentage of its manufacturing workforce overall under 40, whilst Belgium, noted by Kindleberger as one of the countries in which the labour did not substantially increase[473], had a slightly lower percentage.

The increase in women's employment during the 1950s can also be seen in a number of countries. There are problems measuring women's participation in economic activity, since the total figures for economically-active women include wives working in the family business. As we have seen with the Netherlands, a decline in the number of these women can mask an increase in female participation in other economic activity. But the data on female participation in waged and salaried employment, shown in Table 62, confirms a general increase here. Of the countries listed, only Belgium showed no increase in the participation rate, while some other countries showed a much greater increase in participation than the Netherlands.

It would seem therefore that the Netherlands was not different. By and large, the structural profile of the labour force does not seem to have been exceptional. Indeed, the trends that helped create rising disposable income in the Netherlands may well have been less strong

[473] Kindleberger (1967) p. 3.

there than in other countries. This does suggest, therefore, that the common phenomenon of rising disposable income may have had an origin in common changes to the structure of the labour force.

8.3 Some implications.

The conclusions made in this study have implications both for the explanation of Europe's "Golden Age" and for the more general consideration of the relationship between economic growth and the growth of disposable income. The study partly supports Eichengreen's analysis. But it also suggests that the relationship between economic growth and what people have to spend is not a straightforward one. This final section briefly discusses these points.

The results of this study are consistent with Eichengreen's argument concerning the rate of wages growth. He argued that wages growth had been generally moderated, enabling funds to made available for investment. The Dutch experience confirms that this describes the outcome of how wages grew. Hourly wages in industry grew at a slower rate than per capita national income, while manufacturing rapidly expanded, both in terms of the volume of production and of the proportion of the workforce employed in the sector.

But there is little evidence that workers had to defer compensation to any great extent. This point should not be exaggerated. Discontent did appear at times, with the Dutch strike rate increasing during the mid-1950s, in 1960 and in 1963. Dutch families did face economic pressures and their incomes did not always grow, in the short term, by enough for them to deal with these. Nor was the absolute level of consumption reached during the 1950s high by later standards. A million television sets in the Netherlands in 1961 still meant that more than five out of every eight households did not possess one. But what is important is the rapid rise in income, its speed. This is evident from the rate of growth in ownership of consumer durables, and it is evident from the calculation of the median rise in male incomes made in Chapter 6.

Wage costs appear to have been held down largely as a consequence of the structure of the workforce and the way that this changed. This was particularly the case with male labour moving into manufacturing. In the Netherlands, the entry of young workers into manufacturing, paid at lower wage rates than older workers, held down the mean. Kindleberger sees the Netherlands as the only country in which the workforce expanded by a growing population, but census data show that, in other countries, whatever the source of the increase in the manufacturing workforce, it tended to grow most amongst the young.

But the fact that the mean wage was held down did not mean that the wages of every worker were held down. As a worker got older, his earnings tended to rise, rising the fastest when he was youngest. We have seen this process in operation in the Netherlands, but we also know the process is a more general one. The age-earnings curve is found in all developed countries, which means that the similar age structure of the male manufacturing workforce in the countries of western Europe around 1960 will have made male earnings grow in a similar manner.

Eichengreen was correct in his description of the institutions used to moderate wages growth, but it is not clear how much difference these institutions actually made. In the Dutch case, it is true that the trade unions supported wage control, but it is not clear just how much their members noticed it. For many workers, for a good deal of the time, the speed at which their earnings rose may have meant that wage control was something they did not notice. This study has not looked at earnings growth during the last period of wage control, but it may well be that this was the period when wage control began to have a noticeable effect on earnings. It may well have been the case that wage control collapsed at the point when workers noticed it.

In any case, the fact that the rise in disposable income resulted from structural change means that it was a historically-specific phenomenon. It was not something that could have been artificially prolonged or could be recreated. The increase in women's employment was limited by the number of women in the population able to be employed, and at a certain point was bound to level off. Similarly, the increase in the manufacturing workforce as a result of the employment of young workers could not last forever. It was inevitable eventually that there would be diminishing returns to manufacturing employers from increased employment, and employment growth in the sector would cease. As manufacturing productivity increased, there was also bound to be a decline in employment in the sector - something that began to happen in the Netherlands in 1967[474]. And as industries declined, the mean age of their workforce will have tended to rise, pushing up wage cost per employee at a faster rate than hourly wages.

The point here is not that manufacturing is special, but that its growth during the "Golden Age" had specific features. It was generalised growth, affecting all industries, and as such had an impact on a large proportion of the economically-active population. The growth of manufacturing employment meant a net shift of labour into higher-paying jobs, and its general expansion meant that higher earnings were available right across the working

population. This has not been the case with later changes to the structure of the workforce. Jobs created in the service sector during the period since the number of jobs in manufacturing in western Europe began to decline have also offered higher pay, and there are of course those who have increased their incomes by moving to these. But the effect of these on the labour market has been less general. In particular, the demand for unskilled workers in the service sector, by the nature of the sector, is less than in manufacturing, and Nickell and Bell have calculated that, in the case of Britain, the decline in the relative demand for unskilled labour accounted for about twenty percent of the long run increase in unemployment up to the 1980s[475]. What we have here, then, is the reverse situation to that of the 1950s, where economic growth has not meant a net shift into higher-paying jobs.

The rate of economic growth does not, therefore, necessarily give a good indication of the rate of growth of disposable incomes. Milward identifies the growth of disposable income in western Europe during the 1950s and 1960s with the growth of per capita national income[476], but as we have seen, this seriously underestimates the growth of disposable income. But if, under certain circumstances, disposable income can rise faster than per capita national income, it raises the possibility that there are circumstances when it could rise at a slower rate.

The growth of disposable income is not secondary to economic growth. They are not independent. It is not the case that the growth path of disposable incomes merely fluctuates about the growth path of per capita national income due to exogenous factors. On the contrary, the relationship between economic growth and disposable income is dependent on how the economic growth occurs. For example, suppose that, following the Second World War, the Netherlands had held onto Indonesia, and the same Dutch growth rates that actually occurred had been achieved but in this case as the result of expanded trade in colonial goods to the USA or wherever. It is clear that, in this case, growth would not have had the same effect on disposable incomes as the expansion of manufacturing, because it would not have had the same impact on the Dutch labour market.

The relationship of economic growth to the growth of disposable income is therefore historically specific. How they relate to one another changes with the changing historical circumstances. This can be seen in the ambiguous relationship between the growths of national income and disposable income. National income is a summary figure. If the disposable incomes of the mass of the population grow, then - except in circumstances of

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[474] Van Zanden (1998) p. 85.
[475] Nickell & Bell (1995) p. 59.

short-term redistribution - per capita national income will grow. But the growth of per capita national income does not necessarily mean that the disposable income of the mass of the population grows. To find out what has happened to disposable incomes, it is necessary to look deeper.

The mechanism by which growth rates during the "Golden Age" were related to the growth of disposable incomes was confined to that historical period. In other periods, there are other mechanisms, which have to be investigated empirically. While high growth rates and a rapid rise in living standards went together during the 1950s, the two may not necessarily be bound up. Economic growth should not be taken at face value.

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[476] Milward (1992) p. 21.

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