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Citation

Jongen, E. L. W., Been, J., Caminada, C. L. J., & Vethaak, H. T. (2024). Labour market and income inequalities in the Netherlands, 1977-2022. *Fiscal Studies*, 45(3), 343-357. doi:10.1111/1475-5890.12386

Version: Publisher's Version

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Downloaded from: <https://hdl.handle.net/1887/4094426>

Note: To cite this publication please use the final published version (if applicable).

Labour market and income inequalities in the Netherlands, 1977–2022

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Submitted: March 2024

Abstract

We study how changes in labour market outcomes and household composition translate into changes in household incomes in the Netherlands over the period 1977–2022. During this period, the Netherlands witnessed a vast increase in female employment and earnings. This was also the key driver of household income growth. Male employment hardly changed, and male earnings growth was limited, and hence contributed little to household income growth. The increase in employment and earnings was the most pronounced for lower-educated women and women with relatively low earnings. The resulting drop in earnings inequality among women also put a drag on the rise in household income inequality, together with an increase in social benefits and a reduction in taxes for the bottom of the household income distribution. However, overall there was still a small increase in disposable household income inequality because inequality in male earnings increased, with earnings falling in real terms for men with low earnings and rising somewhat for men with high earnings. Furthermore, the proportion of singles increased, in particular among low-earning men and women, and assortative matching on earnings in couples increased. We further show that despite still having relatively low household income inequality overall, a large gap remains between immigrants and natives.

KEYWORDS

income, inequality, labour market, Netherlands

JEL CLASSIFICATION

D31, E24, J2

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1 | INTRODUCTION

Inequality in economic and other outcomes remains high on the academic and policy agenda (Atkinson, 2015; Deaton, 2015; Blundell, 2022; Case and Deaton, 2022). Indeed, in 2013, former President Barack Obama of the United States called growing income inequality (and a lack of upward mobility) ‘the defining challenge of our time’. Although (disposable) income inequality in the Netherlands is lower than in Anglo-Saxon countries such as the UK and the US – compare Jongen et al. (2023), with Blundell et al. (2023) and Hardy et al. (2023) – inequality is also high on the Dutch policy agenda (King Willem-Alexander, 2023).

In this paper, we present and discuss changes in inequality in labour market outcomes, household composition and household income inequality in the Netherlands, and the relation between them. We take a long-run perspective and consider outcomes and incomes for the period 1977–2022. We focus on prime working-age individuals (aged 25–60), so that changes in the enrolment in education and in (early) retirement do not interfere with the analysis (these have been studied extensively in previous studies; see below for some references).

The Netherlands has a long tradition of studying changes in labour market and income inequalities. We stand on the shoulders of giants such as Jan Tinbergen (Tinbergen, 1975) and Jan Pen (Pen and Tinbergen, 1977). Excellent studies also include van Praag (1977), Hartog and Veenbergen (1978), Atkinson and Salverda (2005) and the contributions in Kremer et al. (2014) and Caminada et al. (2021). Our contribution to this literature is threefold. First, we present outcomes over a longer period (1977–2022), using harmonised income data for this period (the result of a joint project with Statistics Netherlands; see Caminada et al., 2021). Second, we use definitions and selections that are consistent with the other country studies for the IFS Deaton Review (hence the outcomes are comparable across countries). Third, we present some novel outcomes for the Netherlands regarding the growth in earnings across the earnings distribution, the share with a partner by earnings, assortative matching by income within couples, and the distribution of immigrants across the income distribution.

A key finding of the study is that the Netherlands witnessed a massive increase in female employment and earnings, which coincided with a strong increase in the average education level of women. As the increase in participation rates and earnings was especially strong for lower-educated women and women with relatively low earnings, inequality in personal incomes of women declined. Meanwhile, despite a substantial increase in the average education level of men, the participation rate of men hardly changed and their earnings grew very little over time, on average. Men with relatively low earnings saw a decline in their (real) earnings, and men with relatively high earnings saw their earnings increase. Inequality in personal incomes of men increased. Furthermore, the proportion of singles increased, and assortative matching by income in couples emerged. However, overall, disposable household income inequality as measured by the Gini coefficient increased only slightly. Indeed, the particularly strong earnings growth for women in low-income households counteracted the changes in the other drivers of household income inequality. Finally, we show that despite having relatively low and stable income inequality overall, a large gap remains in labour market outcomes and household incomes between immigrants and natives.

The outline of the paper is as follows. Section 2 first briefly considers some key institutional features of Dutch policy. In Section 3, we discuss the data used in the analyses (further details can be found in Jongen et al., 2023). Section 4 then considers labour market outcomes, with a focus on differences between men and women. Within the groups of men and women, we also consider differences by level of education and by level of earnings. Next, Section 5 focuses on household incomes. We consider the differences between households where at least one person is working and households without a working person. Furthermore, we consider changes in household composition and how these translate into changes in household income inequality. Also, we consider the role of the tax–benefit system in reducing inequality in disposable household incomes. In Section 6, we then consider inequality between immigrants and natives, which is a key dimension of inequality in the Netherlands.

Differences between immigrants and natives are becoming increasingly relevant for Dutch society, as the share of immigrants in the population is increasing steadily. We conclude in Section 7.

2 | INSTITUTIONAL BACKGROUND

We first briefly summarise some key institutional features of the social insurance system and the tax and transfer system in the Netherlands, and changes in these systems.

2.1 | Social insurance

Unemployment insurance benefits are available to former employees who were working at least 26 weeks in the 36 weeks prior to unemployment. The gross replacement rate is 75 per cent of the previous wage (up to a maximum) for the first two months, and then drops to 70 per cent of the previous wage, which is the level up to the maximum benefit duration of two years. Benefits are financed via an employer premium that depends on the wage. Over the past decades, there has been a shortening of the maximum benefit duration. Before 2016, the maximum benefit duration was three years and two months, and before 2006 the maximum benefit duration was five years.

Social assistance (welfare) benefits are available for unemployed individuals who do not (or no longer) qualify for unemployment insurance but pass a means test (insufficient partner income and/or wealth). The level of the social assistance is tied to the minimum wage. Couples on social assistance benefits receive 100 per cent of the minimum wage, while singles on social assistance benefits receive 70 per cent of the minimum wage.

Disability insurance benefits provide income support to individuals who are unable to work due to health reasons. The gross replacement rate is 75 per cent of the previous wage for individuals who are fully and permanently disabled, and lower for other disabled individuals. Benefits are financed via an employer premium that depends on the wage. Before entering disability insurance, workers with health issues can be on sick leave for a maximum of two years. The last major reform of the disability insurance scheme was in 2006. For a detailed account of changes in disability insurance in the Netherlands, see Koning and Lindeboom (2015).

Health insurance in the Netherlands is not tied to employment. Individuals are free to choose their private health insurer, and receive a universal basic in-kind health insurance package, which they can top up by paying additional premiums, for example, for physiotherapy and dental costs. Health insurance, including dental costs, is free for children up to 18 years of age. Health insurance is financed out of an annual fee for individuals that they pay to their private insurer, an employers' premium that depends on gross wages, and general taxation.¹

2.2 | Tax and transfer system

Income tax is levied on individual income. In 2024, there are two tax brackets, with statutory rates of 36.97 per cent up to €75.518 and 49.5 per cent on income above that level. The number of income tax brackets has declined over the past decades, as have the top income tax rate and statutory tax rates (Caminada et al., 2021). Meanwhile, indirect taxes, such as value-added tax and excise duties, have increased.

There are a number of non-refundable tax credits that reduce the personal income tax (de Boer and Jongen, 2023). There is a general tax credit that is phased out beyond a certain income level. There is an earned income tax credit that has a steep phase-in and phase-out range. There is also a specific

¹ As the focus of the analysis is on individuals aged 25–60, we do not discuss changes in (early) retirement benefits, although they may also affect individuals in this age range. For an analysis of (early) retirement reforms, see Lindeboom and Montizaan (2020) and Rabaté, Jongen and Atav (2024).

earned income tax credit for lone parents and secondary earners with children up to 12 years of age. These latter two tax credits have increased substantially over the past two decades.

Next to tax credits, the Netherlands has various income-dependent benefits that depend on household income. This includes a child benefit for households with dependent children, a housing benefit for renters and a benefit to cover health insurance costs. These benefits are targeted at lower incomes, and are phased out beyond a certain income level. Working lone parents and dual-earner couples with children in formal childcare also qualify for an income-dependent child subsidy per hour of childcare, which declines with household income beyond a certain income level.

2.3 | COVID-19 policy response

During the COVID-19 pandemic, the Netherlands relied heavily on a short-time work scheme, allowed firms to defer their tax payments, provided subsidies for the costs of fixed capital and provided income support for the self-employed. For an overview of the most important policy responses and the labour market developments during 2020 and 2021, see Jongen et al. (2021).

3 | DATA

The labour market outcomes are based on the Dutch Labour Force Survey (LFS) of Statistics Netherlands, a repeated cross-section of more than 100,000 people available annually for the period 1987–2022, and its predecessor the Labour Force Count of Statistics Netherlands, a repeated cross-section of similar size available biannually for the period 1973–85. We use population weights to arrive at nationally representative numbers. From these survey data, we take the outcomes for education, participation, hours worked and the share of self-employed.

For the period up to 2011, earnings (wages of employees and profits of self-employed) and household incomes (earnings, social insurance benefits, social assistance and income from wealth) are based on the Income Panel of Statistics Netherlands, a sample of about 1 per cent of the Dutch population (currently 18 million people), available for 1977, 1981, 1985 and annually as a panel for the period 1989–2011. Again we use population weights to arrive at nationally representative numbers. As noted in the Introduction, these data have recently been harmonised over time in a joint project of Leiden University and Statistics Netherlands (see Caminada et al., 2021). For the years 2011 onwards, we use the integral income files (INPTAB and INHATAB) and the integral demographic files (GBA) of Statistics Netherlands, available for all people living in the Netherlands in the period 2011–21. Nominal earnings and incomes are converted into real terms in calendar year 2019 using the consumer price index. We access all data via remote access at Statistics Netherlands. Considering decades of outcomes, some small remaining breaks in the series are inevitable; these are discussed in Jongen et al. (2023) and highlighted when relevant in the text.

As noted in the Introduction, the focus of the analysis is on a sample consisting of individuals aged 25–60. For the figures with earnings and incomes, the sample is restricted to individuals/household with positive earnings/incomes. The unit of analysis is the individual, where we equalise household incomes (using the modified OECD equivalence scales) to make them comparable across singles and couples (accounting for economies of scale), and accounting for the number of children. See Jongen et al. (2023) for further details of the data.

4 | LABOUR MARKET OUTCOMES

The Netherlands has experienced a steep rise in the employment rate of women (Figure 1). The employment rate of women aged 25–60 started close to 20 per cent in the 1970s and then rose

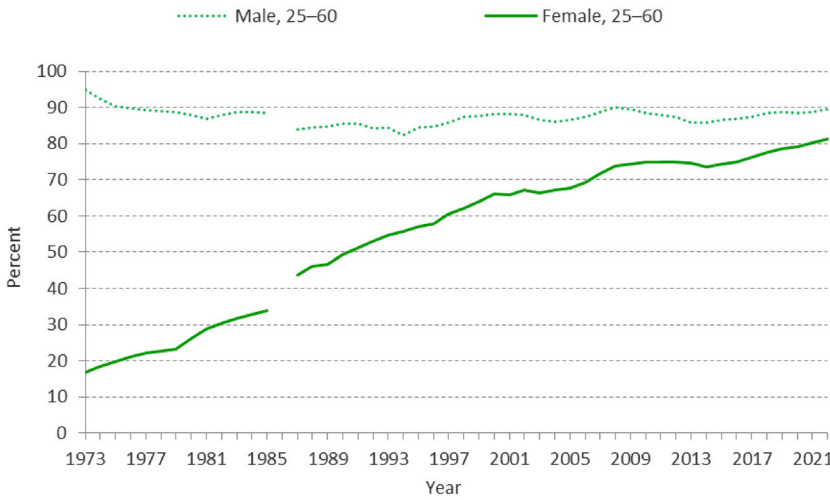


FIGURE 1 Employment rates by gender, over time. *Source:* Authors' own calculations using the EBB (LFS) for 1987–2022 and the AKT (predecessor of the LFS) for 1973–85 (even years are interpolated). There are breaks in the series in 1986. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/1475-8890.12386)]

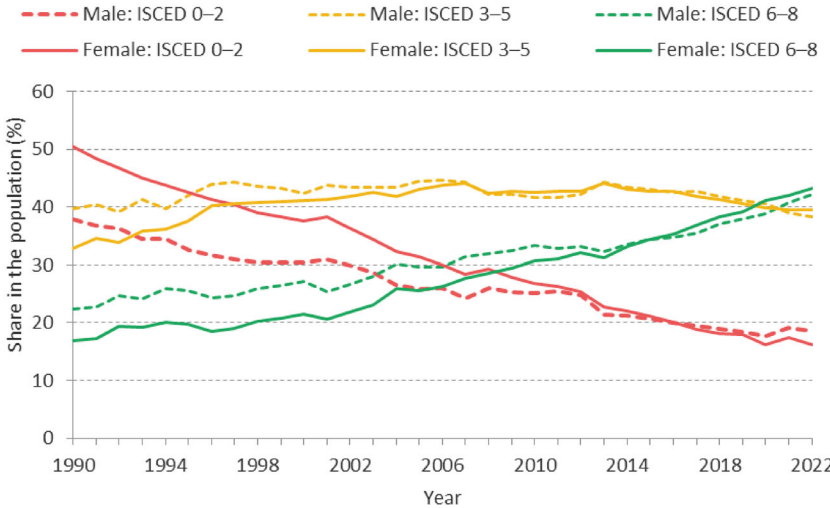


FIGURE 2 Educational attainment by gender, over time. *Source:* Authors' own calculations using the LFS. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/1475-8890.12386)]

steadily to above 80 per cent in 2022 (Jongen et al., 2023). This rate now stands as one of the highest in the developed world (OECD, 2023). Nevertheless, it still lags behind men by nearly 10 percentage points. This increase reflects changes in the level of education (Figure 2), where women have recently surpassed men, changes in the preferences over work and care (Statistics Netherlands and Social Cultural Office, 2020; Been, Knoef and Vethaak, 2023) and policy reforms that reduced the income tax rates for secondary earners including higher childcare subsidies (Bosch and van der Klaauw, 2012; Bettendorf, Jongen and Muller, 2015).² It is also relevant to note that the increase in

² For an analysis of the contribution of different factors to the changes in the employment rates of men and women, see the age-period-cohort analyses in Euwals, Knoef and van Vuuren (2011) and CPB (2018).

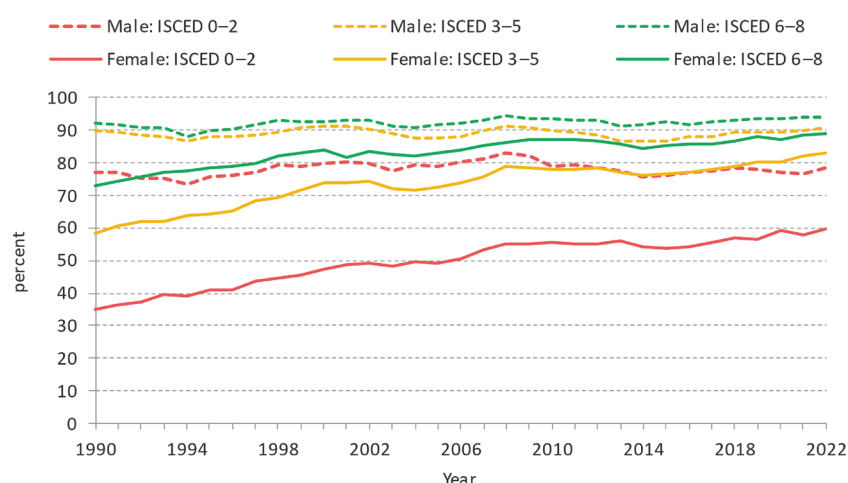


FIGURE 3 Employment rates, by gender and education level, over time. *Source:* Authors' own calculations using the LFS. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/1475-8801.12386)]

employment rates has been more pronounced for lower-educated (and intermediate-educated) women than for higher-educated women (Figure 3).

Changes in the employment rate of men were much more modest. The employment rate of prime working-age men declined between the early 1970s and the late 1980s, following the recession of the 1980s, but has increased since the late 1990s. This partly reflects the initial rise in the use of social insurance and early retirement schemes and the subsequent decline in the use of these schemes, as it became harder and financially less attractive to enter these schemes (Koning and Lindeboom, 2015; Rabaté et al., 2024). The drop in the employment rate of men seems to be concentrated among men aged 25–44, in line with many other OECD countries.³

There has also been some increase in average hours worked by employed women (aged 25–60) since the mid-2000s, whereas hours worked by men have stayed essentially flat (see figure 9 in Jongen et al., 2023). Up to the mid-2000s, hours worked by employed women were essentially flat as well, for all levels of education. Since then, average hours worked have increased from about 26 hours per week in 2005 to close to 30 hours per week in 2022 (+16 per cent). The reduction in the effective marginal tax rates on secondary earners has played some role in this (Bettendorf et al., 2015; de Boer, Jongen and Koot, 2023). In 2022, men on average still worked 8 hours per week more (+29 per cent) than women. So women have closed about one-third of the gap since the mid-2000s. Note that hours worked per week in the Netherlands, by both men and women, are relatively low from an international perspective (Been et al., 2023; OECD, 2023).

Median real gross earnings (wage income plus profit income) have grown substantially for working women over the past decades, whereas they have remained almost flat for men (Figure 4). Median real gross earnings of employed women, accounting for the small breaks in 2001 and 2011, have grown by 92 per cent between 1977 and 2021. Over the shorter period 2005–21, they have grown by 25 per cent, which is just 9 percentage points higher than the growth in hours per week, suggesting that earnings per hour have not increased that much for this shorter period. Hence, the increase in the level of education of women has resulted mostly in higher employment rates and higher working hours over the last period, not so much in higher earnings per hour. For prime working-age men, the rise in the level of education has not translated into higher employment rates, hours worked or median gross earnings, a striking result.

³ For an exploration of potential mechanisms, see CPB (2021).

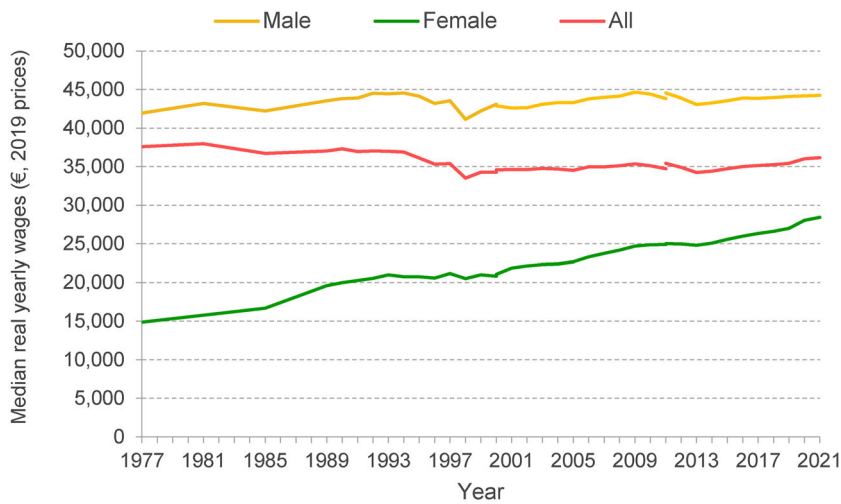


FIGURE 4 Annual median real gross individual earnings employed, overall and by gender, over time. *Note:* Gross earnings are in 2019 prices. *Source:* Authors' own calculations using the Income Panel (1977–2011) and the integral income files (2011–21). There are breaks in the series in 2000 and 2011. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/1475-8800.12386)]

Considering the gender gap in gross earnings at the median, working women used to earn 35 per cent of working men in 1977, by 2005 this had risen to 53 per cent and by 2021 to 65 per cent. Hence, the earnings of women in the Netherlands are catching up with the earnings of men, but a sizeable gap still remains.

Looking beyond the median, we find that gross earnings growth has been the most pronounced for women with relatively low earnings, with mixed fortunes (decline on net) for men with relatively low earnings and some growth for men with high earnings (see figure 5 in Jongen et al., 2023). Especially in the periods 1981–94 and 1994–2007, there was strong growth in gross earnings for women with relatively low earnings, but after 2007 this growth slowed down considerably. Men with relatively low earnings saw their earnings decline over the period 1981–94, including the recession of the 1980s, but regained part of the lost ground in the period 1994–2007. In the period after 2007 they again lost some ground, however, in part due to the financial crisis and the subsequent European sovereign debt crisis. Over all periods, men with relatively high earnings had modest earnings growth.

These opposing patterns for earnings growth for low- and high-earning women and men also show up in the 90:10 (earnings at the 90th percentile of earnings over the earnings at the 10th percentile of earnings) and 50:10 (earnings at the 50th percentile of earnings over the earnings at the 10th percentile of earnings) ratios of earnings by gender (Figure 5). For women, we see that strong growth for women at the lower end of their earnings distribution leads to a strong drop in their 90:10 and 50:10 ratios. For men, we see the reverse, though less pronounced, due to the decline of their earnings at the bottom of the earnings distribution and rise at the top – that is, we see a rise in their 90:10 and 50:10 ratios.⁴

5 | HOUSEHOLD INCOMES

Next, we consider how these changes in labour market outcomes, together with changes in household composition, determine changes in household incomes. We focus on equivalised household incomes, accounting for economies of scale for couples and for the expenditures on children in the household.

⁴ For an international comparison of changes in gender gaps in employment and earnings between women and men, with and without children, see Guirrola, Hospido and Weber (2024).

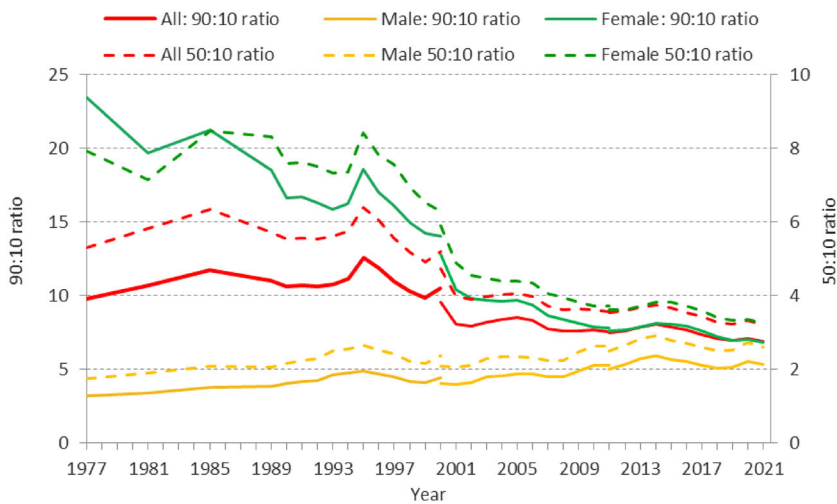


FIGURE 5 90:50 and 50:10 ratios of gross individual earnings employed, overall and by gender, over time.

Source: Authors' own calculations using the Income Panel (1977–2011) and the integral income files (2011–21). There are breaks in the series in 2000 and 2011. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/1475-5880.12386)]

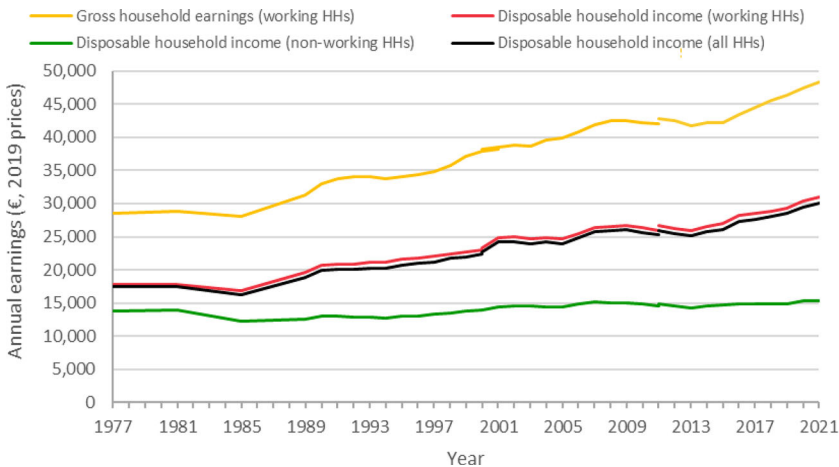


FIGURE 6 Median real gross household earnings and real disposable household income among working households, over time. *Note:* Sample is individuals in working households (HHs). A working household is defined as a household in which at least one adult is in work. All incomes have been equivalised using the modified OECD equivalence scale. *Source:* Authors' own calculations using the Income Panel (1977–2011) and the integral income files (2011–21). [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/1475-5880.12386)]

Median real gross household earnings and real disposable household income have grown substantially over time for households in which at least one individual is working, while it has grown very little for the 6 per cent of households in which no individual is working (Figure 6). Median real gross household earnings and real disposable household income for working households have grown by 67 per cent and 71 per cent, respectively, accounting for the breaks in 2000 and 2011, over the period 1977–2021. However, the rise in median gross household earnings mostly reflects the increase in the participation rate of women and their hours worked. Hence, this increase in earnings has in part come at the expense of other activities such as informal care and leisure. Median disposable income has grown slightly faster than median gross earnings, consistent with the decline in average effective

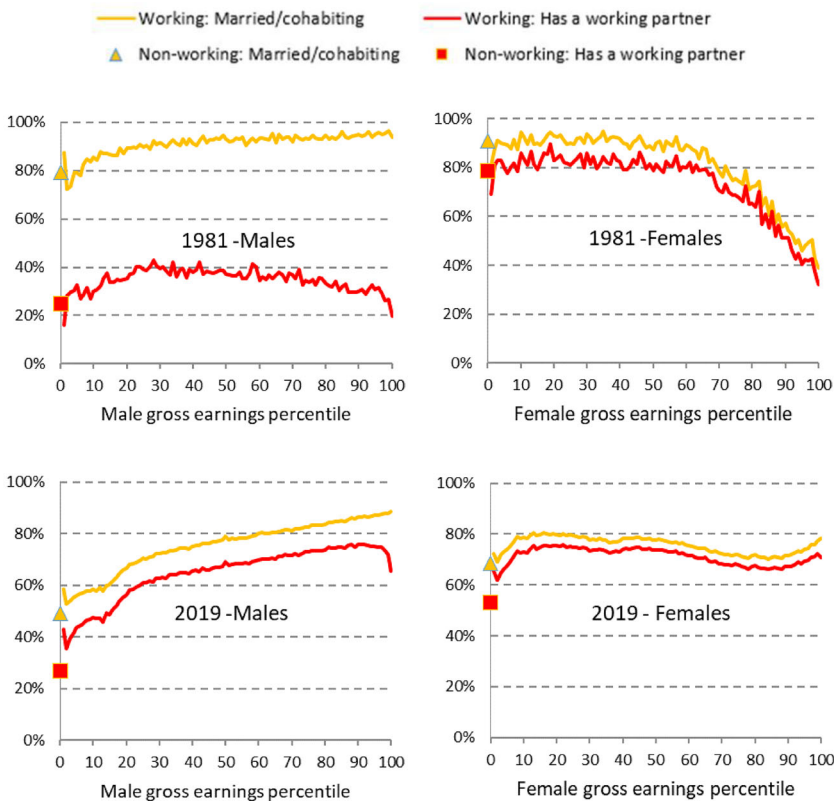


FIGURE 7 Share married/cohabiting and share with working partner, by gender and individual gross earnings percentile, selected years. *Note:* Married/cohabiting also includes civil partnerships. We exclude the bottom and top 1 per cent of the gender-specific earnings distribution. *Source:* Authors' own calculations using the Income Panel (1981) and the integral income files (2019). [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/1475-8801.12386)]

tax rates (including income-dependent transfers) on working households reported in Caminada et al. (2021).

Moving on to inequality in household incomes, before we consider how overall inequality in household incomes has changed, it is instructive to first consider the changes in household composition and the changes in taxes and benefits, for different income groups.

First consider the changes in household composition. The share of men in a couple (married or cohabiting) has been decreasing, in particular for men with low earnings (Figure 7). The share of women in a couple has also been decreasing, in particular for women with low and intermediate earnings (but not the top decile). This reduces the ability of these men and women to make use of returns to scale in, for example, expenditures on housing and food.

However, despite the declining share of men in a couple, the share of men having a working partner has been increasing, following the rise in female participation rates, as discussed earlier. In terms of percentage points, this increase has been more pronounced for the middle to the top of the male earnings distribution, rising from 60 in 1981 to 80 percentage points in 2019, compared to a rise of 10 percentage points at the lower end of the male earnings distribution. However, the initial share of working partners was also much lower for the lower end of the male earnings distribution, of the order of 20–30 percentage points. Hence, the differences in percentage changes are less clear, and are higher for some groups at the lower end. The share of women having a working partner has been decreasing, across the whole distribution of female earnings. This mostly reflects the declining share of women in a couple, much less so a decline in male employment.

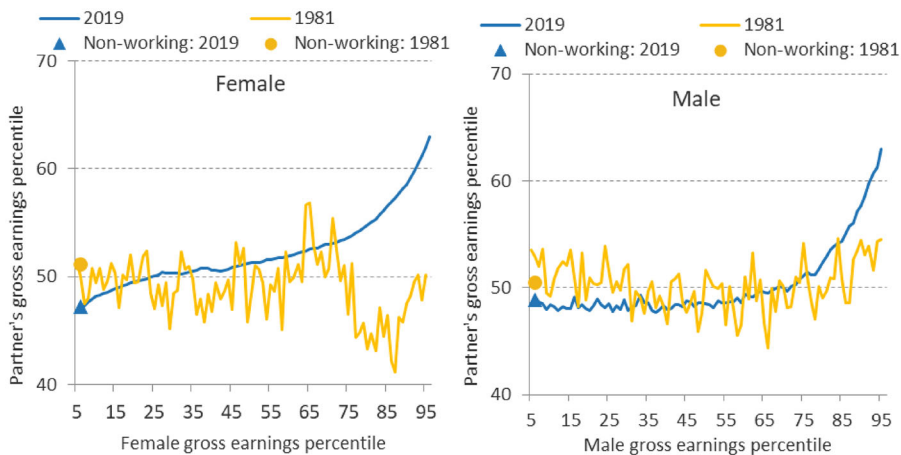


FIGURE 8 Mean gross earnings percentile of partner/spouse by individual's gross earnings percentile, selected years.
Note: Married/cohabiting also includes civil partnerships. We exclude the bottom and top 1 per cent of the gender-specific earnings distribution. *Source:* Authors' own calculations using the Income Panel (1981) and the integral income files (2019). [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

Next to whether there is a partner, and whether this partner is employed, what also matters is what the partners earn. Focusing on couples, we see that assortative matching on earnings between men and women was absent in 1981, but has emerged in the period up to 2019 (Figure 8). By 2019, men (women) with low earnings are more likely to be with a woman (man) with low earnings, and vice versa for men with high earnings. Assortative matching is especially strong at the top of the distribution.

Hence, regarding household composition, we have effects working in opposite directions. On the one hand, men and women are more likely to be single, in particular men and women with relatively low earnings, reducing their opportunity to use returns to scale, *ceteris paribus* pushing up inequality in equivalised disposable household incomes. On the other hand, when men are still in a couple they are much more likely to have a working partner, which percentage wise is bigger for some men with relatively low earnings, reducing inequality in equivalised disposable household income. But then again, due to assortative matching on earnings, men with relatively low earnings are more likely to have a working partner with relatively low earnings than in the past, again increasing inequality in equivalised disposable household income (ignoring, for example, the fact that earnings have grown faster at the lower ranks of the female earnings distribution).

The overall effect of the changes in household composition, including changes in the employment rates and earnings of the partners, on overall household income inequality is hard to infer from the preceding analysis. However, in a related analysis, Vethaak and Jongen (2024) show, for the same sample of 25–60 year olds,⁵ that the equivalised market incomes of households have become more polarised over time, declining in real terms for low-income households and increasing in real terms for high-income households.

However, next to these changes in market incomes of men and women, and the changes in household composition, changes in taxes and benefits are also relevant for understanding changes in inequality in equivalised disposable household incomes. For the bottom quartile of the equivalised disposable household income distribution, social benefits have become a larger part of gross household income (market income plus social benefits), where most of the increase occurred in the 1970s to the late 1980s (when the Netherlands went from a tight labour market to a recession) (Figure 9). For the

⁵ One difference is that Vethaak and Jongen (2024) use the equivalence scales of Statistics Netherlands instead of the modified OECD equivalence scales used here. However, if anything, this will only have a minor effect on the results.

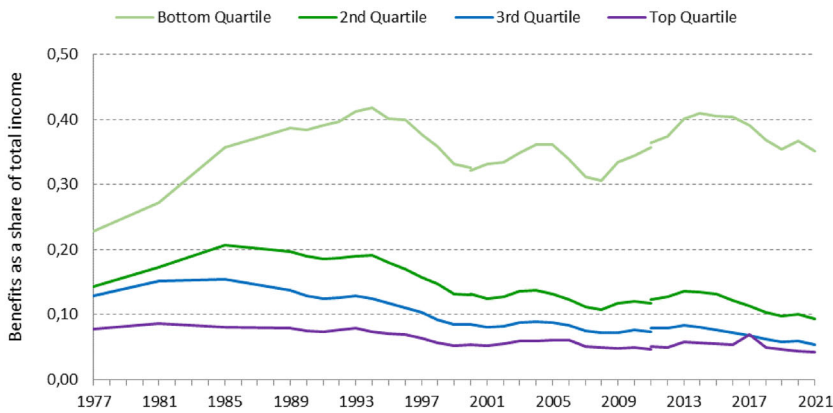


FIGURE 9 Social benefits as a proportion of gross household income, by equivalised disposable income quartile. *Source:* Authors' own calculations using the Income Panel (1977–2011) and the integral income files (2011–21). [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/1475-8890.12386)]

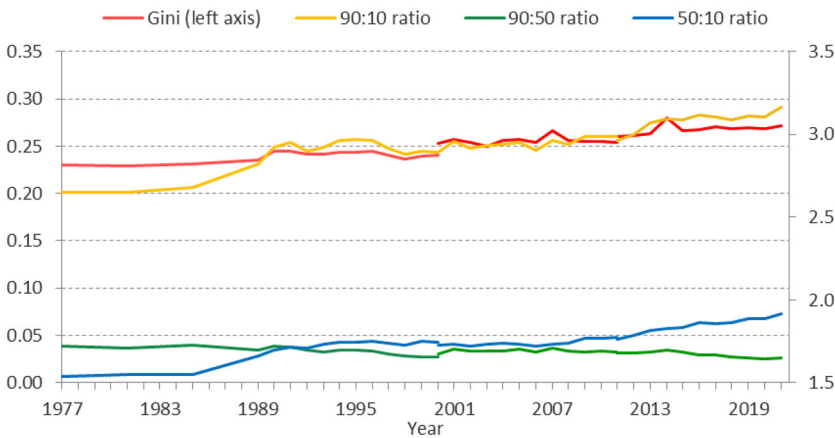


FIGURE 10 Gini coefficient and 90:10, 90:50 and 50:10 ratios of equivalised disposable household income, over time. *Source:* Authors' own calculations using the Income Panel (1977–2011) and the integral income files (2011–21). [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/1475-8890.12386)]

other quartiles, the share of social benefits in gross household income has declined since the mid-1980s. This has partly cushioned the polarisation in market incomes. Furthermore, direct taxes as a proportion of gross household income have declined, but in particular for the bottom quartile of the equivalised disposable household income distribution (see figure 27 in Jongen et al., 2023). This too has cushioned the polarisation in market incomes (see also Caminada et al., 2021).

Finally, when looking at overall income inequality in household incomes, we find only a modest increase in the Gini coefficient (Figure 10). Between 1977 and 2021, accounting for the breaks in the series in 2000 and 2011, the Gini coefficient has ‘only’ increased by 9 per cent – which is much smaller than the increase in the UK (see Blundell et al., 2023) and the US (see Hardy et al., 2023) – to 0.271 in 2021. Indeed, the rise in disposable household income inequality has been limited because of the rise in female labour participation and women’s earnings, in particular for lower- and medium-educated women and in the lower part of the earnings distribution for women (and households; see Vethaak and Jongen, 2024), respectively. This has partly compensated the increase in earnings inequality for men, the rise in singles at the lower to middle part of the income distribution

(reducing returns to scale in consumption) and the emergence of assortative matching in terms of earnings between men and women in couples. But still, when we look at the 90:10 and 50:10 ratios, we do see that middle- and high-income groups were able to pull away to some extent from the low-income groups; see also Vethaak and Jongen (2024) for a more detailed analysis.

6 | IMMIGRANTS AND NATIVES

So far, we have not considered the inequality between immigrants and natives. However, like many other countries, inequality by migration background (including the ‘second generation’) is an important topic in the Netherlands. Although the Netherlands can still be considered to be a country where income inequality is relatively low, there are substantial differences when it comes to gender (see above) and migration background (see also Jongen et al., 2019). The issue is becoming increasingly relevant for the Dutch society, as the share of immigrants in the population is steadily increasing. The share of immigrants in the population aged 25–60 increased from 6 per cent in 1981 to 18 per cent in 2021 (Jongen et al., 2023). Most of this growth has been from immigrants from outside Europe.

The increase in the share of immigrants was more pronounced at the lower end of the income distribution (Figure 11), which is likely to have contributed to the increase in overall income inequality. The lower disposable income of immigrants in the Netherlands relative to natives is related to their lower education level, lower employment rate and lower earnings when employed (Figure 12). Whereas the gap compared with natives in terms of education is smaller for women than for men, the gap in employment rates is bigger for women (note that there is already a gap by gender for natives). Differences in hours per week are modest, and working immigrant women actually work more hours per week than native women. Next to the fact that most of these differences are quite sizeable, what is also worrying is that these differences are quite persistent over time and generations (see van Elk et al., 2024). Improving the labour market outcomes, and thereby the household incomes, of immigrants remains an important policy challenge.

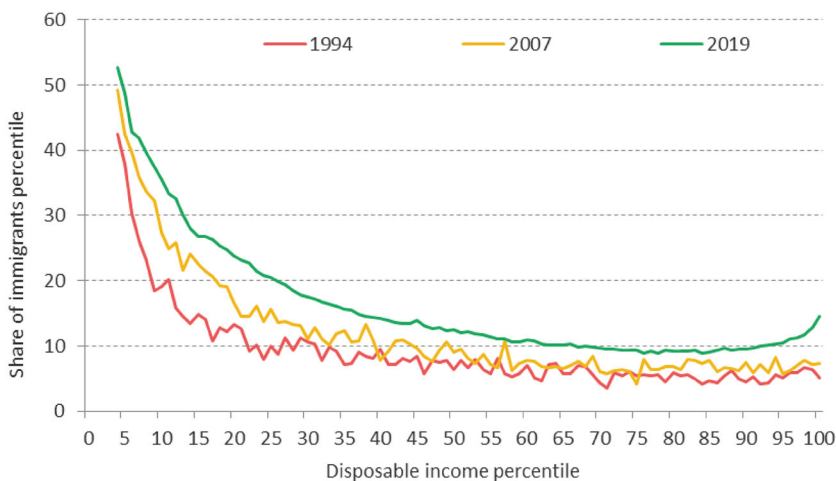


FIGURE 11 Share of immigrants in the population, by disposable income distribution over time. *Source:* Authors' own calculations using the Income Panel (1994 and 2007) and the integral income files (2019). [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

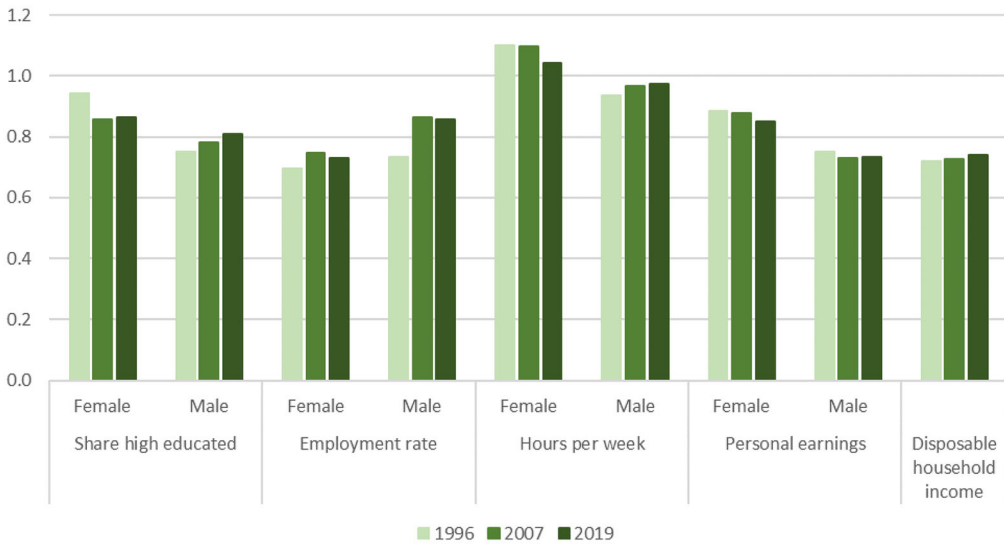


FIGURE 12 Outcomes for immigrants relative to natives, ages 25–60, selected years. *Note:* Natives are normalised to one. Earnings and incomes are ratios of medians. Earnings are only of those that work. *Source:* Authors' own calculations using the LFS, the Income Panel (1996 and 2007) and the integral income files (2019). [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/1475-8890.12386)]

7 | CONCLUSIONS

After several decades of catching up, prime-working-age women in the Netherlands have overtaken prime-working-age men in terms of the highest completed level of education. Women have also closed most of the gap in the employment rate, from 70 percentage points in 1977 to less than 10 percentage points in 2022. Furthermore, women have narrowed part of the gap to men in hours worked and in gross earnings, though sizeable gaps remain for both hours and earnings. Within the group of women, most of the growth in earnings was among women with relatively low earnings. There was hardly any earnings growth for men, and some polarisation in the earnings of men.

Turning to household incomes, the large increase in female employment rates and earnings has increased gross and disposable household incomes. Furthermore, together with more benefits and lower taxes for lower-income households, this has also limited the rise in household income inequality. However, overall household income inequality still increased somewhat, due to the rising earnings inequality among men, the increase in singles at the lower end of the income distribution and the emergence of assortative matching on earnings among couples in the Netherlands.

At the end of the data period, the Netherlands has one of the highest employment rates of women in the world (OECD, 2023). This does not bode well for future household income growth and household income inequality. Indeed, because the strong rise in female participation was an important driver of the increase in household income growth, and given the limited rise in male earnings over the past decades, household income might grow substantially less in the future. Furthermore, because the increase in the participation of women occurred mostly in the lower half of the household income distribution, and participation rates are already very high by international standards, this counteracting force on rising income inequality may become weaker over time. Finally, the larger share of immigrants in the population, with lower disposable income of immigrants relative to natives, is likely to have a positive effect on income inequality as well.

ACKNOWLEDGEMENTS

This paper is part of the IFS Deaton Review Country Studies: A Trans-Atlantic Comparison of Inequalities in Incomes and Outcomes over Five Decades. We are grateful to Jonathan Cribb and Jim Ziliak for comments and suggestions.

DATA AVAILABILITY STATEMENT

This paper uses non-public microdata provided by Statistics Netherlands, made available for scientific research via remote access, see: <https://www.cbs.nl/en-gb/our-services/customised-services-microdata/microdata-conducting-your-own-research>. All codes used in the analysis are available on request.

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How to cite this article: Jongen, E., Been, J., Caminada, K., & Vethaak, H. (2024), Labour market and income inequalities in the Netherlands, 1977–2022. *Fiscal Studies*, 45, 343–357. <https://doi.org/10.1111/1475-5890.12386>