GROWING INEQUALITIES AND THEIR IMPACTS IN THE NETHERLANDS

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Country Report for the Netherlands

September 2013
Acknowledgements

We are grateful to Francesco Bogliacino for his first drafting of Chapter 5.

We also thank the many people who have contributed comments and data which have helped improving the report: Paul de Beer, Maarten Buis, Daniele Checchi, Neda Delfani, Armen Hakhverdian, Matthijs Kalmijn, Olli Kangas, and Abigail McKnight.
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Executive summary

Inequalities

Inequality as measured by the Gini coefficient of net equivalised household incomes has risen substantially (+14%) in the Netherlands. Most of the rise is concentrated in a short episode, the late 1980s, and came about in the wake of deep recession of the early 1980s. Over the 1990s and 2000s a new plateau seems to be reached with little further change. In accordance with the GINI project, these outcomes are used below when considering impacts of inequality.

However, as an important caveat, further scrutiny reveals that the Gini coefficient misses out on important changes at the tails of the distribution and therewith significant further increases in inequality over the 1990s and 2000s. The changes have been very drastic for the bottom decile, where average real income is still 30 per cent below the level reached at the end of the 1970s. This has greatly widened the lower half of the income distribution while dispersion in the upper half has hardly changed. Top income shares basically show stability – in spite of some recent growth for the Top 10% after long years of stability. However, underneath that stability top incomes shares from labour earnings show a secular and strong increase, from 19 per cent to almost 27 per cent of total gross income. The shares of top incomes from enterprise and wealth declined correspondingly. The rising role of earnings can be attributed entirely to the growing role of second earners. Nevertheless, the combination of earnings into household incomes in general halves the inequality of individual (annual) earnings in the labour market. That inequality has increased significantly as a result of a widening of hourly wage inequality (+40%) combined with an increased dispersion of annual hours worked because of growing part-time and temporary employment. In spite of these increases the inequality of net equivalised income of labour household has remained strikingly stable. An important implication is that the focus on net equivalised incomes misses the picture of growing inequality of primary, gross and disposable income and the equalising effect of changing household formation on net equivalised incomes.

These developments have gone hand in hand with a strong growth in educational inequalities in the labour market which, paradoxically, has come about at the same time that the inequality in educational attainment among the population fell very considerably. Low-educated men now suffer strong employment disadvantages which were absent before, and least educated women witness an unchanged 50% employment rate gap to the best educated in spite of the general rise in female
employment participation. The low educated of both sexes suffer great problems in accessing low-level occupations and securing substantial working hours in these jobs which are now mainly part-time. Educational earnings differentials seem stable but at the same time allow the income distribution to tilt to the best educated because of their growing importance.

Finally, the wealth distribution is much more skewed than the income distribution: half the population has no or negative wealth and the top decile alone owns 70% of all financial wealth. This distribution has changed surprisingly little over the 1990s and 2000s. However, the level of debt grew very substantially and became considerably more unevenly distributed.

**Impacts**

Meticulous study of impact variables in relation to inequality was outside the scope of this research, which instead went looking for available data on many potential variables in the first place and for obvious signs of (univariate) correspondence with inequality changes which would justify further research of the relationship. Relevant variables may regard aggregate outcomes but also an underlying stratification that may be reinforced or weakened depending on inequality. Mostly – and unhelpful – impacts could be compared to inequality only after the sharp rise in inequality of 1985-1990, that is for years with little or no changes in inequality, as measured by the Gini coefficient. Overall, no self-evident and convincing indications of increasing impacts related to increasing inequalities were found for a host of areas where impacts might be expected.

A number of candidates for further research emerge. These concern the educational stratification of healthy life expectancy, which may be reinforced by growing inequality, and the frequency of family divorce as well as the decline in fertility which seem to be related to inequality during the 1980s but not necessarily thereafter. The stratification of home-ownership is another candidate. Also property crime may be related from 1977 to the 1990s, contrary to violent crime that seems to be growing for cultural reasons. The educational stratification of life satisfaction may be reinforced and more generally the subjective evaluation whether household income is insufficient. Finally, intergenerational mobility depends less on educational attainment, which may indicate that the general decrease in educational inequality finds its way to the next generation, resulting in less educational inequality according to social or family background. Also some trends in political and cultural indicators may be interpreted in line with the developments in inequality: attitudes towards distribution in the second half of the ‘80s. The trends in civic participation and in attitudes towards immigrants follow a similar pattern as the changes that are observed in income inequality. Interestingly, the membership of political parties of the higher educated – in contrast to the other
educational groups – increased in years of increasing inequality, suggesting that those better off capitalize their interests in times when there is most to gain (viz. less redistribution).

However, several other candidates fail to pass this first test of univariate scrutiny. Some of these certainly have an aspect of inequality in itself, but that stratification seems insensitive to the general level of inequality. Gaps in material deprivation seem persistent, and so do differences in feelings of social disconnectedness or isolation, but the general levels of both bear no relationship to inequality. Drastic changes in household formation, especially the strong rise in single-person households, seem unrelated too. Health-relevant differences in overweight and obesity seem rather constant. Among political and cultural variables changing distances across educational groups could in general not be linked to developments in inequality.

The general conclusion is that at the current stage it is very hard, if not impossible to satisfactorily link the various over-time developments in inequality in the Netherlands to the trends in the outcome variables.

**Policy effects**

The increase in income inequality can to a large extent be attributed to policy developments during the period of observation. Especially during the 1985–1990 episode, as a result of a strong real decline the minimum wage has lagged behind median wages and since benefits levels are automatically linked to the level of the minimum wage, they have lagged behind too. But inequality enhancing policies have not been restricted to this period. The benefit system has continued to evolve since 1990 towards a system with shorter benefits durations, more active labour market policies and the restriction of long-term benefits to severe cases of disability. A growing flexibility/security divide further enhanced labour-market inequalities. Social expenditures have shrunk strongly over 1993–2001. Policies have reduced reliance on social assistance, probably with the biggest impact on income inequality since people who qualify for social assistance are by definition at the bottom of the income distribution. Policy making aimed at providing stronger financial stimulus for expected behaviour and growing inequality was not its purpose but its collateral damage.

The Dutch tax system has been adjusted several times, cutting top marginal rates but also enhancing progressivity, by reducing deductibles and introducing tax credits or increasing the income threshold above which no social security contributions are levied. Various other policy changes have further contributed to the rise in income inequality such as the shift towards (unequal) second-pillar occupational pensions, increases in the VAT-level, also very recently during the years of the Financial
Crisis, or the continued tax deductibility at the marginal tax rate of interest paid on mortgages. Relative to their income the lowest income decile receives the highest contribution from subsidies and tax deductibles while the highest decile receives the least. In absolute terms, however, these contributions are currently benefiting the lowest and highest deciles equally – especially, because of the tax-deductibility of mortgage-interest payments.

Though, generally, educational policy has stimulated increased attainment, specific elements have enhanced inequality. Learning routes through the secondary educational system that were mostly used by the lower social classes and children from immigrants and thus mitigated the inequality-enhancing effects of early tracking, have been cut in the 1990s. Since the mid-1990s students have been allowed much higher earnings on top of their grants. This has enhanced competition for low-skill jobs and contributed to the strong educational working-hours gradient of low-level occupations.

None the less the combination of internationally average income inequality with below-average poverty seems to point to a still more effective redistribution of income in the Netherlands.
1. Introduction

The GINI project aims to look at changes in inequality in the fields of income, wealth, and education, and their social, political, and cultural impacts over the last 30 years. This report for the Netherlands first examines these changes and also their possible drivers, looking especially at the labour market. Next, it highlights their potential effects in the social, political, and cultural spheres, and then it elaborates on the role of relevant institutions and policies in ameliorating or exacerbating those effects. The report mostly focuses on the long run and on the national situation to provide an input for international comparisons elsewhere in the GINI project.

For the Dutch case we stress the interest of its labour market, which is characterised by the massive increase in part-time employment, the growth of immense (pension) wealth as well as (housing) debt, and its policies of redistribution and income protection, which have changed radically. It is important to stress that the Netherlands experienced a deep recession at the beginning of the 1980s which seems to have motivated both the increase in part-time employment and the shifts in policies. At the same time, and better distinguishable in a long-run perspective, demographics have also altered drastically, reducing significant population growth to almost nil, inflating the numbers of single-person households and considerably enhancing the importance of ethnic minorities.

A quick glance at the macro background since 1970

To provide a helpful background to the level and evolution of inequalities in the Netherlands we indicate in this introduction various aggregate trends over the last four decades, much of the study below will start around 1977. Other relevant aggregate detail is reported in the report when specific issues are discussed.

Prior to 1977 there has been a significant decline in inequality over the post-war period. The economy can be characterized during the post-war period up to the 1970s by sustained economic growth and the build-up of the Dutch social security system. Between the launching of the public pension AOW in 1957 and the final introduction of the general disability act together with the linking

\[1\] For more detail see, e.g., Salverda (2008).

\[2\] This is shown by the Gini coefficient for disposable household or tax unit incomes of 0.459 for 1946 (Statistics Netherlands, Regionale inkomensverdeling, Tijdreeks 1946-1994).
of the (net) minimum social benefits to the (net) minimum wage in 1976, the system of social security was fully established. This has led to a significant improvement in the incomes for those outside the work force, be they of working age or not. In turn, this caused a steep reduction in income inequality at the time as can be gauged from the evolution of top income shares (Salverda and Atkinson, 2007).

Table 1.1 pictures the developments over the decades since 1970 in a nutshell. The population has grown considerably but at a declining pace over time. It has also aged though the share of the working-age category has remained stable. The dimension of non-western ethnicity, broadly defined in the Netherlands as including the second generation, was virtually inexistent in 1970 and has grown by an almost steady 2.5 %-pt per decade. Among youth (15-24) its current level (16%) and growth (3.7%) are much higher than in general. Their absolute growth was highest in the 1990s (+6 %-pt) and has been more than halved over the 2000s. The number of households has expanded throughout, especially because the number of singles multiplied by four. Consequently, the average number of persons in a household has declined, from 3.3 to 2.3. Most of that decline has occurred before 1990.

GDP growth has been substantial. As a measure of productivity, GDP volume per hour worked has increased by an estimated 120 per cent while, as a measure of income, the per capita volume has doubled while the per-household volume grew amazingly little: only 10 per cent. The country’s current account has been in surplus in all years except for 1978 and 1980 and the surplus has grown over time. Naturally, the Dutch economy is closely linked to the German one and this was reinforced when the Dutch government fixed the exchange rate of the guilder to the Deutschmark in the early 1980s.

The employment/population rate fell over the 1970s and early 1980s from 59 per cent to a minimum of 50 per cent in 1984 and has grown since though not in all years. This head-count rate exceeded the 1970 level in 1997 for the first time and ended at the considerably higher level of 67 per cent, disregarding the much expanded numbers of small jobs of less than 12 hours per week. However, hours worked per worker declined roughly twice as fast and thus the full-time-equivalent employment rate never returned to its initial level though it is somewhat higher now than it was in 1980. The employment rate for full-timers fell steadily with the exception of the 1990s and now equals less than half the overall employment/population ratio including those working less than 12 hours per week; the rate of employment (8%) in such small jobs of less than 12 hours is a substantial in international comparison. After an initial increase up to 1980 wages have registered a secular decline relative to GDP over the following decades, which was interrupted only temporarily by the effects of recessions. Consumer prices grew fourfold but at a declining speed over the subsequent decades. Household consumption has lagged far behind GDP growth and fell to 44 per cent of GDP -
this compares to an average of 56 per cent for the 26 OECD countries in our 30-country GINI sample. However, a large part of the gap is explained by the share of individual consumption that is deemed to be financed via public funds, such as for health care, education, housing etc. It is important to realise that this large chunk of expenditures has grown substantially over time but is entirely left out in the concept of net and net-equivalised disposable household income, which is the most common measure in inequality studies and which will be compared to other measures in this report. The remaining part of pure collective government spending has remained unchanged over the 40 year-period (Salverda, 2013c).

At the same time the stock of household net wealth has grown, with substantial volatility in the wake of each recession. Average net wealth per household grew fastest over the 1990s and slowest over the 2000s. By contrast, debt has grown almost without interruption and over the entire period an amount was added that exceeds total GDP. The debt/GDP ratio almost doubled in the 1970s and 1990s but grew much more slowly in the 1980s. Although during the 2000s the speed was only half that of the 1990s the aggregate increase was equally large because of the higher starting level, adding another 40 points to the debt ratio. Most of the debt relates to investment in own housing. For determining the possible use of debt for consumption, and therewith the growth of the economy, flow figures would be needed and information about the use of mortgage debt for the purpose of additional consumption. Occupational pension savings are usually left out of wealth data but they are very large in the Netherlands as the country is a champion of capital funding and has a pension coverage rate of up to 90 per cent of all employees. Pension savings have added the equivalent of total GDP between 1970 and 2010.

The economy’s evolution has been far from smooth. In most respects the 1970s witnessed the fastest changes either up or down. The 1990s come second only but are particularly important for net wealth and extensive employment and GDP growth, but not for intensive (productivity) growth. Four times since the early 1970s there has been a clear recession. Particularly important was the one of the early 1980s, which was deeper than in many other countries. Quarterly GDP declined by 8 per cent top to trough, employment rates declined likewise for youth and older workers, and unemployment and the use of unemployment benefits soared. As we will see later as a result of this recession government policy has significantly increased income inequality. While in the early 1990s many countries suffered an economic drawback this has hardly affected the Netherlands - employment rate growth stagnated and unemployment rose only modestly. The dotcom crisis was

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3 Note that the net wealth data of Statistics Netherlands which will be used below, are somewhat lower than those from CPB that are shown here; debt figures are virtually the same.
relatively benign in terms of GDP decline and government finances, but unemployment kept creeping up until 2005. The financial crisis hit the country in 2008 as it did elsewhere and still has the country firmly in its grips, if not more firmly, in 2013. A quick elaboration on that current crisis adds some important insights to the above. GDP per capita peaked in the first quarter of 2008 and now, five years later, it has still not returned to its previous level. To the contrary, in a context of further decline, GDP per capita of working wage was 3.7 per cent below the peak in the first quarter of 2013. It is only 1.7 percentage point above the trough of minus 5.4 per cent level, which was reached in the second quarter of 2009, and after two more downturns more than 2 percentage points below the post-trough maximum of early 2011. The cumulative five-year loss equals almost 14 per cent of the peak level GDP, or two-thirds of the situation after five years in the early 1980s (-20%). Investments and private consumption have contracted and are contracting significantly. During the first two years government spending has helped to keep the negative impacts of the crisis at bay, especially with the help of the automatic stabilisers, which since the change of health-care financing system in 2006 has effectively included much of the spending on health care, which has grown fast also since 2008 (Salverda, 2013c). Different from recessions in the past is that this time the employment rate of older workers has continued to grow; by contrast, those of youth and prime-age men have been declining. Particularly, the downward pressure on full-time jobs has increased – also for prime-age women, whose employment only gained slightly on balance through an increase in part-time employment, which plays an important role for them. The employment effects of the crisis seem to resemble those of the USA and the UK more than of Germany or even France. Nevertheless these employment effects have been relatively modest so far also in the Netherlands, given the scale and duration of the economic problems, but recently the unemployment rate has been rising rapidly and is expected to rise further as austerity policies increasingly make themselves felt.

Finally, we note as an important caveat that the report largely draws on tabulated data and makes frequent use of (linear) interpolations for the measurement and estimations of breakdowns or for the correction of series breaks. The frequent use of decile ratios is one consequence of this as often other inequality ratios are missing while decile values are available.

\footnote{Compare Salverda (2011).}
Table 1.1 Indicators for the Dutch national economy since 1970

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<tr>
<td>Total population (x1000)</td>
<td>13120</td>
<td>8%</td>
<td>14210</td>
<td>6%</td>
<td>15010</td>
<td>7%</td>
<td>15990</td>
<td>4%</td>
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<tr>
<td>% 0-14</td>
<td>27</td>
<td>-19%</td>
<td>22</td>
<td>-18%</td>
<td>18</td>
<td>6%</td>
<td>19</td>
<td>-11%</td>
<td>17</td>
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<tr>
<td>% 15-64</td>
<td>63</td>
<td>5%</td>
<td>66</td>
<td>5%</td>
<td>69</td>
<td>-1%</td>
<td>68</td>
<td>-1%</td>
<td>67</td>
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<tr>
<td>% 65+</td>
<td>10</td>
<td>20%</td>
<td>12</td>
<td>8%</td>
<td>13</td>
<td>8%</td>
<td>14</td>
<td>14%</td>
<td>16</td>
</tr>
<tr>
<td>% non-western minorities*</td>
<td>1</td>
<td>200%</td>
<td>3</td>
<td>100%</td>
<td>6</td>
<td>50%</td>
<td>9</td>
<td>22%</td>
<td>11</td>
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<tr>
<td>Households (x1000)</td>
<td>3986</td>
<td>26%</td>
<td>5006</td>
<td>21%</td>
<td>6061</td>
<td>12%</td>
<td>6801</td>
<td>9%</td>
<td>7386</td>
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<tr>
<td>Singles</td>
<td>679</td>
<td>60%</td>
<td>1085</td>
<td>67%</td>
<td>1813</td>
<td>25%</td>
<td>2272</td>
<td>18%</td>
<td>2670</td>
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<td>Persons/household</td>
<td>3.3</td>
<td>-14%</td>
<td>2.8</td>
<td>-13%</td>
<td>2.5</td>
<td>-5%</td>
<td>2.4</td>
<td>-4%</td>
<td>2.3</td>
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</tr>
</thead>
<tbody>
<tr>
<td>GDP (€-2010 billion)</td>
<td>226.1</td>
<td>34%</td>
<td>302.2</td>
<td>25%</td>
<td>376.4</td>
<td>37%</td>
<td>513.8</td>
<td>15%</td>
<td>588.4</td>
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<tr>
<td>GDP/hour worked (€-2010)</td>
<td>23</td>
<td>39%</td>
<td>32</td>
<td>22%</td>
<td>39</td>
<td>18%</td>
<td>46</td>
<td>11%</td>
<td>51</td>
</tr>
<tr>
<td>GDP/capita (€·2010)</td>
<td>17,350</td>
<td>23%</td>
<td>21,360</td>
<td>18%</td>
<td>25,180</td>
<td>28%</td>
<td>32,270</td>
<td>10%</td>
<td>35,410</td>
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</tr>
<tr>
<td>GDP/household (€·2010)</td>
<td>4,350</td>
<td>-2%</td>
<td>4,270</td>
<td>-3%</td>
<td>4,160</td>
<td>14%</td>
<td>4,750</td>
<td>1%</td>
<td>4,800</td>
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<tr>
<td>Current account balance (% GDP)</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>6</td>
<td>5</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Employment (12+hrs) - population (15-64) ratio (%)</td>
<td>59</td>
<td>-7%</td>
<td>55</td>
<td>0%</td>
<td>55</td>
<td>16%</td>
<td>64</td>
<td>5%</td>
<td>67</td>
</tr>
<tr>
<td>Full-time employment – population (15-64) ratio (%)</td>
<td>46</td>
<td>-10%</td>
<td>41</td>
<td>-12%</td>
<td>36</td>
<td>+6%</td>
<td>38</td>
<td>-11%</td>
<td>34</td>
</tr>
<tr>
<td>Small-jobs (&lt;12 hrs/wk) – population (15-64) ratio</td>
<td>7</td>
<td>14%</td>
<td>8</td>
<td>0%</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Average annual working hours employees</td>
<td>2020</td>
<td>-13%</td>
<td>1758</td>
<td>-10%</td>
<td>1574</td>
<td>-9%</td>
<td>1435</td>
<td>-4%</td>
<td>1381</td>
</tr>
<tr>
<td>Wages (% GDP)</td>
<td>55</td>
<td>5%</td>
<td>58</td>
<td>-10%</td>
<td>52</td>
<td>-2%</td>
<td>51</td>
<td>0%</td>
<td>51</td>
</tr>
<tr>
<td>Private consumption (%GDP)</td>
<td>53</td>
<td>0%</td>
<td>53</td>
<td>-6%</td>
<td>50</td>
<td>0%</td>
<td>50</td>
<td>-10%</td>
<td>45</td>
</tr>
<tr>
<td>Individual consumption via government (% GDP)</td>
<td>9</td>
<td>33%</td>
<td>12</td>
<td>0%</td>
<td>12</td>
<td>0%</td>
<td>12</td>
<td>42%</td>
<td>17</td>
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<tr>
<td>Other government consumption (% GDP)</td>
<td>10</td>
<td>20%</td>
<td>12</td>
<td>-8%</td>
<td>11</td>
<td>-9%</td>
<td>10</td>
<td>10%</td>
<td>11</td>
</tr>
<tr>
<td>Other government consumption (% GDP)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Self-owned housing (% all housing)</td>
<td>40.5</td>
<td>9%</td>
<td>44.3</td>
<td>20%</td>
<td>53.4</td>
<td>14%</td>
<td></td>
<td></td>
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<tr>
<td>Private net wealth (%GDP**)</td>
<td>195</td>
<td>-15%</td>
<td>165</td>
<td>4%</td>
<td>172</td>
<td>49%</td>
<td>257</td>
<td>-10%</td>
<td>232</td>
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</tbody>
</table>
## GINI Country Report The Netherlands

<table>
<thead>
<tr>
<th>Household debt (% GDP**)</th>
<th>19</th>
<th>100%</th>
<th>38</th>
<th>471%</th>
<th>217</th>
<th>-60%</th>
<th>87</th>
<th>46%</th>
<th>127</th>
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</thead>
<tbody>
<tr>
<td>Net wealth / household</td>
<td>28.4</td>
<td>90%</td>
<td>53.9</td>
<td>65%</td>
<td>89</td>
<td>78%</td>
<td>158</td>
<td>17%</td>
<td>184.5</td>
</tr>
<tr>
<td>Occupational pension wealth (% GDP)</td>
<td>31</td>
<td>45%</td>
<td>45</td>
<td>60%</td>
<td>72</td>
<td>53%</td>
<td>110</td>
<td>15%</td>
<td>127</td>
</tr>
<tr>
<td>EMU debt (% GDP)</td>
<td>49</td>
<td>-8%</td>
<td>45</td>
<td>71%</td>
<td>77</td>
<td>-30%</td>
<td>54</td>
<td>17%</td>
<td>63</td>
</tr>
</tbody>
</table>

**Recessions (quarterly basis)**

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Peak-to-trough decline (% quarterly-GDP peak)</td>
<td>-4.1</td>
<td>-7.7</td>
<td>-1</td>
<td>-5.4</td>
</tr>
<tr>
<td>Maximum OECD harmonised unemployment rate (15-64) (%)</td>
<td>5.8</td>
<td>8.4</td>
<td>4.6</td>
<td>6.5</td>
</tr>
<tr>
<td>Maximum EMU public deficit (% GDP)</td>
<td>-2.8</td>
<td>-6.2</td>
<td>-3.1</td>
<td>-6.2</td>
</tr>
</tbody>
</table>

*) Includes 2nd generation and thus is more broadly defined than nationality; 1970 is 1972. **) CBS data provide the wealth breakdown in Section 2.1.4 - 1990 is 1992. **) Recession periods are defined as GDP volume per capita being below the preceding peak level. ^) 2010 is 2009, estimated from coupling two data series.

Sources: Statistics Netherlands, Statline; CPB, Macroeconomic Outlook 2012, for data on government and (un)employment; Wealth data kindly provided by CPB; OECD Economic Outlook No 90 for GDP volume, quarterly GDP for measuring recession, and annual hours; OECD National Accounts for actual individual consumption and other government consumption.
2. The Nature of Inequalities and Their Evolution

This chapter analyses the evolution of inequalities in the Netherlands to lay the basis for considering their social, cultural and political impacts in the following chapters. The prime question to be answered is whether inequalities have in fact increased over time, as is now commonly assumed, and, if so, to what extent and when, and whom it has concerned in particular. However, even if they have not increased in the aggregate this might be due to composition effects so that in fact inequality may have risen along many or even all dimensions at the disaggregate level. Consequently, even unchanged inequality warrants further scrutiny for increases that are of importance for the impacts.

This chapter distinguishes, first, between various fields of inequality:

- household incomes,
- individual earnings from employment in the labour market, which are the main source of household incomes,
- individual educational attainment of the population as well as of the persons in employment, which affects job chances and earnings levels,
- and, finally, household wealth and debt.

Note the distinction between the household and the individual.

Within these fields there are, on the one hand, five subsequent concepts of income: primary incomes (earned in markets), gross income (including transfers), net income (after taxes), net-equivalised income (after standardising for the size and composition of the household), and, finally, effective net-equivalised income (after attributing to households the receipt of in-kind benefits and the use of publicly provided services). On the wealth side, net and gross wealth are distinguished, that is excluding or including debt, and so are housing wealth and financial wealth.

For these fields and concepts we look at different measures of inequality, the Gini coefficient and particularly decile ratios. Unfortunately, we depend largely on tabulated data where Gini coefficients and further detail are scarce. We also pay explicit attention to the two tails of the distribution: poverty (solely for incomes, for material deprivation see Chapter 3) and top incomes respectively. Finally, to consider who have been particularly affected, we break down the universe of households along several important dimensions such as household type, age, and ethnicity.
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We take a long-term view, going back to the late 1970s, for a better grasp of the evolution and the underlying mechanisms of inequalities. To obtain a comprehensive picture different data sources have been combined. This may serve as a caveat on the exactness of the figures presented here: it is the trends that count more than the levels.

We now turn first to income inequality (Section 2.1), then relate this to sources of income (Section 2.2), and to educational attainment (Section 2.3), and finally address the wealth distribution (Section 2.4). Section 2.5 concludes.

2.1 Household income inequality

Income is commonly the focus in discussions of inequality, and, unsurprisingly, the subject for which most detail is available. The starting point here is the evolution of the inequality of net-equivalised household incomes. This is income after transfers and taxation and also after a standardisation across different types of households that aims to account for possible economies of scale in the use of income by the household given its number of adults and children. This concept of income inequality is central to the policy debate and the only one for which in the Netherlands case the Gini coefficient is known for the full period.

Three types of aggregate measures of inequality are shown: the Gini coefficient, the P90:P10 percentile ratio, and the S10:S1 bottom-to-top ratio between the means of the 10th and the 1st decile of the distribution (Figure 2.1). This S10:S1 ratio is used here for five reasons. First, it focuses more strongly on the tails of the distribution than the Gini coefficient does. Second, it can be used where the Gini and similar measures are inapplicable, especially when households are not precisely ranked according the type of income under scrutiny which is the case below for example when we use one uniform ranking for comparison across different types of distributions. Third, as a concept the ratio seems a desirable extension of the P90:P10 ratio, aimed at accounting for the ‘depth’ of the tails in a way the poverty gap or the top incomes share do. The ratio is also better suited than such percentile ratios, because of its broader coverage for analysing households, which come in different types and

5 Naturally, the same equivalisation is also possible for the other income concepts but usually it is applied to net incomes only. By the way, when applied to gross incomes it risks confounding the effect of taxation.
6 The Gini coefficients from OECD, Divided We Stand (Overview, Figure 2) are the same but have been linearly corrected for the series break of 2000, and therefore start at 0.263 in 1977 instead of 0.242.
7 Comparable S10:S1 ratios, for net-equivalised incomes only, for other countries are available in the OECD’s Income Distribution Database, accessible from http://www.oecd.org/social/income-distribution-database.htm.
are more accidentally found at narrow percentiles than within broader deciles. Finally, the Gini coefficient is scarce in the data from Statistics Netherlands while the deciles are more readily available for determining the ratio.

Figure 2.1 Net-equivalised household incomes, two measures of inequality, 1977-2011

Notes: The year 2000 after revision has been left aside as unreliable; for comparison over time add changes over the two separate periods 1977-2000 and 2001-2011. The S10:S1 (gross) ratio concerns net equivalised income but ranked by the gross income of the households.

Source: CBS, Income statistics, special tabulations (authors’ calculations).

All measures show a clear increase, with a clear concentration in the late 1980s. Over the entire period, the Gini rises by 14 per cent from 0.242 to 0.284, the S10:S1 ratio increases by 78 per cent from 5.1 to 8.2, the P90:P10 ratio by 22 per cent. The increase appears to be episodic for the five years 1985–1990 when the rises are relatively steep: 12 per cent for the Gini, 17 per cent for the D9:D1 and 42 per cent for S10:S1. For the rest of the period the Gini and D9:D1 ratio move up but very little while the S10:S1-ratio increases by another 35 per cent. Apparently, the much larger and continued increase in the S10:S1 ratio points to strong and enduring effects occurring at the tails of the distribution which are missed by the other two measures.

The graph also shows an adjusted S10:S1 (gross) ratio which still focuses on mean net-equivalised incomes in deciles but the latter are based on a ranking of households by their gross incomes instead

---

8 Based on a linear correction of the series break of 2000-2001, as also applied in the OECD’s database but then using the revised series for 2000 which is left aside here.

9 The local peak for the Gini in the year 2007 is an anomaly resulting from a one-time tax exemption for profit withdrawals from business ownership and it is virtually restricted to the top decile (Salverda, 2013a and b).
of their net-equivalised incomes. This will be used below for better gauging the redistributive effects between income concepts by controlling for household reranking. This ratio also drops the simple linear repair of the series break and instead uses an extensive, detailed repair of the break (see Salverda 2013a). This adjusted ratio finds inequality at a lower level (4.0 to 6.6), but undergoes a roughly similar evolution: an increase by 63 per cent in total, with again a large role (41%) for the episodic rise of the 1980s but also continued growth (+21%) after that.

Table 2.1 pictures the evolution of net-equivalised incomes, corrected for consumer price increases, for all ten deciles. All decile cut offs fall in the 1980s, in equal measure (-8 to -9%) (Panel A). After 1985 the bottom decile stays put until well into the 1990s followed by a very gradual rise that returns it to its initial level of 1977 in the year 2000, 23 years later; it stays put again over the 2000s. On balance, the first decile’s level fell by 1 per cent until 2011; the second decile grew much more (12%), and from the third decile upwards growth has been between 17 and 28 per cent. Consequently, the traditional percentile ratio for the distribution’s upper half (P90:P50) has hardly changed while that of the lower half (P50:P10) did all the heavy lifting (+20%), especially between 1985 and 1990 (+15%).

However, the growth in inequality is underestimated by these commonly used decile ratios which relate to the upper boundaries of the 1st, 5th and 9th deciles only. We can see this from a comparison of the average incomes within the deciles, equally deflated (Panel B). The overall average grows by 17 per cent but in the first decile it falls by 30 per cent. This evolution strongly deviates from the 2 per cent increase found for the same decile’s upper boundary. Apparently, the bottom decile has drawn in much lower incomes and widened very substantially in itself. By contrast, all other deciles register an increase in average incomes that is much closer to the rise in their cut offs. The S10:S1 ratio increases by 78 per cent, as in Figure 2.1, again fully concentrated on the lower half of the distribution – emulating D5 with the help of the average of the 5th and 6th deciles taken together – while the upper half’s ratio remains virtually unchanged. Note that the average income of the tenth decile (€ 38.600) is considerable higher from the start than the ninth. Interestingly, median incomes commonly lag average incomes but that is not the case here as both rise by 117 to 119 per cent.

The main finding is an extreme widening of the lower half.10 We take the rapid increase in inequality of the late 1980s followed by two decades of a slower increase, with the strongly deteriorating

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10 See SCP (2003, 49) for similar conclusions (strong effects in first decile, concentration of change in 1980s due to reduced social security) based on a larger increase in the Atkinson index compared with the coefficient of variation.
position of the first decile, as the stylised points of departure for considering household incomes. Thus aggregate inequality has grown, but with a concentrated spurt in time and a concentrated effect on the bottom decile.

Table 2.1 Decile limits and within-decile averages of household net-equivalised income, constant prices, and decile ratios, 1977 in levels (k€ of 2011) and other years 1977=100

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<thead>
<tr>
<th></th>
<th>Total</th>
<th>Deciles</th>
<th>Decile ratios</th>
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<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
<td>P90:10 P90:50 P50:10</td>
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<tr>
<td>A. Decile limits (highest income)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>1977</td>
<td>11.2 12.6 14.0 15.5 17.1 19.3 21.7 24.8 30.0</td>
<td></td>
<td>2.68 1.75 1.53</td>
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<tr>
<td></td>
<td>100 100 100 100 100 100 100 100 100</td>
<td></td>
<td>100 100 100</td>
</tr>
<tr>
<td>1985</td>
<td>91 92 91 91 92 91 92 92 92 92</td>
<td></td>
<td>100 100 101</td>
</tr>
<tr>
<td>1990</td>
<td>92 98 101 104 106 106 108 109 109</td>
<td></td>
<td>118 102 115</td>
</tr>
<tr>
<td>2000</td>
<td>101 108 112 114 116 116 117 117 117 117</td>
<td></td>
<td>116 100 115</td>
</tr>
<tr>
<td>2011*</td>
<td>99 112 117 118 119 119 120 127 128 128</td>
<td></td>
<td>122 101 120</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S10:S5/S</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S10:S1 6 S5/6:S1</td>
</tr>
<tr>
<td>B. Within-decile average incomes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1977</td>
<td>19.0 7.6 11.9 13.3 14.8 16.2 18.1 20.5 23.1 27.1 38.6</td>
<td></td>
<td>5.06 2.25 2.25</td>
</tr>
<tr>
<td></td>
<td>100 100 100 100 100 100 100 100 100 100</td>
<td></td>
<td>100 100 100</td>
</tr>
<tr>
<td>1985</td>
<td>92 92 92 92 91 92 92 92 92 92 92</td>
<td></td>
<td>100 100 99</td>
</tr>
<tr>
<td>1990</td>
<td>106 78 96 99 103 106 107 107 109 109 111</td>
<td></td>
<td>142 105 136</td>
</tr>
<tr>
<td>2011*</td>
<td>117 69 106 114 117 119 120 120 121 120 123</td>
<td></td>
<td>178 103 173</td>
</tr>
</tbody>
</table>


We will dissect this evolution in the rest of the section. Subsection 2.1.1 compares this for different concepts of income and the effects on inequality of transfers, taxation and equivalisation; Subsection
2.1.2 looks at poverty and top income shares, the two tails of the distribution. Thirdly, 2.1.3 leaves the national level and considers different dimensions of the household universe and the inequalities that these entail, aimed at fathoming the contribution of a changing composition of the household universe to the evolution of inequality and its impacts. Next, Sections 2.2 and 2.3 elaborate on this in more detail, focusing on labour-market activity and educational attainment respectively, while Section 2.4 considers wealth inequalities.

2.1.1 Inequality-mitigating effects of transfers, income taxation and household equivalisation

The operational concept of income is not trivial, and the choice of primary, gross, net, net-equivalised, or net-equivalised-after-public-services income affects the level and evolution of inequality very significantly. Or, to put it otherwise, though net-equivalised incomes are the focus of policy making and are sensitive to this, they incorporate also effects of market inequalities and of household formation which reflects in the equivalisation of incomes. It is important to make the distinction as otherwise the outcomes may be mistakenly attributed entirely to policy making and policy makers.

The inequality of net-equivalised incomes is a long way away from that of primary (or market) incomes, which are consistent with GDP.¹¹ Five subsequent income concepts can be distinguished which imply four consecutive effects:

i) From primary to gross income¹²: redistribution via transfers to the household,
ii) From gross to net income: taxation of the household,
iii) From net to net-equivalised income: estimation of the significance of net income in relation to the needs of the household
iv) After attribution of the use of public services (care, education) by households net-equivalised income shifts to effective net-equivalised income).

¹¹ Not all households dispose of a primary income and many have a very small one only (mainly interest received on savings).
¹² A caveat is that Dutch Statistics counts occupational pension payments as a transfer while strictly speaking these might be considered primary income, being based on postponed labour income plus the capital proceeds from these savings. In 2010 occupational pensions (over and above the public pension) involve 2.4 million households and an amount of €35 billion or 11% of measured primary income and 38% of all transfers situated between primary and gross income. 14% of that amount and 37% of those households are found in the bottom three gross-income deciles.
The first three income concepts are sensitive to policy making to different degrees. The influence is indirect for market incomes with an important role for labour market institutions and regulations; the steps toward gross and net incomes are more direct, as they lean on social transfers and taxation respectively. Equivalisation, however, results entirely from an analytical treatment of the data. The fifth concept will be touched upon only and discussed in more detail in Chapter 5.

**Figure 2.2 Percentage distribution of persons over household deciles by income concepts, 2011**

The reduction in inequality across taxation etc. is often indicated by a simple comparison of an inequality measure, especially the Gini coefficient, for each of the income concepts, ranking households anew with each step according to the corresponding concept of income. However, this risks mixing up the effects of transfers, taxation and equivalisation with those of household reranking. Strong shifts of households occur across the distribution when moving from one income concept to another which affects parts of the distribution differently. Figure 2.2 illustrates this for the latest year available. Measured indirectly, and on balance, by the number of persons belonging to the households in each decile 4 to 5 per cent of all persons and corresponding households appear to shift deciles with the incorporation of transfers (the transition from primary to gross incomes) and taxation (from gross to net). Equivalisation effects are very large by comparison as 20 per cent of all persons change deciles, and follow a clear pattern of opposite directions – diminishing shares in the upper half (and increasingly so from the 6th to 10th decile) and substantially increasing shares in the lower half. The bottom decile has a much larger share for primary incomes (7.3%) than for gross or net incomes (5.8-5.9%) while for net-equivalised incomes the share is again much larger (8.2%); the
top decile, by contrast, has a 15 per cent share for primary, gross as well as disposable incomes but an 11 per cent share only for net-equivalised incomes. Evidently, this affects inequality significantly, and in addition it may change over time. Over 1977 to 2011, the importance of the bottom decile in the gross-incomes distribution increases from 4.7 per cent to 5.8 per cent, while that of the second decile declines (6.6 to 5.8%) mostly over the 1980s, suggesting a downward shift of larger households receiving transfers.

Figure 2.3 First and tenth decile, evolution of four income concepts, prices of 2011, 1977=100

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A. D1</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>B. D10</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: CBS, Income statistics, special tabulations (authors' calculations)

To control for such reranking effects we apply an identical ranking of households across the income concepts instead, here always based on gross income, which is the most encompassing concept. To control for such reranking effects we apply an identical ranking of households across the income concepts instead, here always based on gross income, which is the most encompassing concept. Now the numbers of persons no longer change and households keep their places across the deciles.  

13 These are also the only figures available to use from 1977 to 2011. Note that it is also important whether all households are considered or only those with a particular income. This is especially important for primary
The evolution of net-equivalised incomes found in Table 2.1 can now be put in perspective by the evolution for primary, gross and disposable income for the two tail deciles steadily ranking the households by their gross income (Figure 2.3).\textsuperscript{14} Average primary income in the bottom decile is halved in the early 1980s and is found consistently above previous levels only over the last six years. It should be noted though that the absolute amounts are tiny (ranging from € 500 to € 2800); this can also explain the volatility. At the same time, the bottom’s gross, net and net-equivalised incomes first decline significantly and with the exception of 2001 have been close to the initial level only since the mid-2000s. Notably, the enhancement of primary incomes is not found for the other three income types. The largely parallel developments of these three concepts points to the leading role of gross incomes. The divergence between gross and net incomes shows that increased taxation has added to this, especially in 1990 when the Oort tax revision increased the effective taxation of singles, who happen to be concentrated at the bottom – as is also reflected by the small effects of equivalisation where the single person is the standard. The upswing of 2001 seems to be a consequence of the Zalm-Vermeend tax revision of that year which replaced many tax deductibles at the marginal rate by tax credits of equal value to everyone. It was followed by a decline reflecting that of primary incomes due to the dotcom crisis.

However, the picture for the top decile looks very different. Primary incomes are large (€ 88,000 to 144,000) and less volatile though they do show the effects of bust and boom (see footnote 9 for 2007). Top primary incomes lead the way for gross and net outcomes while equivalisation makes an important addition with a positive ending in 2011 at 50 per cent above the starting level, which contrasts sharply with the bottom decile. In the top decile net incomes develop slightly more favourably than gross incomes, pointing to some alleviation of income taxation.

Figure 2.4 summarises the absolute changes in income levels between the beginning and the end of the period for all ten deciles and the four income concepts. These levels concern averages over all households within the deciles and indicate the aggregate contribution to income generation within the decile. For the two tails the relative developments were just shown in detail in Figure 2.3. Clear differences surface between the deciles and the income types. The evolution of primary incomes diverges strongly across the distribution, increasing slightly at the bottom, declining substantially up incomes which are not received by all contrary to gross, net and net-equivalised incomes. The presentation here rests on all households including zeros for primary incomes.

\textsuperscript{14} Various differences occur between the 1990–2000 and the 2000–2011 series: the precise observation of (single) households, the categorisation of household types, the identification the equivalisation of their net incomes, income definitions. In addition, the new-series 2000 data are still provisional, and often look unreliable.
Figure 2.4 Changes in real incomes across the deciles for primary, gross, net and net-equivalised income, prices of 2011, 1977 to 2011

Note: Households are ranked uniformly by their gross incomes.
Source: Calculated from special tables provided by Statistics Netherlands.

Figure 2.5 Inequality (S1:S1 ratios) of gross, net and net-equivalised incomes, 1977–2011

Note: Households are ranked uniformly by their gross incomes. The S10:S1 ratio for net/equivalised income is identical to the adjusted ratio shown in Figure 2.1.
Source: Calculated from special tables Statistics Netherlands.

to the 6th decile, and growing significantly thereafter, by up to €30,000 at the top decile, twice as much as in the next, 9th decile, and there again almost twice as much as in the 8th decile. Transfers
make a significant difference and take away most of the primary decline witnessing the evolution of decile gross incomes. Taxation improves the situation for the 3rd to 5th deciles but has clearly grown in absolute terms for the 7th to 10th decile. Finally, equivalised incomes have improved for all deciles with the notable exception of the first. However, its decline (-0.8%) differs strongly from the 20% fall of Table 2.1 because of the different household ranking.

Table 2.2 Distribution of household income and consumption expenditure, 1979–1998

<table>
<thead>
<tr>
<th>Year</th>
<th>Income</th>
<th>Consumption expenditure</th>
<th>Income not spent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D1</td>
<td>D5</td>
<td>D9</td>
</tr>
<tr>
<td>1979</td>
<td>14.3</td>
<td>27.4</td>
<td>51.3</td>
</tr>
<tr>
<td>1989</td>
<td>13.4</td>
<td>29.8</td>
<td>58.2</td>
</tr>
<tr>
<td>1998</td>
<td>14.9</td>
<td>33.8</td>
<td>65.5</td>
</tr>
<tr>
<td>1979=100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1979</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>1989</td>
<td>94</td>
<td>109</td>
<td>114</td>
</tr>
<tr>
<td>1998</td>
<td>105</td>
<td>123</td>
<td>128</td>
</tr>
<tr>
<td>Decile ratios</td>
<td>D9:D1</td>
<td>D9:D5</td>
<td>D5:D1</td>
</tr>
<tr>
<td>1979</td>
<td>3.59</td>
<td>1.87</td>
<td>1.92</td>
</tr>
<tr>
<td>1989</td>
<td>4.35</td>
<td>1.95</td>
<td>2.23</td>
</tr>
<tr>
<td>1998</td>
<td>4.39</td>
<td>1.94</td>
<td>2.26</td>
</tr>
</tbody>
</table>

Note: Based on Consumer household budget surveys.
Source: Calculated from Kalwij and Salverda, 2007, 1451.

Assuming that the room for manoeuvre of households to save instead of spend increases with income it may be expected that the inequality of household consumption will be more stable than
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that of income inequality. This is borne out by the few data that are available\textsuperscript{15} (Table 2.2). For consumption there is little sign of the sharp increase in income inequality that was found for the second half of the 1980s – and that little there is, is limited to the upper half of the distribution and absent from the lower half. At the same time income inequality grew significantly. The ‘not spent’ category seems to indicate that savings at the lowest level have strongly decreased in the bottom decline (100 ⇒ 54%) while at the median and at the ninth decile consumption growth has lagged income growth and savings increased. After 1989 first-decile income grew again but savings remained restrained.

We focus now on the evolution in the inequalities of gross, net and net-equivalised incomes (Figure 2.5) leaving out primary incomes because of their strong volatility and low absolute levels at the bottom (Figure 2.3) which hinders using the S10:S1 ratio (however, this does not hold for all primary income sources as we will see below). The inequality ratios rise sharply until 1990, with substantial mutual differences for gross (23%), disposable (+37%) and net-equivalised incomes (+42% respectively). The subsequent evolution is more gradual (+9, 9, and 15%) and largely concentrated in the 2000s. Clearly, inequality has grown more with each consecutive step: by 33 per cent for gross income inequality, 49 per cent for net inequality and 63 per cent for net equivalised income inequality. Apparently, taxation has not been able to keep growing inequality in check – not to say that its changes have positively contributed to increasing inequality. The lower level of equivalised income inequality shows the equalising effect of household formation. The stronger rise in equivalised incomes inequality, however, implies a considerable reduction in this effect or, conversely, an inequality enhancing effect of changing household composition over the distribution. The same holds for taxation which is responsible for the gap between gross and disposable income. In the year 1989-1990 the effective tax rate on the first decile shows a 14 per cent hike, then increases further up to 1998, when its rate almost equals that of the middle of the distribution, and shrinks after the tax revision of 2001. Thus changing taxation is an important contributor to the evolution of inequality.

\textsuperscript{15} These are derived from a unique study of consumer budget surveys (Gregory et al., 2007) and are subject to the common limitations of such surveys, which are less precise on the levels of income.
Table 2.3 In-kind benefits allocated to the household net income distribution, 1977 and 2007

<table>
<thead>
<tr>
<th>Total</th>
<th>Deciles</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>S10:S1</th>
<th>S10:S5/6</th>
<th>S5/6:S1</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Average benefit per decile, k€ of 2011</td>
<td></td>
<td>1977</td>
<td>7.0</td>
<td>14.4</td>
<td>2.5</td>
<td>3.0</td>
<td>3.5</td>
<td>4.7</td>
<td>5.6</td>
<td>6.8</td>
<td>7.6</td>
<td>6.6</td>
<td>7.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2007</td>
<td>8.1</td>
<td>9.0</td>
<td>8.5</td>
<td>7.8</td>
<td>7.0</td>
<td>6.4</td>
<td>7.5</td>
<td>7.8</td>
<td>7.8</td>
<td>8.8</td>
<td>10.4</td>
<td></td>
</tr>
<tr>
<td>Average decile effective net income including in-kind benefits, k€ of 2011</td>
<td></td>
<td>1977</td>
<td>37.8</td>
<td>23.3</td>
<td>18.9</td>
<td>23.0</td>
<td>26.7</td>
<td>30.9</td>
<td>35.2</td>
<td>40.2</td>
<td>45.8</td>
<td>51.9</td>
<td>74.7</td>
<td>3.21</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2007</td>
<td>43.1</td>
<td>17.0</td>
<td>24.1</td>
<td>27.2</td>
<td>30.1</td>
<td>33.7</td>
<td>39.5</td>
<td>45.0</td>
<td>51.2</td>
<td>61.7</td>
<td>102.1</td>
<td>6.01</td>
</tr>
</tbody>
</table>

Note: net-equivalised data as used for Table 2.1 are not available for 1977.
Source: Pommer et al. (2011) (authors’ calculations)

The fifth income concept, ‘effective’ income, serves to factor in the in-kind benefits and the use of publicly provided services. This use is not directly observed but depends on the attribution of the aggregate use of services to individual households depending on their household type and income level. To consider its evolution Table 2.3 specifies for 1977 and 2007 the amounts involved, and the resulting total income per decile together with the corresponding decile ratios at the right-hand side. The average amount has remained an unchanged 23 per cent of household net income, but nowadays this is radically differently distributed over the income deciles. The bottom decile has witnessed a strong decline while all other deciles (except 7th) registered significant growth. The policy changes behind this – including the strong expansion of mortgage interest deductions which benefit higher incomes – will be discussed in Chapter 5. Suffice it to say here that the shift has considerably reduced the mitigating effect of services and in-kind benefits on inequality. The S10:S1 decile ratio has almost doubled, from 3.21 to 6.01, and the reducing effect on the inequality of net incomes diminished from 58 per cent to 48 per cent. Most of that decline is concentrated in the lower half of the distribution. This underlines the need to take a closer look at the changes undergone by the first decile where net income also declined (Table 2.1). No further detail is available on effective income and the rest of this chapter focuses on the other concepts of income.

16 SCP, the Netherlands Institute for Social Research, the Dutch government’s main advisory body for social affairs, has maintained a tradition of research for attributing such expenditures to the income distribution since 1977.
2.1.2 Poverty and top incomes - the two tails of the income distribution

We have seen that the first income decile has lagged significantly behind the rest. This makes one worry about the poverty rate, which is a more specific measure of income inequality focused on the lower end of the household income distribution. The relative-poverty rate is a core indicator for the European policy debate about inequality (Europe 2020). Conceptually it is based on net-equivalised household income only. Four different measures of poverty are shown in Figure 2.6. Two focus on the share of households in poverty and two on the share of persons found in such households; one applies an absolute (anchored) measure of poverty, the other three use a current relative measure. Though levels differ for reasons of definition, the evolution of the three relative indicators tells a similar story of rapidly increasing poverty until the mid-1990s followed by a slightly lower and roughly stable level. The two CBS measures, for households (11.2% in 2010) and persons (10.4%), imply that poor households count fewer persons than average, but the difference is small. The OECD level (13.5% in 2010) exceeds that of Statistics Netherlands considerably, possibly because of differences in equilisation and non-coverage in the national statistics of student household and households without income throughout the year, which has a lowering effect. The absolute measure, by contrast, shows a sharp increase up to the mid-1980s when 22 per cent of all households are poor according to this measure. This is followed by a considerable decline to 15 per cent in the 1990s, again followed by a further decline between 1998 and 2007 to a level of around 7.5 per cent, also in 2010. All three measures of CBS show clear increases in the year 2011.

17 Compare OECD (2013). For Statistics Netherlands equilisation see Armoedesignalement 2011, Table 2.1.
Figure 2.6 Various* measures of poverty: 1977–2011

*) 1: Based on social security minimum anchored in 1979; 2, 3, 4: below 60% of median income of all households; 4: Linear uplifting of figures before the series break of 2000.
Sources: Statistics Netherlands and OECD Poverty database.

Compared to the average poverty rate of virtually all GINI countries present in the OECD’s poverty dataset, the OECD poverty rate for the Netherlands has increased much more rapidly, climbing from half the international average in 1985 to about the full average around 1990, and then declined slowly to 80 per cent of the average at the end of the 2000s.19

The depth of poverty is another important aspect. This is measured by the poverty gap which indicates how far the average income of the poor is below the (60% relative) poverty threshold as a percentage of that threshold. The Dutch gap was around 20 per cent in 1985, fell to 16 per cent in 1990, increased again to 23 per cent in 2000 and has been increasing since to 27% in 2010 (OECD database). It was below the OECD average in 2000 but has been virtually equal since the mid-2000s.

Summing up, poverty has both risen and deepened significantly in the wake of the 1980s recession and it has remained well above the initial level though in recent years the Netherlands has done somewhat better than other countries with respect to the incidence.

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18 Also with lighter equivalisation of household income: square root of the number of adults and 0.8 times the number of children in the household. (Soede and Vrooman, 2008, 16).
19 It makes little difference to the trend whether we select all countries available in the dataset (with the number growing from 6 to 26), stick to the same 10 consistently available since 1985, or to EU countries only.
To complement the picture of poverty, we take a look at the upper end of the distribution: the top-incomes share. It should be noted that, contrary to poverty, the top share is usually defined for gross incomes and for tax units instead of households. Income shares of the very top (1% or less) were known up to 1999 (Salverda and Atkinson, 2007) and have recently been extended to 2012, albeit with a series break for the year 2000 (Salverda, 2013b). Figure 2.7 situates those results within the period 1977–2012. As in other Continental countries there is not the steep increase that is found for English-speaking countries also not for the newly covered period since 2001 (Atkinson et al., 2011). There is some increase though for the Top 10%, after almost 25 years of stability, while the Top 1% increases slightly up to the outbreak of the Financial Crisis and then declines.

As a prelude to the next section, the figure presents some further detail. Very clear is the rise in top incomes from labour which started in the early 1990 and has continued since 2001. Over 1977-2012, the top shares for labour income grew from 19.4 per cent to 26.7 per cent (Top 10%) and from 2.7 per cent to 4.8 per cent, with only a small part due to the series break. As labour incomes concern

---

20 In the Netherlands tax units are married of formally cohabiting couples and individuals (Salverda, 2013b).
21 The break reflects both changes in statistical definitions and coverage in 2000 and a fundamental change in the income tax system which abolished the separate taxation of the stock of financial wealth and introduced a fixed (4%) rate of return on that wealth which is subject to income taxation (see Salverda 2013b).
the major part of the population this rise may be observed more readily by the population. The top decile of fiscal units comprises some 1.5 million employees, 17 per cent of all employees. This may help explain the existence of feelings of unease and growing inequalities in society in spite of the fact that the overall top shares seem almost stable. That stability must be explained from declining incomes from enterprise and wealth. In addition to this, the dashed grey line indicates, for the Top 10%, the labour income share of single earners and main earners in couples. Stagnant first, this share has clearly been declining recently. The gap between this line and the Top 10% labour share covers the contribution that second earners among couples make, rising from 3.0 per cent in 1977 to 11.7 per cent in 2012. Thus the latter group has been fully responsible for the relentless growth since 1990 in the labour share and even more than that.

2.1.3  Group differences and composition

We now turn to the position of different categories of households in the income distribution and the possible effects of composition changes on aggregate inequality, with the help of data which, unfortunately, are tabulated and mostly univariate. We focus here on three demographic aspects: household type, age, and ethnicity – the latter two as indicated by the head (before 2000) or main earner (after 2000) in the household. Gender will be considered in the next section in conjunction with educational attainment. Two other important dimensions: source of income (labour, enterprise and wealth, or transfers) and educational attainment respectively, are the subject of the Sections 2.2 and 2.3. For each category we discuss its share among households, its median income, its concentration in the lower half of the income distribution and its within-group inequality. First (Table 2.4), we address income inequality more broadly, focusing on net-equivalised income, and, second (Table 2.5), we consider the two tails of poverty and top incomes and also consider the bottom decile.

Table 2.4 summarises the situation for the three demographic aspects. Again, more detail is available after 1990 than before and the series break of 2000 now seems sharper than at the aggregate level. Household numbers have expanded strongly, more so than the population, and the average number of persons in a household has declined from 3.3 to 2.3 (Table 1.1). There has been a clear composition shift towards singles as their share among households grew from 19 to 36 per cent. In terms of equivalisation this is clearly an important compositional change. The shift was equally rapid over the periods 1977–1985 (+7 %-pt) and 1985–1990 (+6 %-pt). This was followed by 20 years of much slower growth (+4 %-pt). Though over 1985–1990 their numbers did not grow faster than before, singles played an important role in the striking growth of inequality during that period as at the same time their income position deteriorated significantly (see also Trimp, 1993). Their relative
median income fell, their concentration in the lower half of the distribution grew, their within-inequality expanded very considerable in the late 1980s from a D9:D1 ratio of 2.9 to 4.1. Over the full period 72 per cent of the growth of singles has been in the half below the median. Unsurprisingly, these developments are reflected in the evolution of their complement, multi-person households: their population share fell, their relative median increased and their concentration in the lower half declined.

Table 2.4 Positions in net-equivalised income, by household type, age, and ethnicity, 1977–2010

<table>
<thead>
<tr>
<th></th>
<th>% of households</th>
<th>Own median % of overall median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate level:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>number x1000; k€ of 2010</td>
<td>4681</td>
<td>5447</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Singles</td>
<td>19</td>
<td>26</td>
</tr>
<tr>
<td>- 65 and over</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- More-person</td>
<td>81</td>
<td>74</td>
</tr>
<tr>
<td>households*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Couples, no children</td>
<td>29</td>
<td>31</td>
</tr>
<tr>
<td>- Couples, children&lt;18</td>
<td>21</td>
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</tr>
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<td>- Single parents, children&lt;18</td>
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<tr>
<td>Age</td>
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<td>- 25-44</td>
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25
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<tbody>
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<td>Native</td>
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<td>81</td>
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<td></td>
<td></td>
<td>103</td>
<td>103</td>
<td></td>
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<tr>
<td>Non-western</td>
<td>7</td>
<td>10</td>
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<td></td>
<td></td>
<td>75</td>
<td>73</td>
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<table>
<thead>
<tr>
<th>Household type</th>
<th>% below median</th>
<th>Within-inequality D9:D1**</th>
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<tr>
<td>Aggregate level</td>
<td>50 50 50 50 50 50</td>
<td>2.68 2.69 3.16 3.10 3.04 3.26</td>
</tr>
<tr>
<td>- Singles</td>
<td>60  60 65 66 66 68</td>
<td>2.88 2.94 4.12 3.47 3.12 3.79</td>
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<td>- 65 and over</td>
<td>74  70</td>
<td>2.51 2.24</td>
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<tr>
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<td>2.59 2.63 2.90 2.91 2.85 2.95</td>
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<tr>
<td>- Couples, no children</td>
<td>37  36 37 36</td>
<td>3.00 2.94 3.30 2.89</td>
</tr>
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<td>- Couples, children&lt;18</td>
<td>57  52 54 45</td>
<td>2.46 2.53 3.05 2.89</td>
</tr>
<tr>
<td>- Single parents, children&lt;18</td>
<td>85  86 86 87</td>
<td>2.72 2.50 2.25 2.55</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Age</th>
<th>% of households</th>
<th>Own median % of overall median</th>
</tr>
</thead>
<tbody>
<tr>
<td>- 15-24</td>
<td>84 88 85 91</td>
<td>5.29 6.11 5.54 7.90</td>
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<tr>
<td>- 25-44</td>
<td>48 49 50 50</td>
<td>3.04 3.04 2.92 3.19</td>
</tr>
<tr>
<td>- 45-64</td>
<td>36 38 38 39</td>
<td>3.09 3.14 3.08 3.24</td>
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</tbody>
</table>
GINI Country Report *The Netherlands*

<table>
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<tr>
<th></th>
<th>% of households</th>
<th>Own median % of overall median</th>
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</thead>
<tbody>
<tr>
<td>- ≥ 65</td>
<td>62</td>
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**Ethnicity***

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</thead>
<tbody>
<tr>
<td>- Native</td>
<td>48</td>
<td>47</td>
<td></td>
<td></td>
<td></td>
<td>2.93</td>
<td>3.07</td>
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<tr>
<td>- Non-western</td>
<td>74</td>
<td>75</td>
<td></td>
<td></td>
<td></td>
<td>3.20</td>
<td>3.65</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

*) Not all constituent categories are shown for more-person households and ethnicity respectively.

***) Aggregate ratios for 2000–2010 deviate from Figure 2.1 as they were now estimated by interpolation in income classes for consistency with the breakdown. Levels are higher but the trend is the same.

Source: authors’ calculations from income data of Statistics Netherlands.

Table 2.5 Poverty and tail deciles by household type, age, and ethnicity, 1990–2010

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<thead>
<tr>
<th></th>
<th>Poverty (relative)</th>
<th>Bottom decile</th>
<th>Top decile</th>
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<tbody>
<tr>
<td><strong>COMPOSITION</strong></td>
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<tr>
<td>Aggregate level (x1000; %)</td>
<td>842</td>
<td>818</td>
<td>781</td>
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<tr>
<td>Household type</td>
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</tr>
<tr>
<td>- Single</td>
<td>58</td>
<td>58</td>
<td>55</td>
</tr>
<tr>
<td>- 65 and over</td>
<td>8</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>- More-person households*</td>
<td>41</td>
<td>42</td>
<td>45</td>
</tr>
<tr>
<td>- Couples, no children</td>
<td>14</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>- Couples, children&lt;18</td>
<td>16</td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td>- Single parents, children&lt;18</td>
<td>8</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Poverty (relative)</td>
<td>Bottom decile</td>
<td>Top decile</td>
</tr>
<tr>
<td>-----------</td>
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</tr>
<tr>
<td>Age</td>
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<td></td>
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<tr>
<td>- 15-24</td>
<td>28 23 22 29</td>
<td>36 28 26 34</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>- 25-44</td>
<td>38 41 42 37</td>
<td>40 42 43 37</td>
<td>38 33 33 28</td>
</tr>
<tr>
<td>- 45-64</td>
<td>16 23 23 26</td>
<td>15 21 22 24</td>
<td>44 49 51 55</td>
</tr>
<tr>
<td>- ≥65</td>
<td>18 13 12 8</td>
<td>9 9 9 6</td>
<td>18 17 16 17</td>
</tr>
<tr>
<td>Ethnicity*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Native</td>
<td>71 64</td>
<td>69 64</td>
<td>87 87</td>
</tr>
<tr>
<td>- Non-western</td>
<td>19 23</td>
<td>20 23</td>
<td>2 3</td>
</tr>
<tr>
<td>INCIDENCE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aggregate level (%)</td>
<td>14 13 12 12</td>
<td>10 10 10 10</td>
<td>10 10 10 10</td>
</tr>
<tr>
<td>Household type</td>
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<td></td>
</tr>
<tr>
<td>- Single</td>
<td>25 21 19 21</td>
<td>21 18 17 18</td>
<td>6 6 5 5</td>
</tr>
<tr>
<td>- 65 and over</td>
<td>9 6</td>
<td>6 3</td>
<td>6 5</td>
</tr>
<tr>
<td>- More-person households*</td>
<td>8 8 8 7</td>
<td>5 6 6 5</td>
<td>12 12 12 13</td>
</tr>
<tr>
<td>- Couples, no children</td>
<td>6 5 5 4</td>
<td>3 3 4 3</td>
<td>16 17 16 16</td>
</tr>
<tr>
<td>- Couples, children&lt;18</td>
<td>10 9 10 8</td>
<td>6 7 8 6</td>
<td>6 6 7 10</td>
</tr>
<tr>
<td>- Single parents, children&lt;18</td>
<td>38 37 32 29</td>
<td>28 27 27 22</td>
<td>2 1 1 2</td>
</tr>
<tr>
<td>Age</td>
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<tr>
<td>- 15-24</td>
<td>57 59 54 67</td>
<td>54 56 54 64</td>
<td>0 1 1 0</td>
</tr>
<tr>
<td>- 25-44</td>
<td>12 13 12 13</td>
<td>9 10 11 11</td>
<td>9 8 8 8</td>
</tr>
</tbody>
</table>
As a result the singles’ median fell from 88 per cent of the median of multi-person households to 75 per cent, implying a doubling of the income gap between the two categories. Singles’ median real income grew by 16 per cent while multi-person households witnessed a 37 per cent increase. If in 2010 the shares of singles and other households would have been the same as in 1977, total average net-equivalised income would have been 5 per cent higher. Retirees (65+) make up a significant but declining share of singles and their relative income seems to be improving over the 2000s though they are still slightly more strongly concentrated in the lower half (70%) than the younger singles.

Within the broad category of multi-person households, couples without children are best off. Couples with children though have witnessed secular improvement in both their relative income and their concentration in the lower half since 1990. This is not because of a diminished number of children which might have benefited income equilvalisation but because of increasing income. Over the 1990s this increase occurred primarily because the average number of persons with income in the household grew significantly; over the 2000s it must be genuine income growth, which may partly rest on a better income position at the later age of the parents before they have children but may also include an effect of longer working hours. Single parents’ numerical importance has not
changed and their income continuously lags far behind the rest of the population and the great majority is found in the lower half.

There has been a clear ageing of the population over the period but much of this concerns a shift within the working-age group, from the younger (25–44) to the older (45–64), particularly between 2000 and 2010. There is a very strong age gradient in incomes which has also been strengthened considerably, particularly during the 2000s. Virtually all youth (91%) now have an equivalised income of less than the overall median. Among the three older age groups only retirees have improved their position, recently.

Finally, only recent data are available for the income position of non-western ethnic households. Note that this category is defined along lines of ethnicity and not of nationality as Eurostat commonly does, and therefore includes the ‘second generation’ offspring of original immigrants who often have Dutch nationality. Their population share has significantly increased over the decades (Table 1.1) and consequently also among households. The median-income gap to the native population is substantial (more than 25%) and there is no sign of improvement over the 2000s.

The picture of poverty and the deciles at the two tails of the distribution confirms this (Table 2.5). Not that top incomes differ from those of the previous subsection and are defined here for the 10\textsuperscript{th} decile of net-equivalised household incomes. Singles, single-parent households, youths and non-western minorities are strongly overrepresented at the lower end of the distribution. Because of their sheer numbers singles make up two-thirds while the contributions of the other categories are much smaller though still important for youths and minorities. Obviously, the concentration of singles explains that the poverty rate among persons was found to be lower than among households.

At the upper end, by contrast, couples without children and the older prime-age group (45–64) are overrepresented, and the role of singles, single parents, youths and minorities is next to nil. For both the bottom and the top there is little sign of change over the 20-year period with one exception: the incidence of low incomes among single parents has clearly declined. The bad position of single parents is well known to the public debate, but minorities appear to suffer equally from poverty. As the latter’s importance among the population has grown strongly over the 1990s, presumably it has also among the poor.
2.2 Household inequality and the sources of income

Five main sources of income can be distinguished: paid labour, enterprise, wealth, pension, and social transfers. With a share of over 50 per cent of all households, a main income from paid labour is by far the most frequent source, followed by pension, benefit and, finally, households with income from enterprise (Table 2.6). Households with main income from enterprise have seen their numbers rise rapidly but this seems due to a serious misclassification since 2000. The highest incomes, median and average, are for enterprise households, but these include a significant amount of labour income. However, the presence of this group at the bottom end of the distribution, 16 per cent of them are in poverty, has increased substantially, especially in the 1990s, and it is significantly higher than among labour households (7%). The inequality ratio among this category has grown strongly (+44%). Income inequality among labour households has also increased but much less (+9%).

The share of households that depend primarily on benefits has clearly diminished between 1990 and 2000. The distribution of benefit incomes has become more compressed over the 1990s and less over the 2000s. Households that depend on benefit have a net-equivalised income only half as high as those from labour or enterprise and their poverty rate is very high indeed, close to 50 per cent. By contrast, pensioners seem closer to those with active incomes than households with benefit. They have a relatively low and stable level of inequality, presumably because the public pension (AOW) provides an important bottom to the income distribution. Their poverty rate has declined significantly and is now even below that of labour households.

The table also specifies positions at the top end of the income distribution. Note that this concerns gross incomes before taxes and equivalisation, in contrast with the other variables in the table. An equal share of this decile being 10 per cent, labour households and, particularly, enterprise

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22 Households with any income from wealth are many but those with a main income seem very few and are not specified by Statistics Netherlands. The data over 1990–2000 distinguish a small category of ‘other income’, mainly from non-contractual labour and wealth, which are classified under labour and enterprise respectively in the 2000—2010 statistic. This category is disregarded here. The 2000–2010 statistic has an equally small category of ‘other transfers’, which are mainly from student grants. It is included here with benefits, as it was over 1990–2000.

23 Note that the restriction to main incomes from a source has a considerable effect; e.g., in 2011 the number of households with any labour income exceeds that with a main labour income by 32%; conversely, the mean of household main labour income is 17% above the mean of any labour income.

24 Over 2000-2010, in contrast to the first period, households are classified as an enterprise-income households also when this is not their most important source of income, even if it is negative. This basically characterises as enterprise households all households with any income from enterprise. This has inflated the number significantly and disregards the importance of income from labour: in 2011 69% of enterprise households also have an income from labour; these labour incomes comprise 53% of their total income and their average income from labour far exceeds that from enterprise: 48,000 euro against 28,800.
### Table 2.6 Household’s net-equivalised income position, by main source of income, 1990–2010

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>Labour</strong></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>% of all households</td>
<td>55</td>
<td>58</td>
<td>57</td>
<td>53</td>
<td>5</td>
<td>5</td>
<td>10</td>
<td>12</td>
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<tr>
<td>Median income (k€ 2010)</td>
<td>20.2</td>
<td>21.4</td>
<td>21.0</td>
<td>22.9</td>
<td>25.7</td>
<td>24.8</td>
<td>24.0</td>
<td>24.8</td>
</tr>
<tr>
<td>Average income (k€ 2010)</td>
<td>21.4</td>
<td>22.9</td>
<td>22.5</td>
<td>24.8</td>
<td>28.7</td>
<td>26.0</td>
<td>30.6</td>
<td>30.1</td>
</tr>
<tr>
<td>D9:D1, inequality ratio</td>
<td>2.59</td>
<td>2.72</td>
<td>2.67</td>
<td>2.79</td>
<td>4.46</td>
<td>5.12</td>
<td>5.37</td>
<td>6.75</td>
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<tr>
<td>% of households in poverty</td>
<td>6</td>
<td>8</td>
<td>7</td>
<td>7</td>
<td>9</td>
<td>14</td>
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<td><strong>Gross incomes</strong></td>
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<tr>
<td>% of households in top-10</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>14</td>
<td>32</td>
<td>25</td>
<td>23</td>
<td>20</td>
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<tr>
<td>% of income in top-10%</td>
<td>27</td>
<td>30</td>
<td></td>
<td></td>
<td>55</td>
<td>48</td>
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<td><strong>Benefit</strong></td>
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<tr>
<td>% of all households</td>
<td>15</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>23</td>
<td>24</td>
<td>23</td>
<td>25</td>
</tr>
<tr>
<td>Median income (k€ 2010)</td>
<td>10.9</td>
<td>11.9</td>
<td>12.0</td>
<td>12.5</td>
<td>15.4</td>
<td>17.2</td>
<td>16.6</td>
<td>17.2</td>
</tr>
<tr>
<td>Average income (k€ 2010)</td>
<td>11.5</td>
<td>12.5</td>
<td>12.7</td>
<td>12.7</td>
<td>18.3</td>
<td>20.1</td>
<td>18.9</td>
<td>21.3</td>
</tr>
<tr>
<td>D9:D1, inequality ratio</td>
<td>3.52</td>
<td>3.20</td>
<td>2.83</td>
<td>3.98</td>
<td>2.67</td>
<td>2.61</td>
<td>2.36</td>
<td>2.36</td>
</tr>
<tr>
<td>% of households in poverty</td>
<td>46</td>
<td>48</td>
<td>43</td>
<td>48</td>
<td>11</td>
<td>8</td>
<td>7</td>
<td>5</td>
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<tr>
<td><strong>Pension</strong></td>
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</tr>
<tr>
<td>% of all households</td>
<td>23</td>
<td>24</td>
<td>23</td>
<td>25</td>
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<tr>
<td>Median income (k€ 2010)</td>
<td>15.4</td>
<td>17.2</td>
<td>16.6</td>
<td>17.2</td>
<td></td>
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</tr>
<tr>
<td>Average income (k€ 2010)</td>
<td>18.3</td>
<td>20.1</td>
<td>18.9</td>
<td>21.3</td>
<td></td>
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<td></td>
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<tr>
<td>D9:D1, inequality ratio</td>
<td>2.67</td>
<td>2.61</td>
<td>2.36</td>
<td>2.36</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of households in poverty</td>
<td>11</td>
<td>8</td>
<td>7</td>
<td>5</td>
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</tr>
<tr>
<td><strong>Gross incomes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of households in top-10</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of income in top-10%</td>
<td>6</td>
<td>6</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
Note that with the series break of 2000 households with main income from labour have been classified nevertheless as self-employed if they have any income from that source, even if negative (see footnote 23). Source: Estimated with linear interpolation in income classes from CBS/Statline income data series for 1990–2000 and 2000–2010 respectively.

<table>
<thead>
<tr>
<th>Year</th>
<th>1990</th>
<th>2000</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
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<td></td>
</tr>
<tr>
<td>2000</td>
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<td></td>
<td></td>
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<tr>
<td>2010</td>
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</tr>
</tbody>
</table>

households appear to be overrepresented. However, the latter category’s presence at the top end has substantially diminished, falling from 29 in 1990 (after linear correction) to 20 per cent. Unsurprisingly, virtually no benefit households are found in the top decile. Though underrepresented, pensioners do have a non-trivial presence in the top decile.

Figure 2.8 portrays, in the same vein as Figure 2.4, how the three types of primary income have evolved over the household income deciles between the beginning and the end of the period. Here the ranking by household gross incomes is again the basis, not the net-equivalised distribution as used for Table 2.6. We find a close parallel between wage incomes and total market incomes. Both are flat at the bottom, decline over the next deciles and rise rapidly from the 7th decile onward up to a €34,000 increase for top decile wage incomes and €30,000 for total market incomes. This contrasts strongly with incomes from enterprise and wealth. Apart from the bottom decile, incomes from enterprise actually and surprisingly decline, especially at the top where they fall by €16,000 in prices of 2011. There is no change between 1977 and 2011 in real incomes from wealth over the entire income distribution.

The prime importance of incomes from labour warrants further scrutiny of their contribution to income inequality. For the sake of a consistent comparison with the latter the former shall also be considered on an annual basis. The scrutiny concerns not only the annual earnings obtained but includes also the employment chances of households underlying these earnings and the (hourly) wage level attained on the job. In addition, it is of interest to also see how earnings inequality compares to income inequality as the distribution over households may either enhance or mitigate the effects of earnings inequality. Section 2.2.1 considers this in general, that is without regarding further household characteristics. Those are the focus of Section 2.2.2 which discusses the effects of the equivalisation of household net income as these appear to differ considerably between sources of income mirroring diverging household compositions.
2.2.1 Individual employment, earnings and household income

In 2011 almost 3.9 million households receive their main income from paid labour, and 6.6 million persons collect earnings as an employee.\(^{25}\) Once employment access has been achieved the nature of the job – e.g., hours of work, occupational level – is an important determinant of the level of income that is actually attained. For this reason we distinguish between two types of inequalities concerning the labour market: inequalities of employment and of income respectively. Naturally, they are closely intertwined. We consider employment first and then turn to earnings and income. For the latter it is essential to distinguish between the inequality of earnings of the persons in work on the one hand and that of the incomes that households derive from this on the other.

Employment

Figure 2.9 brings together two indicators of successful access to employment. First, it shows the common person-based employment/population rate (EPOP): individual employees as a percentage of the population of working age (15–64 years). This rate shows a solid upward trend, from 55 to 67 per cent.\(^{26}\) The upward movement shows some hesitation in 1993 and 1994, a temporary decline in 2003–2004, again some increase over 2005–2008 and, finally, a new decline during the current crisis.

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\(^{25}\) According to the same income statistics. The LFS mentions 7.1 million persons in paid employment in 2011.

\(^{26}\) Notably, this includes small jobs of less than 12 hours per week, in contrast with the Dutch national definition of (un)employment which leaves out these small jobs; for their importance see Table 1.1.
in 2009–2011; these movements are related to ups and downs in the national economy. Second, the figure pictures the rate of full-time employees among the working-age population, a subset of the above. It stagnates around 42 per cent of the working-age population, with some cyclical movements, and is trending downward over the 2000s and increasingly diverges from the total EPOP. This implies that most of the employment growth has been in part-time jobs: the part-time employment/population rate doubles from 12 to 25 per cent. This development makes working hours a highly relevant dimension of employment, especially for the Netherlands given its uniquely high rate of part-time jobs and in particular its high share of very small jobs. Part-time earnings are not equally distributed over individuals and they may contribute to inequalities in cross-section (part-time pay penalty) as well as in a dynamic perspective (less career improvement\(^{27}\)). Their distribution over households is an important issue to consider.

Third, the figure adds households receiving their main income from labour\(^{28}\) as a percentage of all households with a head aged below 65 years. We call this the household employment rate (for employees).\(^{29}\) This rate, in contrast with the EPOP, moves up only during the second half of the 1990s, from 68 to 74 per cent. Between 1990 and 1995 and also over the 2000s it stagnates and it declines in the wake of the dotcom crisis and the great recession. These declines, in times of economic downturn signify increasing household joblessness and imply that the household is not a self-evident guarantee of continued labour income, which is understandable as a large share of households concerns single persons.

The difference between the household rate and the personal rate of employment points to the fact that many households are supplying the labour of more than one of its members, and increasingly so. Figure 2.10 indicates the growing importance of second earners among households. The number of those with an income from labour has grown from 850,000 households in 1977 to close to 2.5 million in 2011. This growth largely coincides with the increase in part-time employment; today in 90 per cent of these households at least one of the two partners works part-time. At the same time the number of one-earner households fell from almost 2 million to less than 850,000. So one-earner and two-earner households have traded places among couples.

\(^{27}\) E.g., Salverda (2011).
\(^{28}\) Including the, assumedly tiny, number of households aged 65 and over that receive their main income from labour.
\(^{29}\) Members of other households where labour is not the most important source of income, may also have a job, presumably mostly a small one as another income in those households is apparently more important (but see footnote 24.)
Figure 2.9 Three indicators* of persons and household’s’ access to employment, 1990-2010

*) Persons in dependent employment as a percentage of working-age population; households with labour income a percentage of all households with head aged below 65. Full-time employment defined as 35 hours or more.

Source: Statistics Netherlands, income and labour force statistics.

Earnings and incomes

The Netherlands has a reputation of wage moderation. Especially the Wassenaar Agreement, concluded by the unions, employers and the government in 1982, has affected the development of real wages ever since. Stimulating the growth of part-time employment was one of the Agreement’s elements in addition to a general reduction in full-time working hours. The years 1982–1987 witness a decline in median real annual earnings of full-time full-year workers, followed by a slow increase. It is only in 2001 that the original level was exceeded. On balance, these earnings grow by 12.4 per cent, or 0.4 per cent on average per year. This contrasts with the annual earnings of all workers which have remained flat since 1990. This seems due primarily to a decrease in average working hours as a result of the growth in part-time employment and not to wage developments, as median hourly earnings increase at the same time. The overall growth rate in the median real hourly wage was 23 per cent between 1979 and 2005, amounting to 0.9 per cent on average per year.

30 To cut a long story short, the Agreement and related government policy established that private-sector wages would lag productivity growth aimed at restoring profitability while public-sector wage growth was decoupled from private-sector wage growth (read: lowered and frozen) to enable lower taxation of private-sector wages (more detail in Salverda, 2008a).
Figure 2.11 indicates the evolution of the overall inequality (D9:D1 ratio) among individual employees of their annual earnings on the one hand and hourly earnings on the other hand. There is a sharp increase in the former, basically a doubling\(^{31}\) to a level of about twelve. At the same time hourly-earnings inequality rises by a good one third (2.37 \(\Rightarrow\) 3.22); this is still significant though certainly less than a doubling. A further breakdown (not shown) indicates that it is the relative decline of the lower end that causes the major part of the increase in inequality more so than a particular growth at the top.

By definition, a person’s annual earnings equal hourly earnings times annual hours worked. Annual hours result from weekly working hours and the part of the year for which a person is working. About 1 million out of 8 million persons per annum draw no full-year earnings. The number is cyclically sensitive, as shown by the decline and increase of all annual earnings, and it is also strongly concentrated among youths (½ million, 40% of employed youths). Leaving these part-year workers aside and focusing on full-year annual earnings, the inequality ratio is almost halved to between six and seven instead of twelve. The halving reflects the effect of personal turnover in the labour market during the year (e.g. school-leavers entering, retirees leaving, and short-term contracts). The other gap, between full-year annual earnings and hourly earnings, indicates the spread of weekly working

\[^{31}\text{On the assumption that before 1990 annual-earnings inequality increased at least as much as hourly-earnings inequality.}\]
hours over those who are in work over the year. This gives rise to yet another halving of the inequality ratio, from six to three.

Figure 2.11 Inequality (D9:D1 ratio) of individual annual and hourly earnings, and household annual incomes from labour, 1977-2008

In addition to the three indicators of personal earnings inequality the graph also depicts the inequality of household incomes from labour. Personal earnings combine into household incomes on the basis of the household members’ labour supply. Interestingly, the level of this inequality ratio, about five, is also between the two extremes of annual earnings and hourly earnings. The inequality-reducing effect of combining earnings into incomes in the household is indicated by the large gap between household annual incomes and personal annual earnings. Thus the pattern of household labour supply takes away a large part of the inequality that results from individual labour supply. The

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32 Assuming that entrants and leavers during the year exert little effect on the hourly distribution.
33 Inequality among full-time full-year workers differs very little from hourly-wage inequality, which is understandable as these persons all work about the same number of hours.
much smaller but still non-trivial gap of household incomes to hourly-earnings inequality reflects the between-household dispersion in hours worked by the household as a result of e.g. part-time employment. Thus the differences in the supply of labour across households do contribute to income inequality, but this contribution should be compared to the much larger inequality-decreasing effect of combining labour supply within the household.

Household income inequality shown above concerns primary incomes as earned in the labour market. It is important to consider their significance for the households concerned. Figure 2.12 puts the three subsequent steps from these primary incomes towards net-equivalised incomes.\(^{34}\) Gross and net income inequalities rose considerably more strongly (+40% and 30% respectively) than for the population as a whole (0% and 7%). We know primary inequality for a shorter period only but even then there has been a clear increase in inequality, rising from 4.65 to 5.65 (+22%) within a decade.\(^{35}\)

The step from primary to gross income adds transfers. Unsurprisingly, these reduce the level of inequality, and that lowering effect has increased slightly over the 2000s. The second step, towards net incomes, deducts taxes and social contributions and leads to a further reduction in inequality. Its effect seems rather steady over the 2000s contrary to the 1990s when it widened somewhat. Transfers and taxes taken together reduce primary inequality by a pretty steady percentage of around 25. Apparently, the redistribution of income has retained its effect but has been unable to take away the *growth* in primary-income inequality. Third, the equivalisation of net incomes has a large further lowering effect of more than 30 per cent of net-income inequality. Very strikingly, the effect has increased rapidly over time – up from an 18 per cent lowering in the early 1990s. It has largely kept the net-equivalised income inequality ratio in check as it increases by 8 per cent only over the full two decades. This is an amazing outcome in comparison with both the strong increases for the other three income concepts and the absence of a similar effect for the household population as a whole: equivalised income inequality is equally flat but the growth in net income was less than 10 per cent while for labour income this was around 30 per cent. This points to considerable and differential shifts across income sources in the composition of households and their allocation over the income distribution, which we discuss in Section 2.2.2.

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\(^{34}\) In contrasts with Figure 2.3 it covers primary income and addresses the same selection of (labour) households throughout

\(^{35}\) It seems plausible that primary inequality has also risen over the 1990s.
Figure 2.12 Inequality (D9:D1) of primary, gross, net and net-equivalised labour-household incomes

Source: Netherlands Statistics datasets on incomes 1990-200 and 2000-2010; Authors’ estimation with linear interpolation, but note that during the second half of the 2000s the marginal class (>100,000 euro) comprises more than 10 per cent of households for primary and gross incomes; thus the results become more arbitrary because of the choice of an upper limit (150,000) for the interpolation.

Figure 2.13 Share of labour households among poverty and top incomes, 1990–2010

Source: Authors’ estimation from income statistics Statistics Netherlands.

We have already discussed the important role of labour incomes among top incomes, where it concerned fiscal units (Figure 2.7). For labour households the numerical role is equally important albeit that the evolution is somewhat flatter. We conclude with a consideration of how labour households relate to poverty. Being poor in spite of a labour income is a much debated issue as it identifies a major shortcoming of the labour market, that people can be/remain in poverty in spite of
being employed. Table 2.6 has shown a stable overlap of around 7 per cent on balance. However, further detail indicates a clear rise during the second half of the 1990s, and then again in 2008 (Figure 2.13. Note that this concerns households and not individuals, who are often the unit of measurement for in-work poverty. That may explain the somewhat higher level compared to levels of person-based in-work poverty (Eurostat). Plausibly, poor households have fewer workers as more would tend to bring them higher up the income distribution. In the figure, the incidence of poverty among employees relates to their importance among all poor households, their share in poverty. This has grown in parallel; it remains a minority though of less than 40 per cent of all poor households though.

2.2.2 The effects of income equivalisation

We have found a strong effect of equivalisation on net incomes for labour households but not for all households – indeed, households with income from other sources than labour do not show this trend (not shown). This throws up the question how the effect may be explained.

Equivalisation aims to account for possible economies of scale in the household, which depend on the composition of the household: the number of adults and children – basically, the household type. Equivalisation indicates the (equivalent) use of a given level of net income depending on said composition relative to the household of a single, whose net-equivalised income is defined to equal the net income while for all other types of households it will be less. There is an increasing divergence in household composition for labour households. At the bottom of the distribution (D1) the equivalisation effect has declined strongly (-11 %-pt), meaning that households became ‘lighter’. The opposite has occurred on at the top (D9) where household have become ‘heavier’ in terms of equivalisation, increasing the equivalisation effect (+4 %-pt). Thus the difference between bottom and top equivalisation has doubled over the period and the inequality ratio between the two net-equivalised deciles has narrowed and moved further below the corresponding ratio for net incomes. The effect at the bottom may be understood as the result of a growing general share of single households in combination with an increased concentration of those at lower levels of income. About the ‘heavier’ outcome at the top of labour households one can speculate whether this relates

36 Various approaches to equiavalisation differ in the way they account for adults and children. For consistency with the income statistics we have to use the method of Dutch Statistics (square root of number of adults and 0.8 x children). This is somewhat below the OECD’s approach that takes the square root over all members of the household.
to the growth of two-earner households, which may be shifting larger households – with children – up the income distribution and at the same time push single earners, who increasingly are single households, downward.

### 2.3 Household inequality and educational attainment

The educational attainment of the population has increased rapidly over recent decades. We focus here on cross-section to enable correspondence with the other data. For a cohort approach based on years of education see Meschi and Scervini (2010). From their data we infer that over the range of birth cohorts of the period 1920-84 (covering all post-school cohorts relevant to the 2000s) a 55% increase in mean educational attainment and a 26% decline in the corresponding Gini coefficient.

In cross-section, the share of the tertiary educated in the working-age population (15–64) rose from less than 6 per cent in 1971 to 28 per cent in 2011. A lack of microdata in combination with the limited number of educational levels available prevents using a formal measure of educational inequality. Instead we utilise the ranking by educational levels from 1 ((pre-)primary (education) to 4 (tertiary education)) (Figure 2.14). There has been a very strong upward shift leading to a reduction by almost two-thirds of the first level and by more than one-third of the junior secondary level. The other two levels have grown, especially the tertiary level. Behind this picture are important gender differences. Currently, the distribution over educational levels is almost identical for men and women while initially female attainment lagged significantly behind.

The figure also indicates the mean educational level. It shows a steady increase up from 2.32 to more than 2.95, totalling a 27 per cent increase over 32 years. The increase has been continuous (excluding the series break of 2001). Note that many young people are still in education and thus the population in cross-section has not reached its full educational potential yet – an effect that is increasing over time with the prolonged educational participation of the population.

The yellow slices in the figure picture the role of the growing population of non-western ethnicities at the different levels of education. These were virtually absent at the start of the period. Their two percentage-points share at the lowest educational level and three points at the junior-secondary

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37 The focus is working age because more detail is available, e.g. on employment, and no data exist on attainment for those aged over 64 before the year 2000.
38 The educational levels correspond to ISCED 0-1, 2, 3-4, and 5-7 respectively.
39 Scoring on a numerical scale 1–5 for five levels, the tertiary level now split between polytechnics and universities.
level imply that the non-minority population has witnessed larger declines and therewith a larger shift towards higher levels of education and a faster increase in its mean attainment.

Figure 2.14 Educational levels of the working-age population 15–64 years, with mean level, 1981–2011

Note: The two yellow bits concern non-western minorities at (pre-)primary (2 %-pt) and junior secondary (3 %-pt) level respectively.

Before turning to employment and earnings in relation to educational attainment we consider an important implication of the increased attainment, which is that to reach that attainment level people have to stay much longer in education and enter the labour market at a later age. Among the youth population (ages 15–24) participation in full-time education has tripled from 27 per cent in 1970 to 75 per cent in 2010.\footnote{Above the age of 24 participation in education has remained a tiny and very steady 1% of the population.} The development is similar to other countries. However, in some countries including particularly the Netherlands, a large overlap has grown with labour-market participation: some two-thirds of youth in education (more than 40 per cent of the entire young population) also have a job. Though mostly a small job, it is fully counted as employment according to international definitions. This implies an inflation of employment performance and a corresponding underestimation of (youth) unemployment problems. As we will see it also affects the functioning of the less-skilled job segment of the labour market.
2.3.1  Access to employment and job level

The evolution of the educational means of on the one hand the population and on the other hand those in employment provide an important background (Figure 2.15). It confirms that the female population at large has almost bridged the educational gap to men. Interestingly, it also shows that the attainment of those in employment exceeds that of the population at large. That difference is particularly large for women, whose average attainment in employment invariably exceeds even that of employed men. The employment rate is higher the higher the level of education but this rate gradient is extremely steep for women (Figure 2.16). Though over the decades the employment rate of the least-educated women has increased, the rate gap has even somewhat increased to around 55 percentage points. There was no such gradient for men initially but it has arisen since, as the least educated men’s employment rate underwent a strong fall over the 1980s and the gap grew from 3 to 38 per cent. Thus men and women with only primary education have increasingly fallen behind, creating a very important and enduring new (employment) inequality for men and consolidating the existing one for women.

Figure 2.15 Mean educational attainment, working-age population and employed, by gender, 1981–2010

![Graph showing educational attainment over time](chart.png)

Note: Employment is for 12 hours per week or more, and for 15-64 only.

The common view is that the low-educated population has adapted its skills insufficiently to the upgrading of employment due to technological change which has led to a loss of low-skill jobs.

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41 Note that in 1960 adult men had an employment rate close to 100%, including the least educated who were actually had the highest rate (Salverda, forthcoming).
However, it seems plausible that they have also lost out significantly in a competition with better-educated labour supply for the type of jobs which would still be suitable for them. The least-skilled occupations have surprisingly retained their quantitative importance in employment with a share of around 7 per cent (Figure 2.17). The next-higher job level has indeed suffered a blow (-9%-pt), while the gap was filled by the growth at the highest two job levels. However, the latter growth has lagged the sharp increase in labour supply at the corresponding educational levels.\footnote{Dutch Statistics operates a job-level classification based on expert linking to levels of education.} As a result increasing numbers of the better educated are found in jobs at lower levels of occupational skills, originating a process of bumping down along the educational dimension. There are two sides to this coin. Better-educated individuals have higher average rates of underutilisation in their jobs, and less-skilled jobs witness higher average rates of overskilling among their occupants. Though the average skill level of jobs has increased for all employed it has declined at each of the four levels of education. The overall average grew as a result of a composition shift towards the better educated, who have above-average job levels. The average rate of underutilisation is now 28 per cent, only slightly up (+1%-pt) for women compared to 1990 but strongly up (+8%-pt) for men who have thus bridged the gap to women.\footnote{Measured from the direct comparison of jobs’ educational requirements and occupants’ attainment.}
So far, in this section, we have followed the definition of employment of Statistics Netherlands, which starts at 12 hours per week. However, a large (10%) share of employment in the Netherlands is in small jobs of fewer hours. These are concentrated strongly in low-wage low-skill jobs. Working hours add an important dimension to the educational inequality in access to jobs. The lower the educational level of the employed person the higher the incidence of short working hours, and the same holds for the level of the job. The inclusion of small jobs dampens the employment gap of the low-skilled somewhat but also adds an educational gradient of working hours to that of employment. The paradoxical conclusion must be that the more equal and much increased educational attainment has gone hand in hand with major growth in the inequality of access to jobs.

Figure 2.17 Employment by skill level of the job, 1987–2011

2.3.2 Earnings and incomes

We have seen that earnings from labour are the major source of income for households. Figure 2.18 depicts educational differentials in individual wage earnings relative to the lowest level of primary education for three different educational levels, each time split by general and vocational

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44 Systematic data on the distribution of income by level of education are almost entirely missing at Statistics Netherlands, not only in general but also with a focus on poverty or on earnings in the labour market. This can be explained by the fact the earnings and income data derive from administrative sources (tax authorities or enterprise), while the Dutch Labour force survey that samples individuals is only just beginning to ask earnings questions.
education. There is rough stability over time; the main change seems to be a decline in the university differential in the earlier years. For the rest there is some volatility but little structural change in spite of the fact that the size distribution of employees over educational levels has changed so considerably (Figure 2.14). Clearly, these differentials reinforce the effects of the educational stratification of job access on household income inequality. In other words, even if we accept as a stylised fact that educational differentials have been largely stable since the 1990s the growing share of high-educated employed has given them a much larger share in earnings. A rough

Figure 2.18 Individual hourly pay differentials by educational level, 1987–2010

Notes: Years with an asterisk were calculated from LSO wage earnings survey data, other years from AVO data. Primary education is the reference.
Source: Results underlying kindly provided by CPB.

estimation indicates that the share of the high educated (Isced 5/7) in the national wage bill has grown from less than a quarter in 1970 to 30 per cent in the early 1990s and almost half currently.

45 The differentials were estimated by the CPB using Mincerian equations that control for various characteristics. Two different data sources were used that covered 1979–2002 and 1992–2006 respectively. The overlapping years show rather similar outcomes, only the university differential seems larger for the older data.
46 Relative uncorrected average earnings show the same rapid decline in the 1980s (EU-KLEMS; CBS, 1996).
This regards primary income and, naturally, the share will be smaller for gross and net income precisely because benefits add to lower incomes and taxes reduce higher incomes.  

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*) Calculated from ECHP and EU-SILC data. Concerns households with an income from labour only.
Source: Brals and Salverda, forthcoming

Naturally, it is of importance how better-educated labour supply is combined in households. This points to educational homogamy of couples as a potential driver of increased inequality as it implies that better educated persons, who tend to have better chances of employment and higher earnings, combine forces in households. No systematic information is available for the longer period. A special study using ECHP and SILC data (Brals and Salverda, forthcoming; provisional results) reveals that, though the role of aggregate homogamy has changed little over the 1990s, it has clearly shifted towards higher levels of education (Table 2.7). The actual contribution to household inequality depends on the nature of employment participation of these households – the second earner often works part-time. Evidently, the effect on aggregate inequality also depends on the share of couples in the total population of households – this has been secularly declining, from 72 per cent in 1979 to 57 per cent currently.

Finally, SCP has analysed on the basis of its own AVO survey the role of education in the evolution of household income inequality over the period 1977-1999 with the help of a univariate Theil decomposition (Table 2.8). Total inequality has gone up significantly, especially between the mid-1980s and mid-1990s. Virtually all of the increase is concentrated within educational groups, where the level has roughly doubled, while between-inequality has hardly changed. The greater within-inequality seems consistent with the overskilling thesis: persons with higher qualifications many increasingly occupy lower-level, less–paid jobs, leading to greater pay variation within the same

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47 The three steps cannot be made separately. The 2010 primary share of 48% declines very little because of transfers (47%) and considerably more because of the combined effect of taxation and equivalisation (41%). (CBS/Statline, Werkzame beroepsbevolking; gemiddeld inkomen 2005-2010).
educational category (Salverda, forthcoming). For both net and net-equivalised household income inequality has risen and the rise is limited to within-inequality. It has increased faster for net income than for net equivalised income and, thus, household composition may have slightly neutralised that increase.

### Table 2.8 Household-income inequality, within / between education of head, 1977-1999

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Note: Theil index with decomposition over seven levels of education.

### 2.4 Household wealth and debt, and income

Wealth inequality is incomparably higher than income inequality. Unfortunately, wealth is often left out in inequality discussions, which commonly concentrate on incomes and/or earnings as illustrated by, e.g., the OECD’s *Divided We Stand*. One important reason for this is the lack of reliable data. Fortunately, rather comprehensive and detailed wealth distribution data are available for the Netherlands for a good part of the recent period: 1993–2000 and 2006–2011.48 Those are all based on the household, while data before 1993 were on a different (personal or tax unit) basis and much less detailed. Note that the Netherlands holds very substantial capital-funded occupational pension savings, equivalent to about €1,000 million, which are not captured by any of the wealth data discussed here. No generalised measures of wealth inequality are made available by Statistics Netherlands49 and we have to make do with decile-based tabulations.

Before turning to these, we set them against the background of aggregate developments of net and gross wealth since 1980 (Figure 2.19). As a percentage of GDP both have declined briefly during the

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48 Data for the two sub-periods are reasonably comparable though not entirely according to Statistics Netherlands. Particularly, the incidence among households of negative wealth seems twice as high in the 1990s while at the same time their incomes are significantly more negative in the 2000s.

49 The only observation is a relatively high Gini coefficient of 0.82 (including negative value in the calculation) for wealth inequality on 1 January 2009 (Claessen, 2010).
recession of the early 1980s. Since 1985 net wealth has grown rapidly from 150 per cent of GDP in 1983 to more than 250 per cent in 2000, with a short interruption in 1990-1991 and strong growth in the second half of the 1990s. However, during the 2000s as a whole, notably including the years preceding the financial crisis, net wealth has tended to decline. It fell during the dotcom crisis, stagnated up to 2007 and then fell further. Debt, the difference between gross and net wealth, has grown even more relentlessly. It expanded from 38 per cent of GDP in 1983 to 87 per cent in 2000, again particularly during the second half of the 1990s. During the 2000s its development contrasts with that of net wealth. Though it first fell in tandem with net wealth during the dotcom crisis it grew again significantly after that and on balance increased to 125 per cent of GDP in 2011.

Figure 2.19 Wealth and debt, % of GDP, 1980–2011

Source: Tabel Vermogens gezinnen kindly provided by CPB, and CBS wealth statistics special tables.

The levels found by Statistics Netherlands compared to CPB are somewhat lower for net wealth – more so during the 1990s than the 2000s – but they are identical for debt. The long series of CPB also give an idea about the evolution during the five-year gap between the two series of CBS. At least debt seems consistent between the two periods at both sides of the gap, while one may be less sure for net wealth.
Nominal wealth has grown significantly in recent decades and it is a source of very strong inequality even though it is not obvious how to compare wealth inequality over time. The own house and financial assets are the main components of wealth and both are not covered by the usual index of consumer prices. At the same time it is well known that the prices of these categories have been diverging strongly from consumer-price developments, undergoing explosive volatility as a result of bubbles, including a significant decline during the most recent years. Deflating by consumer prices can indicate how people may have experienced their wealth.\(^{50}\) On that basis, real wealth has grown by 129 per cent in the aggregate between 1993 and 2011, by 109 per cent per capita of the population, and by 96 per cent per household. On the basis of this we compare to real household income (Figure 2.20)\(^ {51}\). The ratio of net wealth to net income (light bar) almost doubled first, from 2.9 in 1993 to 5.6 in 2007–2008, and subsequently declined to 4.9. It grew particularly during the

\(^{50}\) Though the value of houses may be deflated, there is no obvious way to deflate financial wealth. A separate price index of (existing) houses sold covers the years since 1995 and is standardised on the total stock of self-owned houses (Van der Wal and Tamminga, 2008). It rose by 124% between January 1995 and January 2002 and continued to increase at a slower pace until a maximum was reached in August 2008 (+31%). Since then it has decreased (-20%) until April 2013, while over the three same periods consumer prices grew by 19, 13, and 7% respectively. However, the index does not account for the possible market failure that may shine through the slow growth or rapid decline in the number of houses annually sold (+8% between 1st and 2nd period, -37% between 2nd and 3rd period).

\(^{51}\) Given tax-deductibility of mortgage interest the preferable ratio would be to gross incomes, but figures on wealth and the income distribution shown below are available for net incomes only. However, though as a result the ratios in the figure are higher the evolution is virtually identical for gross incomes.
second half of the 1990s. The debt/income ratio (dark bar) almost trebled from 1.1 to 3.1 in 2011. Most of its growth also concentrates in the late 1990s, and contrary to net wealth the ratio did not decline in recent years but slightly increased. Net wealth and debt add up to gross wealth, which is defined as the legal property and disregards its economics, i.e. the corresponding debt. Thus the light and dark bars taken together show the ratio of gross wealth to income. This doubled to more than 8 in 2007–2008. The share of housing net of debt in total net wealth is indicated by the round markers; virtually all of the rest of the light bars above these markers is net financial wealth. Its share rose from 42 to 49 per cent over the 1990s, hovered there until 2009, and then declined quickly to 42 per cent in 2011. To provide a reference the line in the chart pictures the evolution of real net income (right axis). It has increased by 18 per cent – from € 28,400 to 33,400.

Taken as a percentage of gross wealth, debt has expanded from a substantial 28 per cent to an even higher 39 per cent (€ 750bn out of almost € 2000bn) in 2011. Most of this consists of mortgage debt for the own house (€ 650bn) and virtually all of the growth in the debt share is due to mortgage debt, which increased from 22 per cent of gross wealth in 1993 to 33 per cent in 2011. Current mortgage debt roughly equals Dutch GDP.

2.4.1 Wealth and debt and income inequalities

Wealth is much more unequally distributed than income. Taken over all households much of the lower half of the wealth distribution has hardly any net wealth while the top decile alone owns 60 per cent of all wealth. The ninth decile owns 20 per cent and the eighth decile 10 per cent, while the bottom decile has a net debt to the equivalent of 3 per cent of total wealth (Figure 2.21). This profile contrasts strongly with the income distribution. The top income decile receives 25 per cent and also the ninth decile’s share is below that of the wealth distribution. The first seven income deciles are doing better for income than the wealth deciles for wealth. The bottom income decile receives two per cent of total income. Interestingly, based on special data, the figure also shows how wealth is owned across the income distribution: wealth shares of the income deciles are always (slightly) below income shares with the exception of the top income decile: it receives 25 per cent of income but owns 34 per cent of total wealth, which, however, still is only half of what the top wealth decile owns. Notably, the bottom income decile owns four per cent of total wealth, twice its share of incomes. The significant difference between the two wealth distributions may serve as an important caveat concerning the contribution of wealth inequality towards social and political impacts when analysed from the perspective of income inequality. A further analysis is warranted.
Over the period since 1993 the wealth over wealth distribution has hardly changed. As far as differences can be observed they regard the top wealth decile. This started in 1993 with a share of 61 per cent which fluctuated and reached a minimum of 56 per cent in 2009, the deepest year of the financial crisis so far, but returned quickly to 60 per cent in 2011. In other deciles there is no difference or a 1%-pt variation at the maximum, including in the bottom decile if we consider the two periods separately. The variation in the wealth over income distribution is larger at the top (28 to 36%) but hardly more in the other deciles.

Net wealth results from property after debt is deducted. The debt distribution over wealth is rather different from the wealth distribution being much less skewed (Figure 2.22). Debt is relatively low for the top wealth decile: it holds only 18% of all debt compared to 60 per cent of all wealth. Conversely, for the bottom decile the debt share is particularly large (27%). It implies that the distribution of gross wealth is more even than the net distribution: the top-decile share hovers between 44 and 50 per cent of total gross wealth. By contrast, both debt and wealth are very similarly distributed over the income deciles. The bottom income decile has 4 per cent of both, the top decile 28 per cent of debt as against 34 per cent of net wealth. Indeed, the top-decile share in gross wealth is in the same range (27 to 33%).

*Figure 2.21 Distribution of net wealth distribution over wealth and income* deciles, and distribution of income, % of total wealth or income, 2011

*) Disposable income.

Figure 2.22 Distribution of net wealth and debt over wealth and income* deciles, % of total wealth or income, 2011

*) Disposable income.

However, as the flat profile concerns shares in the total it may actually imply rather different wealth and debt levels in comparison to the level of income in the deciles. This is pictured in Figure 2.23. The bottom income decile has a clearly above-average ratio of wealth to income (9). Its debt-to-income ratio (5.4) is also above average. Over the rest of the distribution this ratio is much lower though somewhat increasing to a level of around 3.2 in the top half of the distribution. Generally, people’s wealth holdings seem to correspond with four times their income levels, and only in the top decile is the ratio slightly higher (6). It seems to suggest that wealth inequality effects may be largely captured through income inequality. The debt/income ratio tends to decline over the remaining deciles, from eight in the second decile to four in the tenth. Over time, the role of debt vis-à-vis wealth has shifted considerably. Assuming consistency in debt observations between the two periods debt-to-income levels have soared, increasing first between 1993 and 2000 and then particularly between 2000 and 2006. Between 2006 and 2011 the profile has remained virtually unchanged. The average debt/income ratio doubled between 1993 and 2000 (1.1 to 2.0) and further increased (3.0 in 2011). The increase is spread over the entire income distribution but the level has been higher in the bottom decile from the start. As result the population has become significantly more indebted up to the mid-2000s.
2.4.2 Wealth and debt and assets

Compared to income the concept of wealth is more complex not only because of the role of debt, but also because of its composition. Two main elements can be distinguished: housing and financial wealth. The former is important and of a special nature, the second comprises a variety of ingredients, ranging from purely financial values – savings and equity – to business ownership and some real estate. Figure 2.24 shows the role of both, defining financial wealth here as anything but own housing. Financial wealth is clearly more unequally distributed as the top wealth decile holds 70 per cent of the total. Not only does the lower half not have any financial wealth, also deciles 7 to 9 have rather little.

Housing wealth is more equally distributed to the extent that deciles 7 to 9 have relatively more and the top decile holds 48 per cent. Housing wealth is also responsible for net debt at the bottom. Between 1993 and 2011 the share of the top in financial wealth has fallen somewhat (74 to 70%) while its share in housing wealth has increased (41 to 48%). Gross housing value is substantially higher as the large majority of debt (85%) concerns housing. Here the top decile owns only 27 per cent while the bottom decile owns 13 per cent. The latter percentage has shot up under the influence of the financial crisis, doubling from 6 per cent in 2008.
Figure 2.24 Distributions of total, financial and housing net wealth over wealth deciles, % of total wealth, 2011

Source: CBS, special tables crossing income and wealth deciles.

Figure 2.25 Household types across wealth deciles, with median/average wealth (k€), 2011


We conclude with a look at social differences in wealth. Figure 2.25 pictures the composition of wealth deciles by types of households for the latest available year. The role of singles and single parents declines strongly with increasing wealth while that of couples grows. Couples without children or with at least one child aged above 17 years play an important role at the higher end of the wealth distribution. The lowest decile deviates surprisingly from this general pattern. Singles
have only a modest role while particularly couples with young children but also those with no children are frequently found here. This seems consistent with the problem of mortgage debt that characterises the bottom decile. Unsurprisingly, a similar exercise (not shown) for households by the age of the main earner finds the younger groups in the lower deciles and the older groups in the higher deciles. However, the prime-age group (25-54) seems more unevenly distributed and has a striking role in the lowest decile, again consistent with high mortgage debt incurred when starting home-ownership. Indeed virtually all home-owning couples with children have mortgage debt. In a lifetime perspective this supposedly goes together with a decline in debt for the households involved. If so, the high debt at the bottom of the distribution may be less of a problem than the cross-section wealth inequality seems to suggest. Naturally, this optimistic note rests on an unchanging economic situation. It is here that we may be seeing considerable consequences of the current crisis because of its effects on housing, which is the main type of wealth for most households. In particular, the striking position of households with under-age children in the bottom decile is the outcome of a rapid change between 2008 and 2010, hard pressed between declining gross housing wealth (€340 ⇒ 315 billion) and increasing housing debt (€237 ⇒ €255 billion). The total number of those households was unchanged (1.35 million) but the share found in the first wealth decile doubled, increasing from about average (10-11%) to twice average (21%). This change is virtually identical to the development of negative wealth for this category of households. Other types of households registered a much more modest increase (e.g., +20% for couples without children) or a significant decline (e.g., halved for singles).

We conclude that there has been at best a limited increase in net wealth inequality and a general problem of growing debt. In addition, much of wealth inequality seems reflected in the income inequality with the exception of the wealth top decile.

2.5 Conclusion

Income inequality in the Netherlands is now significantly higher than it was 35 years ago, in 1977. The Gini coefficient of household incomes, after benefits and tax and equivalised for household composition, has risen by 14 per cent, the P90:P10 ratio by 23 per cent and the S10:S1 decile-means ratio by no less than 78 per cent (Figure 2.1, Table 2.1). Virtually all of these increases are concentrated among lower incomes, between the 5th and 1st decile. Median income grew by 19 per cent.

\[\text{\footnotesize \textsuperscript{52} For 1993–2000 we find a similar total number and percentage in the first decile.}\]

57
cent, less than GDP per household (+29%), and growth even at the highest deciles was not much higher (+23%). This contrasts with the first decile where real average income is still more than 30 per cent below the level of 1977. The change was much more rapid during five years 1985–1990: the Gini coefficient increased by 7% and the S10:S1 ratio by 42%. Over the preceding years (1977–1985) all deciles had registered an 8–9 per cent decline in real terms as a consequence of the severe recession of the early 1980s, and thus inequality remained unchanged. However, after 1985 the first decile remained stuck at that lower level until the mid-1990s while the other deciles took off and had recouped their preceding losses already before 1990. After 1990 there was first a modest decrease in inequality over the 1990s and then a renewed increase over the 2000s: on balance, the Gini coefficient crept up a few per cent but the S10:S1 ratio increased by another 25 per cent. The Dutch Gini coefficient’s level and evolution are also almost identical to the (unweighted) average of EU15, with a short stay above that average in the mid-1990s.

A similar evolution is found for household poverty. The OECD poverty rate incidence moved up drastically between 1985 and 1995, from 8 per cent to 13.5 per cent, but has remained roughly stable since (Figure 2.6). The rise in the poverty rate bridged the gap to the rather stable EU15 average, moving up from 55 per cent to 95 per cent of that average between 1985 and 1995 and then gradually diminishing again to 80 per cent.

The rapid rise of the 1980s is clear but there are two reasons to be cautious about the stylised fact of twenty years of relative stability since that rapid increase, apart from the fact that the S10:S1 ratio shows a non-trivial increase which signals larger problems at the tails of the distribution, particularly the lower end. First, this picture regards net equivalised income but differs for primary, gross and net incomes, and, second, the picture is different at the disaggregate level. The former points to the possible role of a shifting household composition and a concomitant equivalisation effect that may help explain the stability. The latter draws attention to diverging trends for social groups which may be hidden underneath the stable surface.

**Market income and household equivalisation**

Net-equivalised income is only the final outcome of three stages of income treatment starting from primary income received in the market and running via transfers (gross income) and taxation (net income) to net income and finally equivalised as a correction for the needs of the income-receiving
household. During the crucial 1985–1990 period\textsuperscript{53}, though primary incomes slightly increased in the first decile, gross, net and net equivalised incomes actually fell. After 1990 they all clearly rose for the top deciles but clearly more for primary income that the other three types of income (Figures 2.3, 2.4). These diverging outcomes point to policy effects on benefits and taxation. It also shows that after 1990 the inequalities of primary, gross and disposable income do not share the stability of net-equivalised incomes. Particularly in the upper half of the income distribution during the 2000s the inequalities of primary, gross and net (+6\%) income tend to grow away from net-equivalised (+3\%) income inequality.

Behind primary incomes lies a sharp rise in individual labour-earnings inequality among the working-age population (Figures 2.8, 2.11). The D9:D1-ratio grew by 40 per cent for hourly earnings while it doubled for individual annual earnings. The latter are conceptually consistent with household income and incorporate part-year work (starting or ending a job, temporary or not) as well as the rapid growth of part-time work. This annual rise is much less concentrated in the 1985-1990 period but for a large part found in the mid-1990s, followed by a renewed but smaller increase in the first half of the 2000s (unfortunately, data stop in 2005). The individual rise contrasts very strongly with the evolution of household income inequality from labour earnings. Their primary-income inequality did increase significantly but much less than for individual annual earnings, pointing to the rapid rise to a majority position of two-earner households, which leads away from the simpler correspondence between earnings and incomes of the era of the single-earner household. The household employment rate increased much less than the individual employment rate. In addition, gross-income and net-income inequalities of households grew less than primary-income inequality, pointing to the role of taxes and transfers. Third, and most striking, net-equivalised income inequality among those labour households has remained virtually unchanged over the two decades including the 2000s, pointing to a significant shift in the composition of working-age households. Lower earnings concentrate increasingly on singles, implying a smaller effect of equivalisation, while at higher earnings the effect of equivalisation grow – both working to reduce equivalised-income inequality. One can only speculate about the explanation of that effect. The numerical growth of singles together with their increased concentration at the bottom pushes other larger households up the distribution by definition. In addition, the rapid growth of two-earner households may have shifted relatively larger households higher up the labour-income distribution.

The incidence of poverty among households with a labour income (6–8%) is well below that of the total population but follows a different path, clearly increasing instead of decreasing during the second half of the 1990s and with a somewhat stronger tendency to grow over the 2000s. The work-work-work focus of redistributive policy may have led to this divergence between the working-age population and the rest.

Government policy making of the 1980s concerning benefits and the minimum wage seem to bear responsibility for the sharpest divergences. At the same time the combination of internationally average income inequality with below-average poverty seems to point to a still more effective redistribution of income in the Netherlands. We come back to this in Chapter 5.

Social differences – educational equality and income inequality

Looking behind the aggregate, the evolution of inequality has differed as the observations on benefits and labour income already illustrated. Socio-demographic categories of educational attainment, age, household type, or number of earners in the household, show considerable divergence. Educational attainment has become significantly less unequal over subsequent birth cohorts. Mean educational attainment, measured across five levels with simple weights, has grown strongly, a more for women (+31%) than for men (+24%). However, at the same time employment chances have become drastically more unequal by level of education, opening up a significant employment gap between least-educated and best-educated men. Though it has lifted the job chances for women at all levels of education, it actually left the existing 50 %-pt employment gap between the least and best educated women unchanged. It is also clear that education-related earnings differences have grown, reinforced by a working-hours gradient that goes up steeply with job level and educational attainment. Educational earnings differentials seem largely stable but they still bend the income distribution towards the best educated given the growing quantitative importance of that category. Though, unfortunately, no statistical information is available on incomes by level of education, a Theil coefficient decomposition over 1977–1999 by SCP (2003) shows a substantial growth of within-group inequality while between-group inequality remained unchanged. The growth is secular and not particularly concentrated between 1985 and 1990.

While poverty is defined for net-equivalised household incomes, top-income shares are commonly defined for gross incomes. The Top-10% income share has changed modestly over the period climbing a bit especially over the 2000s, after having moved up and down first by 1.3 %-pt (1977/1985/1993). This rise was not fully shared by the very top, the Top-1% share, which witnessed a declining share since the onset of the Financial crisis which harked to the development of financial
wealth. At the same time, within the largely stable Top-10% outcome there have been strong divergences. The labour share grew strongly (20 \rightarrow 27\%) while the shares of income from enterprise or wealth declined correspondingly.

**Wealth inequality**

Unsurprisingly, the wealth distribution is much more skewed than the income distribution. However, when relating wealth to the income distribution the ratio of wealth to income is surprisingly similar across the income deciles with the exception of the bottom and top deciles. Debt is a major aspect of the wealth distribution. It is almost entirely related to the massive Dutch mortgage debt and has increased significantly over the 1990s and 2000s, growing from 28 to 39 per cent of total gross wealth.

The wealthiest top-10% owns considerably more than half of all net wealth though their share in gross wealth declined to less than half (44%). The corollary is that they own consistently less of the debt that comes with the property – mainly the self-owned house – and their share in total debt has actually decreased (24 to 18\%). When focusing on financial wealth only the top-10% have consistently held two-thirds. The singular category of households who own more than €1 million in net wealth has grown from 25,000 or 0.4 per cent of all households in 1993 to 150,000 or 2 per cent in 2011. Debt and home-ownership play a smaller role also in this top section. Their share in total financial wealth has increased from 22 per cent to 46 per cent. Comparing to the shares of the top-10% is evident that the top-10% is also skewed within itself and that very top stands out against the rest.
3. **The social impacts of inequality**

**Patterns and trends**

This chapter discusses the potential social impacts of inequalities in the Netherlands for the past decades. The focus is on patterns and trends in different aspects of material deprivation, poverty risk and vulnerability, social exclusion, family formation, health, housing, social cohesion, crime and happiness, in relation to trends in income, economic and/or educational inequality. Hence, this part links to chapter 2 by relating trends in inequality to their potential social impacts. The aim of this chapter is to discuss whether increasing inequality may have led to changes in all kinds of social impacts, as suggested by Wilkinson and Pickett (2009). Chapter 2 already shows that in the Netherlands income and/or economic inequality has increased since the 1970s, but not as steep as expected by some scholars and not for everyone. Especially in the period 1985-1990 inequality has grown, also the years 2000 show an increasing level of income inequality. But also beyond the general picture of relative stability in income inequality during the 1990s, and the slight increase during the 2000s, there are differences between social groups in inequality, and, as we will explore here, most likely also in its social impacts.

In this chapter we elaborate on the findings in chapter 2 and will focus on several social gradients (e.g., educational level, income) in relation to a range of potential social impacts of inequality. We describe long-term trends and, where possible, we show results of bivariate analyses to gain more insight into whether different social groups are diverging or rather converging over time. The databases used are both national (Statistics Netherlands) and international (Eurostat). Descriptive statistics are shown, for different outcomes and social gradients. We are aware that the composition of different income, educational groups and household types has changed over the past decades. Hence, in interpreting the figures we have to remain cautious. Since the descriptive statistics and data that are used in this chapter do not enable causal claims, we make use of relevant literature and related empirical studies to come closer to an understanding of the potential social impacts of inequality.

### 3.1 Material deprivation

We start this chapter with three closely related sections regarding the relation between inequality, material deprivation and poverty. This is followed by a description of the potential relation between
inequality and social exclusion. In analysing the relation between inequality and these issues, we make use of several distinct and multidimensional measures of material deprivation and poverty. In this first paragraph the focus is on material deprivation, which refers to the inability for individuals or households to afford those consumption goods and activities that are typical in a society at a given point in time, irrespective of people’s preferences with respect to these items (OECD, 2007; see also Whelan and Maitre, 2012). In line with this definition, indicators of material deprivation focus on financial affordability (i.e., financial difficulties), in particular with regard to the availability or lack of some standard material living conditions because of financial pressure. The Eurostat material deprivation indicator, measured by the EU-SILC material deprivation rate, expresses the inability to afford a number of items considered by most people to be desirable or even necessary to lead an adequate life. Materially deprived persons have living conditions constrained by a lack of resources, as they experience at least three out of the following nine deprivations items: cannot afford i) to pay rent or utility bills, ii) keep home adequately warm, iii) face unexpected expenses, iv) eat meat, fish or a protein equivalent every second day, v) a week holiday away from home, vi) a car, vii) a washing machine, viii) a colour TV, or ix) a telephone.

Table 3.1 Material deprivation rate

<table>
<thead>
<tr>
<th></th>
<th>Total&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Below 60% median equivalised household income&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Above 60% median equivalised household income&lt;sup&gt;b&lt;/sup&gt;</th>
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<tr>
<td>2005</td>
<td>7.5</td>
<td>14.7</td>
<td>3.3</td>
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<tr>
<td>2006</td>
<td>6.5</td>
<td>7.9</td>
<td>3.0</td>
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<tr>
<td>2007</td>
<td>5.6</td>
<td>9.9</td>
<td>2.4</td>
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<tr>
<td>2008</td>
<td>5.2</td>
<td>10.2</td>
<td>2.1</td>
</tr>
<tr>
<td>2009</td>
<td>5.2</td>
<td>12.5</td>
<td>1.9</td>
</tr>
<tr>
<td>2010</td>
<td>7.2</td>
<td>15.8</td>
<td>3.0</td>
</tr>
<tr>
<td>2011</td>
<td>6.6</td>
<td>11.9</td>
<td>2.8</td>
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</table>

Note: a. not able to afford 3 or more items; b. not able to afford 3 items.
Source: Eurostat (EU-SILC), 2012

Table 3.1 presents the material deprivation rate for the total Dutch population, and for those below and above 60% of the median equalized household income. In the years 2005-2009, the total material deprivation rate goes down by 2.3 percentage points. However, from 2009 to 2010 there is a steep increase, likely related to the financial crises in this period. Also, when looking at the different parts in the income distribution, we see that until 2009 the decrease in material deprivation is mainly due to the fact that people with an income above 60% of the median are gradually less materially deprived, at least until 2010. For those at risk of poverty, that is persons below 60% of the median,
the material deprivation rate in 2011 is lower compared to 2005. However, for lower income households the incidence of material deprivation actually increases from 2006 onwards, and reaches its highest level in 2010 (15.8%). This correlates with the slight increase in overall income inequality (Gini) in this period, and seems in line with the increase in household poverty and the especially vulnerable position of the lower income groups as discussed in chapter 2. Note that in 2011 the material deprivation rate is somewhat lower than in 2010.

Figure 3.1a Material deprivation by educational level

In Figure 3.1a material deprivation rates are mainly presented based on national data, however, for 2004 and 2005 data from the EU-SILC are used (Statistics Netherlands, 2012). Material deprivation in the national data refers to the percentage of households that have financial difficulties (as in experiencing financial restraints) providing one of the following items: ‘regularly buying new clothes’, ‘replacing furniture’, ‘inviting family and/or friends for dinner’, ‘going on holiday every year 1 week’, and ‘heating your home’. Figure 3.1a shows some fluctuations and a slight overall increase in total material deprivation in the period 2000 to 2010, which correlates with the fluctuations and increasing income inequality (Gini) in these years. Moreover, material deprivation is highly stratified according to educational level, and this educational differentiation in material deprivation remains rather stable.

54 Data up until 2003 are from the “Sociaal-Economisch Panelonderzoek (SEP)” and the “Permanent Onderzoek Leefsituatie (2004)” (Statistics Netherlands, 2012). For 2004 and 2005, however, data are from the Statistics on Income and Living Conditions (EU-SILC); comparison over time is therefore complicated. Although the general trends are alike, Eurostat and national statistics may differ in their findings on material deprivation, due to different measurements of material deprivation and different age/educational groups.
Material deprivation is also stratified by household type, as may be expected based on the conclusions in chapter 2 and is presented in Figure 3.1b. Single parents with dependent children hold an outstanding position; these households are most material deprived (SCP/Statistics Netherlands, 2011). All other household types are more congruent in experiencing material deprivation.

Figure 3.1b Material deprivation by household composition

As may be expected and in line with the findings in chapter 2, those that are in the lowest income quintile and lowest educational group have significantly more financial difficulties than the higher income quintiles and higher educated, and this pattern seems rather table for the past 10 years (Statistics Netherlands, 2012).

3.1 Poverty risk and vulnerability

The total percentage of households in the Netherlands that lives in poverty, when indicated as having 60% or less than the median income, hovers around 10 per cent since the year 2000 (Statistics Netherlands, 2012). Single person households have the highest incidence of low income and poverty (see chapter 2). In this chapter we present trends by social gradients in two indicators of poverty of risk and vulnerability: arrears of payment and difficulties to make ends meet.

Figure 3.2 presents the percentage of households by educational level, which had (in the last 12 months) arrears of payment (i.e., delays in paying bills) in at least one of the following categories:
rent or mortgage, housing utilities, articles bought on credit. Overall, arrears of payment seem to have increased over the past 10 years, especially for the lowest (primary and lower secondary) and middle (secondary) educational categories. This overall trend seems in line with the increase in income inequality in the years 2000, also described in chapter 2. The increasing level of poverty risk in the early 2000s probably is related to the recession in the years 2003 and 2004. Especially the higher secondary educated households show an increase in arrears of payment between 2000 and 2010 (from 2 to 7%). Among the tertiary (high) educated households, the proportion with arrears of payment seems rather stable. In general, Figure 3.2 shows a slight increase in educational inequality in arrears of payment.

**Figure 3.2 Arrears of payment by educational level**

![Figure 3.2 Arrears of payment by educational level](image)


**Figure 3.3 Arrears of payment by income**

![Figure 3.3 Arrears of payment by income](image)

Arrears of payment also differentiate along income (Statistics Netherlands, 2012). As may be expected, lower income groups have more far trouble paying their bills than higher income households. This divergence has in particular taken place the early 2000s, remaining rather stable since then. Figure 3.3 shows the correlation between household income and income inequality; the overall increase in arrears of payment, especially for the lower income households, seems to go hand in hand with rising levels of inequality. This seems to corroborate the idea of growing inequalities’ impacts.

Figure 3.4 shows another indicator of poverty risk or vulnerability: the percentage of people that reported to have experienced difficulties or severe difficulties to make ends meet, for the years 1991-2010. On the whole, and taking into account fluctuations, the percentage of persons having difficulties getting by on their household income seems to decrease towards the year 2000, and increases again thereafter. This trend seems to correlate with the sharp increase in overall income inequality in the years 2000. As can be expected, more economic vulnerable groups in society (i.e., low incomes, single parents with children, low educated and the youngest) more frequently experience difficulties to make ends meet: (Statistics Netherlands, 2012).

Figure 3.4 Difficulties getting by on household income by income

It seems that in the beginning of the 1990s, households are slightly more differentiated in difficulties getting by than they are in 2010. Most strikingly is the clear gap between low vs. higher income groups (see Figure 3.3), and, although to a somewhat lesser extent, between educational levels (not presented). The peaks around 1994/1996 and 2005 are visible for several social indicators (e.g., age,
household types, income, educational level), likely representing the higher rates of unemployment and/or income inequality in these particular years.

3.3 Cumulative disadvantage, multidimensional poverty and social exclusion

The indicator in Table 3.2 summarizes the number of people who are either at risk of poverty and/or materially deprived and/or living in households with very low work intensity. Eurostat defines this category as at risk of poverty or social exclusion (EU2020 poverty target) (see also Nolan and Whelan, 2011). At risk-of-poverty are persons with an equivalised disposable income below the risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income (after social transfers). Material deprivation covers indicators relating to economic strain, durables, housing and environment of the dwelling (see paragraph 3.1). People living in households with very low work intensity are people aged 0-59 living in households where the adults work less than 20% of their total work potential during the past year.

Table 3.2. At risk of poverty or social exclusion (EU 2020 target)

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<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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<td>Total</td>
<td>16.7</td>
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<td>15.7</td>
<td>14.9</td>
<td>15.1</td>
<td>15.1</td>
<td>15.7</td>
</tr>
</tbody>
</table>

Source: Eurostat (EU-SILC, EU 2020 target).

For the years 2005-2010, the EU2020 target rate is slightly going down, at least until 2009. This concurs with the general slight decline in material deprivation between 2005 and 2010 as mentioned...
before (see Table 3.1). However, this downward trend is not clearly visible and sometimes even opposed when looking at social differentiation in poverty (paragraph 1.3 and 3.2). The findings in Table 3.2 seem to confer that underneath general (national) trends in levels of at risk of poverty or social exclusion (EU 2020 target), other processes are at work. The overall slight increase in the EU2020 target since the 2008, especially in the more vulnerable social groups, likely relates to the (current) recession that took off around this period and the increasing level of income inequality in this period. Figure 3.5 shows the differentiation in the percentage of people at risk of poverty or social exclusion (Eurostat’s EU2020 poverty target) by income quintile between 2005 and 2010. It clearly shows that higher income groups are better off and this differentiation remains constant, despite of minor fluctuations.

3.4 Social (dis)connectedness

Rising levels of inequality are associated with lower levels of social cohesion and trust (Putnam, 2000; Wilkinson and Pickett, 2009). In this section trends and differentiation in some indicators of social connectedness are discussed, related to different forms of inequality. In Figure 3.6 trends in feelings of social disconnectedness or isolation are presented. Overall, the proportion of Dutch citizens that experiences no feelings of isolation is rather high (around 90%) and quite stable over the years. Although the majority of people is satisfied with the intensity of their social contacts, and the proportion of people experiencing social contacts as superficial declines over the years, since 1997 there is also a stable proportion of about 3% of the total population that regularly feels isolated while around 8% sometimes feels socially disconnected (Statistics Netherlands, 2011; SCP, 2008, 2011). Overall, Figure 3.6 suggests no clear relation between trends in inequality since the late 1990s and trends in social connectedness and isolation in these years.

Underneath the general pattern, there are differences in feelings of isolation between distinct social groups. Feelings of isolation or social disconnectedness are at a higher level among the group lower educated people, see Figure 3.7. This might be related to the changing composition of the lower educated group in the Netherlands, resulting in a more economic deprived situation (e.g., higher level of unemployment, lower incomes) and worse general health of this particular educational group. This is in line with both the psychosocial and resource based explanation of the relation between inequality and social impacts (Allport, 1979; Wilkinson, 1999). Inequality in feelings of isolation between people with different household types seems to converge (Statistics Netherlands, 2012). Especially single parents feel far less isolated in the early 2000s than in the 1990s.
Figure 3.6 Indicators of social disconnectedness (social contacts)

![Graph showing indicators of social disconnectedness]

Source: Statistics Netherlands, information retrieved

Figure 3.7 Feelings of isolation by educational level

![Graph showing feelings of isolation by educational level]

Source: Statistics Netherlands, 2012

In Figure 3.8 the percentage of the adult population providing informal help (helping neighbours, family etc.) is presented. Since the late 1990s we see some fluctuations in the supply of informal help especially, with a small peak around 2000. The rather stable or slightly increasing general level of informal help seems in line with the general level of inequality since the 1990s. However, there are educational differences in providing informal help. Especially the middle and higher secondary educated people seem to provide informal help on a regular basis. The lowest educational group (primary) provides a reduced level of informal help. In general, educational differences in informal
help slightly converge over the past two decades. This seems especially so for the secondary and tertiary educated, resulting in an increased gap between the lowest educational group and the rest.

### Figure 3.8 Informal help by educational level

![Informal help by educational level](image.png)

Source: Statistics Netherlands, 2012

#### 3.5 Family formation and breakdown, lone parenthood and fertility

**Fertility rates**

In the early 1970s the fertility rates declined dramatically after a long period of growth. Economic uncertainty has been shown to cause low fertility rates (e.g., Mills et al., 2008), hence, the low fertility rate in the early 1980s may be related to the deep economic recession in that period. However, from 1983 onwards, the total number of births (not presented) slightly increases. This probable relates to the general economic prosperity towards the year 2000 (Beets, Verweij and Sanderse, 2009). The most common explanations for decline and increase in fertility rates are economic motives, costs of childbearing, and changing ideologies (Mills et al., 2008; D’Addio and d’Ercole, 2005).
Besides a drop in the total number of life births, also the average number of births per women sharply declines around the 1970s and reached its lowest rate in 1983 (with a mean of 1.5 births per woman). Especially women’s increased economic independence, both through higher levels of education and labour-market participation, may have led to lower fertility rates and postponed childbearing (Becker, 1981). Since the 1980s the average number of births per woman increases rather continuously to a mean of 1.8 total births per woman in 2011 (Statistics Netherlands, 2012). Dutch policies improving the quantity and quality of child care during the 1990s may have played a role in this. However, the growth in income inequality during since 2000 (and the financial crisis since 2008) might lead to declining fertility rates in the near future.

Especially the age of the mother at birth drastically changed during the past decades (see also Figure 3.14). From 1970 onwards the age of childbearing women has dramatically increased, resulting from fertility postponement (Beets, Verweij and Sanderse, 2009). This phenomenon occurred for all educational levels but especially for higher educated women (Agmaat-Wolbers and Van Huis, 2008; van de Kaa, 1987; Lesthaeghe and Moors, 2000). Reasons for increasing levels of delayed childbearing and childlessness are, for instance, the (easy) availability and general acceptation of contraception, women’s increased and uninterrupted participation in education and the labour market, higher divorce rates and the decrease in marriages (De Graaf, 2011; Keizer, 2010). Recently, in the Netherlands, the rise in the mother’s age at childbirth came to a halt. From 2008 the number

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55 Fertility rates by mother’s age (age specific fertility rate): The number of births to mothers of age x to the average female population of age x (Eurostat, 2012).
of average births per woman shows a slight increase, which may be due to the increase in general economic prosperity in 2006 and 2007, and the stabilizing age of the mother at birth of the first child (Mills et al., 2008). Note that (voluntary) childlessness sharply increased in the past decades with clear educational differences (Agmaat-Wobma and van Huis, 2008; Keizer, 2010). Except for the sharp decline in total births towards the 1990s, which correlates with a sharp increase in income inequality, a linkage between overall trends in fertility and inequality is unclear.

Marriage and dissolution

After the 1970s, the number of young married people declined rapidly. Several factors may be responsible for this change: cohabiting as an increasingly popular form of couple formation, changing gender roles, (youth) unemployment, female emancipation and educational expansion (see also Kalmijn, 2007). From the 1980s the number of married people in all age groups declines (see Figure 3.10), which might indicate a low(er) popularity of marriage for younger generations, as well as a higher and increasing divorce rate since the 1970s (see Figure 3.11). The fall in number of marriages also seems to reflect a more general cultural change, with more alternatives (cohabiting, partner registration) for couple and family formation (Latten and de Graaf, 2010) and less trust in future economic prosperity (NIDI, 2012). The latter might relate to the increasing level of income inequality since the late 1990s and the financial crisis and its consequences around 2008.

In 1982 the divorce rate outweighs the proportion of marriages, and due to changes in both rates, the number of actually married couples is rather stable thereafter. The decline in divorce rate during the second half of the 1980s (see Figure 3.11) may be related to the economic recession and sharp increase in poverty rate in this period (see chapter 2). The overall increase in divorce rates since 1992 might correlate with an overall growth in income inequality. Although the latter is debated in the literature (see e.g., Fischer and Liefbroer, 2006), since the year 2000 the divorce rate seems to increase with economic prosperity (NIDI, 2012). Up until the early 20th century, persons from higher social classes, especially those in higher cultural groups, were more likely to divorce than people from lower socioeconomic backgrounds, pointing to cultural hindrances to divorcing. In the post-war decades, when divorces became more common, the association between education and

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56 The general trend presented in Figure 3.11, likely hides the fact that an alternative divorce process (‘flitsscheiding’) was offered and rather popular during the early 2000s (see also De Graaf, 2011).
divorce turned negative, with the lower educated currently having a higher risk of divorce than the higher educated (De Graaf and Kalmijn, 2006; Kalmijn, Vanassche and Matthijs, 2011).

Figure 3.10 Percentage married persons in total population, by age

![Figure 3.10](image)

**Source:** Statistics Netherlands.

Figure 3.11 Percentage of married couples who divorce each year

![Figure 3.11](image)

**Source:** Statistics Netherlands, Statline, information retrieve July 21, 2012

Family composition

About 50 per cent of the group ‘single parents’ consists of divorced parents, mainly mothers. The remaining proportion of single parents are mostly never-married mothers. Figure 3.12 shows that in the past decades household types have changed drastically. Over the years there is a sharp increase in the proportion of single person households, whereas the percentage of two-person households or couples has decreased, in particular those with children living at home (from 44% in 1981 to 27% in
GINI Country Report The Netherlands

2011). Yet, in general, the two-parent or two-person family is still dominant. As Figure 3.12 shows, the proportion of single parent households has been rather constant in the past decades (around 7% of all households). The increase in single person households might be related to an overall higher level of economic independency of women and educational expansion. Both are found to affect family formation, resulting in people living longer independently (e.g., Blossfeld and Huinink, 1991).

Single parenthood is negatively related to financial resources or household income; single parent families have lower incomes and less resources than two-person households. Among the single parents, never-married single mothers are even more likely to be poor (Kalmijn and Monden, 2010). Additionally, poor persons are more likely to remain single. As shown in chapter 2, the income of the single parent household is the lowest and has remained on a low(er) level over the past 20 years. For this reason, income inequality between different household types or compositions has grown between 1990 and 2010.

Figure 3.12 Household types

Source: Statistics Netherlands, 2012 and SCP (Buckx) 2011.
3.6 Health inequalities

Healthy life expectancy

In the Netherlands overall life expectancy has increased since the 1950s. For healthy life expectancy, that is the expected years people live in good health, the trend is also positive, with women living longer than men. From the late nineties differences between men and women are small. Yet, in the most recent years especially men’s healthy life expectancy has increased. For women we may conclude that although their overall life expectancy overrules men’s life expectancy, since the 2000s they seem to spend fewer years in good health than their male counterparts (Statistics Netherlands, 2012). Differences in healthy life expectancy are also found between the higher and lower educated, see Figure 3.13. Generally, higher educated people live longer and have a better life expectancy compared to the lower educated (Statistics Netherlands, 2012). Note that educational differences in mental health are found to be smaller than in physical health (RIVM, 2010).

Individual health is repeatedly found to be dependent on social indicators or determinants such as social class and education (e.g., Subramanian, Huijts and Avadeno, 2009). There are several possible explanations for the relation between education and (good) health. Both from a psycho-sociological and resource perspective higher educated are expected to hold a better health (Wilkinson and Pickett, 2009). Higher educated people live in better material circumstances; they hold higher incomes, experience less economic adversity, and lower unemployment rates. A higher educational level also enhances a person’s social-psychological resources (e.g., better psychological and physical health, more social capital). Moreover, higher educated tend to have healthier lifestyles, as in less smoking and lower risk of overweight, which are also found to influence a person’s health (Huijts, Monden and Kraaykamp, 2010; RIVM, 2010).

As shown in Figure 3.13, the healthy lifespan of higher educated (tertiary) at age 25 is around 17 years longer compared to lower educated (primary) at age 25. Between 2001/2004 and 2005/2008 the disparity in healthy life expectancy between the lowest and highest educated widened, especially for women, with a difference of 19.2 years in healthy life expectancy between the highest and lowest educated women in 2005/2008. From 2008 to 2010 inequality in healthy life expectancy slightly decreased, resulting in a convergence between men and women, and a mean difference of 18 years in healthy life expectancy between the highest and lowest educated in society. Hence, beyond a general pattern of increasing levels of healthy life expectancy, likely due to educational expansion

57 Although less numerous, there are also studies on health affecting inequality, such as education and labour market success (e.g., Haas, 2006), suggesting reverse causality.
and improvements in health care, there are educational inequalities in healthy life expectancy. In the past decades, these educational differences in health have slightly increased, for both men and women, which might relate to the increased income inequality over this period.

**Figure 3.13 Educational disparity (in yrs; primary vs. tertiary educated) in healthy life expectancy in years (at age 25 and 65)**

Source: Statistics Netherlands, 2012 (GINI here is the mean over the four year period)

**Self-reported health**

Between 1984 and 2000 self-reported health shows a rather constant pattern, with the majority reporting (very) good health (about 80%) and a small proportion (around 2.3%) reporting very bad health (Statistics Netherlands, 2012). Reasoning from the psychological and resource-related theoretical notions about a causal relation between inequalities and health issues, the rather stable level of self-reported health in this period might be in line with the constant level of income inequality during the 1990s.

Figure 3.14 shows that, despite some fluctuations, during the 2000s educational differences in self-perceived poor health are rather stable. Moreover, clear differences exist between social groups. Lower educated persons report poorer health than higher educated, which is in line with previous research on health inequalities (Subramanian, Huijts and Avandano, 2010; Blasquez, Cottini and Herrarte, 2012). Yet, from 2007 inequalities between the lowest educational groups seem to converge. This results in a wider gap between the higher (higher secondary and tertiary) and lower
educated (primary and lower secondary) in self-perceived health. This might relate to the worse economic situation and higher poverty rate since 2008, especially for the lowest income and educational groups, and the slightly increasing income inequality towards 2009. Note that in general men tend to report better health than women (RIVM, 2010).

Figure 3.14 Self-perceived poor health, by education (2000-2009)

![Graph showing self-perceived poor health by education level from 2000 to 2009.](image)

Source: Statistics Netherlands, 2012

**Overweight and obesity**

The total percentage of overweighted people has sharply increased in the recent decades, also in the Netherlands. Especially the prevalence of obesity shows a substantial increase and doubled from 5% in 1981 to almost 12% in 2009 (Statistics Netherlands, 2012). This overall increase in the prevalence of overweight is independent of sex or education. Hence, the economic development and prosperity in current modern societies seems to go together with a higher level of general weight status. However, men have a higher risk of becoming overweight than women, and this gender gap in (over)weight status is slightly increasing over time. We then might conclude that, due to several factors, health risks due to overweight are increasing, especially for men.

Overweight and obesity are more common for those with a lower educational level, compared to the higher educated (Hurk et al., 2007; Schokker et al., 2006). As presented in Figure 3.15, about 60 per cent the low educated are over weighted (BMI-score >25), among the tertiary educated around 40 per cent is over weighted. Extreme overweight (obesity) is found among 18 per cent of the lowest educated and around 7 per cent of the highest educational group (not presented). The increase in
over weighted persons is also found during the years 2000 (from 44% in 2000 to 47% in 2009), which correlates with the slight overall increase in income inequality in the period 2000 to 2011, but educational inequalities heir in seem quite stable.

Figure 3.15 Overweight adult population by educational level

![Figure 3.15 Overweight adult population by educational level](image)


### 3.7 Housing tenure

**Home-ownership and rented homes**

Differences in home-ownership are a relevant source and indication of social inequality (Mulder and Smits, 1999; DeWilde and Lancee, 2011). Moreover, social inequality in housing and home-ownership is transmitted over generations (Tolsma and Wolbers, 2010; Smits, 2010). Since the 1970s home-ownership is the main form of housing in most European countries (Atterhög, 2006). Note that information about housing over the past years, in which the housing market has been under pressure, is not included yet.

In the Netherlands, the number of home-owners increased during the 1990s (Van Kempen and Priemus, 2002), remained rather stable in the beginning of 2000 and again increases after 2003 (see also Figure 3.16). The latter was mainly caused by a higher stock of new built owner-occupied homes and the selling of former (social) rented homes (SCP, 2008). In addition, since 1998 also net
equivalised household incomes have increased (see chapter 2). This might have stimulated people into investing in housing.

**Figure 3.16 Home ownership by education**

![Chart showing home ownership by education](chart1.png)

*Source: Tolsma and Wolbers, 2010.*

**Figure 3.17 Tenure status, % total population**

![Chart showing tenure status](chart2.png)

*Source: Eurostat (EU-SILC), 2012*

In the past two decades, and at least until 2006, home ownership increased in the higher income and educational groups but it remained quite stable or decreased in the middle and lowest income and educational groups. This might reflect the slight increase in income inequality in this period. Figure 3.16 shows the educational differentiation in home ownership. Higher (tertiary) educated more often own their house compared to lower (primary and secondary) educated, and this educational
inequality in home ownership has significantly increased over the period 1992-2003 (Tolsma and Wolbers, 2010).

Home-ownership occurs predominantly in the age group over 35, the proportion younger home-owners (mostly first-time home-owners) decreased between 1998 and 2006 (SCP, 2008). The latter is mainly due to rising housing prices since the 1990s, which made home ownership difficult for entrants on the home-owner market, and likely relates to the stable low level of net equivalised household income for younger people (see chapter 2). Young people generally have a lower income, are more often without a partner an existing home (asset) compared to older people (www.rijksoverheid.nl, 2011). Moreover, credit institutions have become much stricter, especially since the financial crisis from 2008, making it much more difficult than before to acquire a mortgage without a substantial deposit. This probably has as an effect for young people and people with low incomes. Recently, the economic crisis has caused a sharp decline in the housing prices (Statistics Netherlands, 2012) and has blocked the housing market.

Figure 3.17 shows trends in tenure status form 1995 until 2009. Overall, the increasing level of income inequality seems to go together with in increasing proportion of home owners.

During the 1990s renting increased in the lowest income deciles, but decreased in higher income groups, resulting in a rather homogeneous low-income group of social renters (Kleinhans, 2003). During this period the total number of private renters decreased, regardless of income (Van Kempen and Priemus, 2002). However, for those below 60% of the median equivalised income, the proportion of renters increased slightly since 2005 (Eurostat, 2012). Compared to other European countries, the Netherlands is characterized by a rather small private rental sector (Mulder and Smits, 1999). Overall, the number of home-owners increased, especially for those with an income above 60% of the median equivalised income (VROM, 2003), but the economic recession and rising housing prices since 2006 put a brake on the proportion of home-renters becoming home-owners. In 2011 the number of sold home-occupied homes has fallen with 30%, compared to 2008 (Statistics Netherlands, 2012).

**Housing costs**

In the Netherlands, home-owners can obtain full tax relief on their mortgage interest payments, which likely halves the real cost of a mortgage (SCP, 2008). Tenants may receive a rent benefit, depending on the size of their social income and rent. Nevertheless, compared to other EU countries, Eurostat shows that the Netherlands score highest on total housing costs, with a mean ratio of 30%
of total housing costs to disposable income (Özdemir and Ward, 2009). Haffner and Dol (2011) however show that the Netherlands score lower (rank lower) on total housing costs (behind the UK and Belgium) when taking into account relevant corrections.

**Figure 3.18 Housing expenditure (% of total expenditure)**

![Figure 3.18 Housing expenditure (% of total expenditure)](image)

Source: Statistics Netherlands, 2012

Figure 3.18 presents housing costs, as % of total expenditure of disposable income of owner-occupiers and tenants on housing, after allowing benefits and costs like energy and tax. It shows that housing expenditure share slightly decreased between 1992 and 2000, but increased from 2002 onwards, for both home-occupiers and tenants. This was mainly due to increased energy prices and (local) property tax. The net housings costs for tenants remained rather stable (MBZK, 2009). Costs of housing differentiate across income groups, with relatively higher housing costs (as % of total household expenditure) in the low income group. These findings are confirmed by international comparative research: in the Netherlands housing costs amounts about 47% of the disposable income for those in the lowest income quintile, compared to 22% of disposable income in the top quintile (Özdemir and Ward, 2009). Figure 3.18 shows that since 1992 housing expenditure slightly increased for renters and remains rather stable for home owners. This might relate to the increased level of income inequality since the late 1990s, as presented in figure 3.18.

### 3.8 Crime and punishment

**Criminality rates**

Although criminality is perceived as a major problem in public debate, the actual (total) criminality rate seems to decline since the early 2000s (Statistics Netherlands, 2012). Next to individual, family
and social factors (e.g. Hirschi, 1969; Featherstone and Deflem, 2003; Van de Rakt, Nieuwbeerta and De Graaf, 2008), contextual features like economic constrains are found highly relevant in explaining criminal behaviours as well (Becker, 1974; Allan and Steffensmeier, 1989). Since the 1990s economic prosperity has grown. Yet, some social groups remain disadvantaged, which is represented by an increasing level of income inequality. It is within these groups that the risk of committing a crime is the highest, due to a lack of relevant or necessary (material and/or cultural) resources and because of psychosocial reasons, such as higher stress levels or lower life satisfaction (see also Wilkinson and Pickett, 2009). In Figure 3.19 the number of reported criminal acts by the policy is presented.\footnote{Note that police statistics only provide a partial image of crime, since it is affected by factors such as reporting patterns, police practices but also changes in collection (see also Healy, Mulcahy & O’Donell, 2012).} Since the 1970s there is a clear increase in criminality, which levels off during the mid-eighties (after a period of deep economic recession). In the beginning of the 1990s the number of crimes increases, which may be explained by the high level of unemployment and poverty rate in this period. Since 1996, the total number of recorded crimes has increased steadily with a peak in the beginning of the years 2000. From 2002 onwards the total crime rate is decreasing, which seems to contradict the trend in income inequality. The imprisonment rate between 1970 and 2010 slightly fluctuates and shows no clear trend (Statistics Netherlands, 2012).

As shown in Figure 3.19, most of the recorded crimes (about 60 per cent around 2010) relate to burglary. The increasing total crime rate during the nineties, and especially the higher level of
property crime (i.e. more economic driven forms of crime) in the early 2000s, may be a result of the increasing inequalities in wealth during the 1990s (see chapter 2), and the high youth unemployment rate around the year 2000.

**Crime victims and crime perceptions**

Higher levels of perceived and experienced inequality are also argued to go together with more feelings of threat and anxiety (Wilkinson and Pickett, 2009). Figure 3.20 shows the percentage of crime victims and people who feel unsafe, related to their perception of crime (which differs from fear of crime). Since 1995 a rather stable proportion (around 25%) of the Dutch population has been a victim of crime. The proportion of people who feel unsafe fluctuates between 20 and 25 per cent and has fallen somewhat since 2005. The slight increase in both the number of crime victims and feelings of insecurity around 2002 might be related to the higher level of recorded crime in 2002 and the high level of youth unemployment in the early 2000s. However, the assassination of Pim Fortuyn (May 2002) and Theo van Gogh (November 2004) are likely related to the higher proportion of people who reported to feel unsafe in these specific years.

**Figure 3.20 Victims of crime and people feeling unsafe**

![Graph showing percentage of crime victims and people feeling unsafe](image)

Source: Statistics Netherlands.

After 2005 both the proportion of people who feel unsafe and the proportion of victims show a slight decline, which seems not in line with the general trend in income inequality towards 2010. People who feel unsafe or perceive higher safety risks are divided by social backgrounds, but especially by age, gender (SCP, 2008; Oppelaar and Wittebrood, 2006) and region (Statistics Netherlands, 2012). Note that people particularly report to feel unsafe and have a higher chance of becoming a victim in
their own neighbourhood (Van Wilsem, Wittebrood and De Graaf, 2003; Statistics Netherlands, 2011).

3.9 Subjective measures of well-being, satisfaction, happiness

Happiness and life satisfaction

Since the 1970s Dutch citizens are rather constant in their feelings of happiness and life satisfaction (Statistics Netherlands, 2012; Eurostat, 2012). Veenhoven (2005; 2011) finds an increase in the overall level of happiness and life satisfaction between 1973 and 2010, when taking different measures and levels of happiness and life satisfaction into account. During the past decade, about 90 per cent of the total population reports to be happy (Netherlands Statistics, 2012). Note that these stable feelings of happiness and life satisfaction in the Netherlands may be a result of contrasting processes; rising inequality may lower life satisfaction while the lower poverty rate (see chapter 2) may positively affect a person’s life satisfaction.

Beyond the overall pattern, there are differences between social groups. The tertiary educated proportion of the Dutch population seems to be happier and more satisfied with their lives compared to the lower educated part of the population. As presented in Figure 3.21, there seems to be a slight increase in the educational gap in feelings of life satisfaction since the early 2000s between the higher educated (tertiary and middle/higher secondary educated) on the one hand and the lower secondary and primary educated on the other hand. This could be related to the more prominent role of education in society; education has become a prime determinant for economic success in the past decades (see chapter 2). This might result in less feelings of happiness and life satisfaction within the increasingly homogeneous group lower educated, who then are supposed to experience (increasingly) less economic success (Gesthuizen, Solga and Künster, 2009). Hence, for several reasons, for instance because of better (perceived) health and labour market opportunities (De Jonge, Hupkens, and Bruggink, 2009; see also chapter 2), higher educated report more often (43% in 2008) to be very satisfied than lower educated persons (24% in 2008). The slight increase in educational inequality in life satisfaction seems to relate to the increase in income inequality since the late 1990s, as shown in Figure 3.21.
Figure 3.21 Life satisfaction ("very satisfied") by educational level

Source: Statistics Netherlands, 2012

Subjective evaluation of income

Figures 3.22 displays the subjective evaluation of income. This indicator is a self-evaluation of that what is minimally needed according to the respondents, set off against their actual income. The overall trend in subjective evaluation of income suggests a rising trend; an increasing proportion of people perceive their income as insufficient (from 11% in 1995 to 14% in 2004), which seems to correlate with the increasing level of income inequality since the late 1990s. An increase in the perception of received income as not sufficient can be observed in general, and across educational levels as well. From 2001 onwards, there is a rising level in perceived income problems for all educational groups, but this increase is steepest for those with a low education, implying that inequality grows.

Other relevant stratifying social characteristics (i.e., vulnerable groups) regarding subjective evaluation of income are income, age and household composition. For instance, about 30% of the one-parent households with children indicate that their actual income is not sufficient. This likely correlates with the actual (remaining) lower level of household incomes of single parents, especially compared with couples with children (see chapter 2). Moreover, the proportion single parents
evaluating their income as insufficient is increasing over time, which is in line with the growing income inequality due to the rather stable low level of income for these single parents.

Figure 3.22 Subjective evaluation of income by educational level; is income sufficient to meet minimal need?

Source: Statistics Netherlands, 2012

3.10 Intergenerational Mobility

Income mobility

In this section we first look at intergenerational mobility for income between the first and second generation, fathers and their children, see Figure 3.23. To measure this income mobility the incomes of fathers and their children have been selected for the years 1981 and 1998 respectively. Incomes from wages and self-employment have been included in this measure (at constant prices 1995). The first generation has been allocated into five income groups each representing 20 per cent of the share in total income (quintiles). Income group one represents the 20 per cent lowest incomes and income group five the 20 per cent highest incomes, received by the fathers.
Figure 3.23 Intergenerational income mobility 1981–1998

The percentages in the columns show whether a child has climbed up or down the income ladder with respect to the father. Second generation income was on average 0.21% higher when the father earned 1% more than his counterparts. These results are in line with other developed countries such as, Canada, US and Sweden. The highest and lowest income class shows the least intergenerational mobility. Where the first generation belonged to the lowest or highest income group, the probability the second generation would stay in this group was 30% or 35% respectively. While the three middle classes show relatively equal intergenerational income mobility. For these three groups, the probability of staying in the same income group as the first generation is only around 20%. Their income mobility is therefore higher than the previous two groups. So inequality in income has an enduring effect; when persons are born in a lower income household, they have a rather high risk of ending up in this lower income group themselves (Guiaux, Roest and Ledema, 2011). However, not all people from lower income parental homes stay poor; most of them actually climb up the income ladder. This means that inequality in income is transmitted to the next generation, leading to all kinds of other social impacts (e.g. social isolation, bad health, material deprivation).

**Educational mobility**

Parents transmit their socio-economic position onto their children, including their educational level and field of education (Bourdieu and Passeron, 1977; De Graaf, 1993; Van de Werfhorst, De Graaf and...
Kraaykamp, 2001). This means that there are unequal educational opportunities for children from different social backgrounds. Recently in the Netherlands there was a decrease in the upwards educational mobility for men and an increase in downward mobility, especially for men from higher social family backgrounds. For the most recent birth cohorts, about 25% of the men end up with a lower educational level than their parents (see absolute % in Figure 3.24). So, there is a clear trend of less upwards mobility and more downward mobility for men due to a ceiling effect; due to the educational expansion more men are born in higher educated families. Yet, the sum of upwards and downwards mobile men is still positive (there is still more upward than downward educational mobility). For women upward educational mobility has increased until the birth cohort 1955-'64. For the most recent cohorts the (absolute) percentage upward mobile women slightly decreased, but in contrast with men the number of downwards mobile women is rather stable. In general, educational mobility in the past decade has been predominantly upwards for women, regardless of their socioeconomic family background (Herwijer, 2010; Tolsma and Wolbers, 2010).

Overall, due to the educational expansion, the intergenerational association of educational levels becomes weaker (see odds ratios in Figure 3.25). This might indicate that the general decrease in educational inequality, as shown in chapter 2, finds its way to the next generation, resulting in less educational inequality according to social or family background. Especially for men the association between parents’ and own educational level decreases; this indicates more openness. For women the intergenerational association of educational level remains rather stable; in the past decades the
influence of the educational level of the parents is more pronounced for the attained educational level for women than for men.

Figure 3.25 Intergenerational association of educational level, by birth cohort; odds ratios

![Graph showing intergenerational association of educational level, by birth cohort; odds ratios](image)

Source: Herwijner (SCP) 2010

3.11 Conclusion

Material deprivation and poverty

Overall, and in line with the trend in increasing income inequality, there seems to be an increase in material deprivation in the period 2000-2011, especially for the more vulnerable social groups, resulting in persistent social differentiation in material deprivation. Although the proportion of households living in poverty is rather stable during the 2000s, the slight increase in inequality in the Netherlands in this period seems to go together with a growth in (social differentiation in) arrears of payments. As can be expected, the more economically vulnerable groups in society more frequently experience arrears of payment and difficulties to make ends meet: low incomes, single parents with children, low educated and the youngest. Although chapter 2 shows a slight increase in income inequality, there is not a clear trend in its potential impacts on the various indicators of material deprivation and poverty discussed here. Inequalities between social groups seem to fluctuate and therefore remain rather stable over time. Perhaps the most basic conclusion is that gaps remain persistent between the most vulnerable social groups (single parents, low educated and low income) versus the rest, despite general trends such as increasing income inequality and educational expansion.
Social disconnectedness and isolation

In the past two decades the percentage of Dutch citizens that reported no social disconnectedness or social isolation remained rather stable (about 90% of the total population). However, there are clear social dispersions in feelings of social isolation, with the lower educated and single (parent) households reporting higher levels of social isolation. In general, we might conclude that the slightly increasing level of inequality in the Netherlands since the 2000s does not straightforwardly affect the general level of social (dis)connectedness, as could be expected according to Wilkinson and Pickett (2009).

Family

After a long period of growth, in the early 1970s the fertility rate in the Netherlands declined dramatically. Except for the sharp decline towards the 1980s, which correlates with a sharp increase in income inequality in that period, a linkage between overall trends in fertility and inequality is unclear. Yet, the favourable economic climate (as in higher GDP) may be one of the reasons for the slight increase in fertility rate in recent years. The decline in divorce rate during the second half of the 1980s might relate to the economic recession and sharp increase in poverty rate in this period as well. Since the beginning of the 2000s, when the poverty rate and general income inequality show a slight increase, the number of legal divorces slightly declines again. This, in combination with the (increased) gap in income between couples with children and single parents likely represents the economic explanation of the fluctuations in number of divorces. Over the past decades household types have changed drastically. Over the years there is a sharp increase in the proportion of single person households, whereas the percentage of two-person households or couples has decreased, in particular those with children living at home. The increase in single person households (and decrease in couples) might be related to an overall higher level of economic independency of women and educational expansion.

Health

Beyond a general pattern of an increasing level of healthy life expectancy, likely due to educational expansion, economic prosperity and improvements in health care, there are clear educational inequalities. Educational inequalities in healthy life expectancy show a slight increase over the past decades. This seems in line with the stable economic unfortunate position of the lowest educated
and lowest income group as described in chapter 2. And although there are a constant proportion of people reporting a good and poor health, underneath this general stable pattern there are clear differences between social groups. Furthermore, more recently there is a clear trend towards higher levels of overweight and obesity. Differences between gender and educational groups in (over)weight status are rather constant.

Housing

In the Netherlands, the number of home-owners increased since the 1990s and seems rather in line with the increase in net equivalised household incomes. The economic recession and rising housing prices since 2006 put a brake on this growth in home-owners. Since the financial crisis in 2008 the number of sold home-occupied homes has fallen. Between 1992 and 2003 home ownership increased in the higher educational and income groups, but it remained quite stable in the middle and lowest income and educational group. This might relate to the slight increasing income inequality since the year 2000. Costs of housing differentiate across income groups, with relatively higher housing costs (as % of total household expenditure) in the low income group. Since 1992 housing expenditure slightly increased for renters but remained rather stable for home owners. Whether this diverging process relates towards an increasing trend in inequality is not visible.

Crime

The general increasing level of criminality is rather in line with the increasing trend of poverty and income inequality from 1977 to the 1990s. The decline in criminality since 2002 may be a result of a better economic climate towards 2007 and lower levels of poverty. Note that these findings are related to property crime. The numbers of violent offences seems so increase steadily during the past decades, which might be more related to a cultural change. The proportion of people reporting to be a victim of crime and people who feel unsafe (around 20-25%) remains rather stable from 1995 onwards, with some fluctuations (2002, 2005). Changes in inequality on the national level seem to affect crime rates but hardly influence the proportion of crime victims or people feeling unsafe.

Well-being, happiness and life satisfaction

General levels of happiness and life satisfaction were rather stable in the past decades. The educational gap in life satisfaction is diverging; inequality seems increasing mainly due to divergence between the lowest educated and the rest. In general, the subjective evaluation of income shows a
rising trend; an increasing proportion of people (between 1995 and 2004) perceive their income as insufficient. Educational differences suggest rising levels of inequality in the subjective evaluation of income.

**Intergenerational mobility**

This chapter also shows a clear pattern of intergenerational transmission of poverty (income). When persons are born in a lower income household, they have a rather high risk of ending up in a low income group themselves (in adulthood). However, not all people from lower income parental homes stay poor; most of them actually climb up the income ladder. Overall, the intergenerational association of educational levels becomes weaker and educational mobility has been predominantly upwards. Yet, there are clear differences according to gender and educational level. Mainly due to the higher level of educational expansion, downward educational mobility has increased, especially for the higher educated men. This means that for men educational openness has increased, indicating higher levels of equality.
4. The political and cultural impacts of inequality

Rising income/wealth inequalities, and stable or declining educational inequalities, may have severe repercussions on outcomes in the sphere of politics and values. In chapter two, different measures of inequality and its development over time have been described. In this part, we focus on the political and cultural impacts that these developments may have triggered. The central question is whether we can explain trends in the sphere of political and cultural values with developments in inequality. More specifically, we focus on the social gradient: can trends in inequality be associated with increasing or decreasing distances between educational groups with respect to political and cultural impacts? For example, does rising inequality, by increasing status competition result in a ‘pulling out’ of the poor and a consequential decrease in political participation (Solt 2008; Horn 2011)?

We do so by describing long-term trends of the various relevant political and cultural indicators in the Netherlands, and by analysing them for educational levels separately. In the first section, we discuss long-term trends regarding political and cultural participation; the second section deals with trust, the third with political values and legitimacy, while the last section discusses values about policy and the welfare state.

4.1 The causal nexus of inequality and its political and cultural impacts

Studies on the impact of inequality on a wide range of outcomes are mostly internationally comparative. Undesirable outcomes such as crime, bad health, low social trust, and low levels of civic participation are seen as being dependent on individual (or household) income position and on the income inequality in a society (Neckermann and Torche 2007, Andersen and Fetner 2008, Daly, et al., 2001, Huisman and Oldehinkel, 2009, Kawachi, et al., 1997, Rothstein and Uslaner, 2005, Solt, 2008, Uslaner and Brown, 2005, Wilkinson and Pickett, 2009). Moreover, in countries, states or neighbourhoods where inequality is high, trust and civic participation are low (Alesina and La Ferrara, 2000, Oliver, 1999, Uslaner and Brown, 2005, Lancee and Van de Werfhorst 2012).

These internationally comparative studies are almost exclusively cross-sectional in nature, with measurement at a single point in time. The causal claim, however, that these studies make is that inequality leads to an increase of undesirable outcomes and a decrease of favorable outcomes. In this chapter, we try to add to these cross-national findings an over-time picture of the development of these indicators in the Netherlands. Although methodologically we cannot improve previous
analyses, in this report we present empirical material that describes the over-time developments in the Netherlands, which is missing in cross-national studies. Moreover, where possible, we present these trends for different educational groups, as to give an idea whether these key social groups came closer together, or that the distances increased. Also with an over-time comparison of distances between groups is difficult, however, due to the changing composition of these groups. That is, due to, for example, educational expansion, the lower educated in the ‘70s have different characteristics as the lowest educated in the 2000’s.

Data

For this chapter, we rely on several different data sources. First, we rely on the macro data that are available through Statline, the database of Statistics Netherlands (Statline 2011). These figures are often available only on the macro level, although in several instances it is possible to split the data by income groups or educational levels. Second, we rely on survey data and, more specifically, two pooled cross-sectional surveys: the Survey Cultural Changes (1975-2008, with 23 data points) and the National Election Survey (1971-2010, with 13 data points). The ‘Cultural Changes’ survey (Culturele Veranderingen) is collected by the Dutch Social and Cultural Planning Office (SCP). The Cultural Changes survey is a (mostly) bi-yearly survey containing 23 national samples of the Netherlands (Beckers et al. 2010). The Analyses based on the Dutch national election survey are based on the cumulative file (Todosijevic et al., 2010). It covers almost forty years and 13 measurement points.

For these surveys, it is possible to plot over time differences for different educational groups separately and to compare changing over-time differences across these groups. Last, we make use of the Eurobarometer time-series that are made available by Eurostat (Eurostat 2011).

Besides these outcome variables, we plot the net equivalised Gini-coefficient in the Figures we constructed. Although, as discussed in chapters one and two, this is only one measure of inequality, it summarizes the development that took place in the Netherlands since the 1980s.

4.2 Political and civic participation

One of the key indicators of political participation is the turnout rate in elections (Solt 2010). We therefore look at the voter turnout figures for parliamentary, municipal and European elections (figure 4.1). Turnout rates in the Netherlands have declined steadily since the mandatory turnout was abolished in 1970. Turnout for elections of the national parliament dropped from close to 100%
in 1969 to around 80 in the 2010 elections. Municipal elections have always been considerably lower starting around 75 per cent for the first data point, and about 54 per cent in 2010. Turnout for the elections of the European parliament has always been lower than national and sub-national elections, with a steep decline until 2000. Compared to other EU member states, the Netherlands is on the lower side of the turnout rate in the entire EU.

Solt (2010) finds for the US that in states where income inequality is higher (both compared to other states as to earlier points in time), citizens are less likely to vote. To some extent, Horn (2011) has similar findings for Europe. This can be explained with Schattschneider’s hypothesis of increasing differences between the rich and poor. Solt (2010: 285-286) summarizes this as follows: “As the rich grow richer relative to their fellow citizens, he argued, they consequently grow better able to define the alternatives that are considered within the political system and exclude matters of importance to poor citizens. Poorer citizens, less and less able to place questions of concern to them on the agenda, increasingly stay away from the voting booth.” Another argument is that inequality results in changing social norms (Lister 2007).

Hence, based on the Schattschneider hypothesis, as inequality is rising, we would expect the general turnout to go down in the Netherlands, as we observe in Figure 4.1. More importantly, however, we expect the differences across groups to increase over time. Based on the Schattschneider hypothesis one would expect the poor to have a lower turnout as inequality increases, but the rich a higher turnout.

Figure 4.1 Voter turnout, 1956–2010

In Figures 4.2 and 4.3 we see how turnout varies across social groups over time. We plotted turnout over time for different educational levels separately. The national election survey (figure 4.2) only has data points in election years, the survey cultural changes (figure 4.3) has data points mostly bi-annually. The survey questions are slightly different and ask for whether you voted in the previous elections (Dutch national election survey) and for the intention to vote in the next election, or if elections were held now (survey Cultural Changes). The results are similar for the two data sources: individuals with higher levels of education have a higher propensity to vote, which corresponds with previous research (Bovens and Wille 2010).

Over-time changes fluctuate more for lower levels of education than for higher levels. In the year 2000, propensity to vote drops and rises sharply after (figure 4.3). Whether people voted in the last election or not rises sharply after the 2002 elections after years of descendent, with the exception of the people with a higher vocational education. This is due to the landslide elections of 2002, where Fortuyn’s populist party entered the parliament with 17 per cent of the votes.

Based on these figures, it is difficult to examine whether the different educational groups are moving towards each other or further apart. Eye balling the figures, it seems that differences between educational levels exist (higher levels participating structurally more than lower levels), but that these differences do not change much over time. This observation is confirmed by Hakhveridan, De Vries and Van der Brug (2011), who analyse –among other political outcomes- the intention to vote in a multivariate manner.

This would imply that, the observed decreasing overall turnout could be due to the rising inequality that has been documented in chapter one of this report. There is, however, little evidence for a widening gap between different levels of education. In the years 1985-1990, when inequality rose sharpest in the Netherlands, it seems that the lower educated have an increasing turnout, whereas the turnout of the higher educated is rather stable. This is, however, more clear in Figure 4.2 than it is in Figure 4.3. This development is not in line with the Schattschneider hypothesis, which predicts that it is the more advantaged groups that have a higher turnout with growing inequality and the less advantaged groups pull in and hence have a lower turnout.
In figures 4.4, party membership is visualized, another indicator of political participation. In the data of the National Election Survey (figure 4.4), the general trend of party membership is decline. However, this is most strongly for those with the highest level of education. This would hint at convergence of groups, something one would not expect if inequality would be causing these changes. The stronger decline of the higher educated in participation rates is conflicting with the Schattschneider hypothesis.

However, the picture changes when we zoom in on the years 1985-1990 the years where inequality increased most sharply in the Netherlands. We see that in Figure 4.4, in those years the membership rates for the higher educated increases. This is in line with the idea that, with rising inequality the
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more advantageous groups “grow better able to define the alternatives that are considered within the political system and exclude matters of importance to poor citizens” (Solt 2010). In the years where inequality decreased, (1977-1985 and 1990-2000), we observe the reverse, there the educational groups come closer together.

**Figure 4.4. Membership of political part by educational level.**

Source: Dutch National Election Survey (1971-2010).

**Figure 4.5 Union membership in the Netherlands.**

Source: Statistics Netherlands.

Union membership is another indicator of participation and mobilization. Since unions bargain for better labor conditions of one’s own group, one would expect more benefits of membership with
rising levels of inequality. That is, with higher income inequality the bottom groups become poorer (or, less rich when compared to the top), making it more beneficial for them to unite and fight for their interests. Similarly, it is likely that groups in the top of the income distribution, under conditions of higher inequality have a higher incentive to protect their interests and therefore unite.

Figure 4.6 Union membership in the Netherlands as a percentage of employees.

![Graph showing union membership as a percentage of employees over time.](image)

Source: Statistics Netherlands.

Figure 4.5 presents the number of union memberships per 1,000 inhabitants. In Figure 4.6 this figure is presented as a percentage of the employed persons. With regard to the membership ratio as a percentage of the work force, the following can be observed. Until the end of the ‘70s, the membership rate is rather stable, with a sharp decline until the mid ‘80s. This concurs with a decline in income inequality in the same period. When inequality goes down, differences across groups become smaller, giving less reason to protect the interests of one’s own group. Or, put differently, with decreasing inequality the bottom groups are relatively better off giving less reason to unite and fight for their interests.

From the mid ‘80s to the beginning of the ‘90s, the membership rates increase (and trending slowly downwards afterwards). These are the years in which inequality has risen most sharply in the Netherlands. This pattern therefore seems to fit with the idea that when inequality rises, people increasingly unite to protect their interests. Since the 2000s, however, inequality rises steadily, and union membership decreases.

The above comparison is based on the trend in income inequality based on household incomes. This is the most ‘general’ measure of inequality. The general mechanism between trends in inequality and union membership is likely to apply for such a general measure of inequality. However, since unions
bargain for better wages, it makes sense to look at the trends in wage inequality too. As can be seen in Figure 2.11, inequality based on income from labour has been risen steadily since the 1980’s (+31%). Based on equivalized incomes, this increase is, however, not that strong (+8%). In any case, if we expect measures of labour income inequality to affect union membership, it seems that with increasing inequality, membership goes down. In contrast to an increasing ‘insurance’ against rising inequality in the form of union membership, people choose to opt out of unions.

This overall decline is not in line with the expectation that, with rising inequality, people protect themselves from increasing differences and possible marginalization by becoming a member of a union. There is perhaps an alternative explanation. It could be that, as is suggested by Uslaner and Brown, and by Wilkinson and Pickett (2009), that inequality decreases trust, solidarity and increases status competition. It could be the case that rising inequality fuels a more individualistic mentality, which causes people to perceive their interests not to be represented by a collective, but rather as an individual endeavor. Along that line of reasoning, union membership is less likely with higher levels of inequality. This could be especially the case for the less vulnerable groups in society, like the higher educated.

In figure 4.7, we look across the social gradient and plot union membership for the years 1975-2008, for different educational levels. There is a general declining trend from 1975 until the beginning of the ‘90s. After that, membership rises slightly, and declines again in the early 2000’s. Membership rates vary between above 30 per cent for the highest educated in the mid ‘70s to around 15 per cent for the lower educated around 1990. In general, higher educated people are more often member of a union. This difference does not vary much over time. Data provided by Statistics Netherlands, shows that for the years 1995-2010 the decrease in union membership is strongest for the higher educated, supporting the idea that the decline in membership is stronger for less vulnerable groups, or put differently, groups that might even gain from rising inequality. The same can be observed in Figure 4.7: from 2000 onwards, the decline in union membership is especially strong among the high educated.

However, from the 90s onwards we observe a rise of membership rates of the lowest educated. The rates for higher educated people seem to decline in those years. This would be in line with a view where, under conditions of rising inequality, the lower educated insure themselves against the possible negative consequences of rising inequality, and the higher educated increasingly choose to ‘fight’ on their own: since they are on the top side of the income distribution, they are more likely to benefit from rising inequality and therefore do not need union membership as much.
Figure 4.7 Percentage of people that is member of a union.


4.3 Civic and social participation

Social participation can be described as the informal bonds between people, or as the extent to which people interact with their friends and family members (Spencer and Pahl, 2006, Van der Meer, et al., 2009). Often, this is also classified as informal social capital, because it refers to the resources that can be accessed through these relations (Lin, 2001, Pichler and Wallace, 2007). The main distinction with the other form of participation that we identify is that it is based on informal, as opposed to formal or institutionalized ties.

Previous cross-national research suggests that in countries, states or neighbourhoods where inequality is high, trust and civic participation are low (Alesina and La Ferrara, 2000, 2002 Oliver, 1999, Uslaner and Brown, 2005, Rohstein and Uslaner 2005, Lancee and Van de Werfhorst 2012). Moreover, researchers find educational differences in social capital in Europe (including for the Netherlands): people with a higher educational attainment have more formal and informal social capital (Gesthuizen, Van der Meer & Scheepers 2008)

Figures 4.8 and 4.9 present the more extensive forms of civic participation that are available in the Dutch Elections Survey. Figure 4.8 plots an index of civic participation from the Dutch Election Survey (see Hakhverdian, De Vries and Van de Brug 2011). Although not containing many measurement points, the figure indicates an upward trend for political participation. The trend is almost identical to that of inequality in terms of the Gini-coefficient.
Previous comparative research suggests that inequality and civic participation are correlated negatively. With inequality and participation both rising over time, the picture of Figure 4.8 does not concur with these previous findings: in the period when inequality has risen sharpest (1985-1990), also political participation shows the sharpest increase. An explanation might be that most previous studies are internationally comparative. They hence compare levels across countries, and not levels within a country across time, which may operate with another mechanism. A more substantial explanation might be that with rising inequality, frustration goes up and together with that the motivation to try to change things, which results in increasing participation.

In Figure 4.8, the percentage of people that is engaged in volunteering activities is shown. As expected from previous studies, lower educated people volunteer less than higher educated people (Wilson 2000; Curtis, Grabb & Baer 1992). Due to the short observation window, the trend is not very clear: it could be stable, or declining slightly. The latter conclusion would concur with the findings of Putnam (2000), who argues that social capital –of which volunteering is a key part- has been declining in the United States for the past 25 years.
In Figure 4.10, we see that religious participation in the form of church attendance has declined steadily since 1975. This is the case for all levels of education. Moreover, the decline does not seem to differ across groups. A hypothesis could be that with increasing inequality people increasingly look for stable anchors in their life, and the church may provide such a place, implying that increasing inequality is positively associated with church attendance. However, it is more likely that the declining trend of church attendance is rather a sign of the general process of secularisation, which might be driven by educational expansion.

There is some research that shows that religious participation is positively associated with volunteering (Ruiter & De Graaf 2006; Wuthnow 2002; Musick, Wilson & Bynum Jr 2000; Curtis, Baer & Grabb 2001). The decline in church attendance could therefore explain at least to some extent the slightly downward slope in volunteering.

For the largest part of the observations, people with an elementary and lower vocational degree go to church more often than people with tertiary education. Hence, contrary to other forms of participation, religious participation is higher for the lower educated. In 1975, about 30 per cent of the respondents that has tertiary education indicate to go to church at least once a month. In 2008, this number has declined to less than 20 per cent of the respondents. For people with an elementary or lower vocational degree, almost 40 per cent goes to church at least once a week in 1975. In 2008, this number is below 30 per cent; in 2000 it is almost 20 per cent.
Figure 4.10. Percentage of people that goes to church at least once a month by educational level.

![Percentage of people going to church by educational level](image)


Figure 4.11. Social participation: meeting friends and family once a week by education.

![Social participation by education](image)

Source: Netherlands Statistics

In Figure 4.11, the frequency of meeting family and friends is presented, as proxies of social participation (Pichler & Wallace 2007; Lancee & Van de Werfhorst 2012). Those with an elementary education only have the highest meeting frequency for friends. Those with a lower vocational or lower secondary have the lowest meeting frequency. Unexpectedly, the higher educated score in between. No clear pattern is visible. With regard to family, elementary and lower secondary educated meet their family members less frequently than lower vocational and tertiary educated.
Trust in others and in institutions

Trust is a variable of central interest to scholars studying social cohesion and social capital (Nannestad 2008). There is a debate about whether or not inequality affects trust (Rothstein & Uslaner 2005; Steijn & Lancee 2011; Solt 2008; Delhey & Newton 2003; Delhey & Newton 2005). Many studies on the consequences of income inequality find that where inequality is high, trust is low. Many of the studies that examine negative effects of income inequality presume that the effects of income inequality are mediated by a decrease in social trust (Wilkinson and Pickett, 2009). A negative effect of income inequality on social trust would therefore result in several undesirable outcomes. The central argument why inequality reduces trust is that as differences between people are larger, uncertainty increases and trust in other people subsequently goes down.

Figure 4.12. Trust in political institutions.

![Graph showing trust in political institutions](image)

Source: Eurobarometer

In this section, we describe measures of trust and attitudes alike that are available for the Netherlands for a longer period of time. Figure 4.12 plots the percentage of people that expresses trust in various political institutions, as measured by the Eurobarometer in the years 2003-2010. The survey question reads: “I would like to ask you a question about how much trust you have in certain institutions. For each of the following institutions, please tell me if you tend to trust it or tend not to trust it” No clear common trend can be observed here: trust in the parliament has risen slightly; trust in the legal system has gone up until 2008, than drops. The peak observed in March 2007 for trust in
political parties and the government goes and in hand with the peak in inequality. It has to be noted, however, that the observation window of 7 years might be too short to capture effects of inequality; especially since income inequality has risen only moderately in that period. Figure 4.13 plots satisfaction with democracy, a good proxy for satisfaction with and approval of the political system in the Netherlands. Most movement is in the categories ‘fairly satisfied’ and ‘not very satisfied’: whereas the percentage of people that is fairly satisfied has risen since the ’70s, the amount of people that is not very satisfied has gone down, suggesting that satisfaction with democracy has (modestly) grown from beginning ’70’s until approximately the year 2000. After that, we see what are likely to be the results of the political landslide in 2002: satisfaction with democracy drops and dissatisfaction increases. In 2002, the political debate changed radically, and populist parties entered the parliament with high electoral success (Van der Brug, 2003). With regard to satisfaction with democracy, there hence seems to be little evidence of a negative relation with income inequality.

Looking at the relation with the Gini-coefficient, there seems to be a weak correlation in the sense that in the years where the Gini goes up, satisfaction goes also up: in the 1980s (where inequality increases) there are more people who are fairly satisfied, and less people who are not very satisfied. It could hence be that people evaluate politics at least partly based on the distribution of income

Figure 4.13. Satisfaction with democracy

Source: Eurobarometer

Figures 4.14-4.16 present political attitudes in the Netherlands and its development for the last 30 years, for different educational levels. Figure 4.14 plots political cynicism, which is a scale consisting
of items like ‘One is more likely to become a member of parliament because of one’s political friends than because of one’s abilities’, ‘Ministers and state secretaries are primarily concerned about their personal interests’ and ‘Although they know better, politicians promise more than they can deliver’ (see Dutch Election Survey Codebook). Clearly, political cynicism is highest among the lowest levels of education, and structurally lower with higher levels of education. Over time, political cynicism seems to grow, although not clearly different for different educational levels. This trend is the same in inequality, supporting the idea that with increasing inequality, people ‘pull out’ of civic life (Uslaner and Brown 2005). It has to be kept in mind though, that due to educational expansion, the educational groups are different for different time points: the lowest educated in the late ‘70’s is very different from the lowest educated in the beginning of the 2000’s.

Figure 4.15 presents a scale for political interest (i.e. reading or talking about national and international news). Higher levels of education are more interested in politics. Overall, political interest is declining in the Netherlands, at least when it concerns reading and talking about the news. At the same time, inequality is rising, providing some illustrative evidence that in times of rising inequality, people pull out of civic life. Differences across educational groups seem to decline over time, with the landslide 2002 elections as sharp contraction point. In 2002, the populist party of Pim Fortuyun entered the parliament with 17 per cent of the votes (Van der Brug 2003). This trend implies that the differences across educational groups are smaller now than they were in 1971, the first measurement year.

**Figure 4.14. Political cynicism by educational level.**

![Graph showing political cynicism by educational level from 1977 to 2009.](image)

Source: Dutch National Election Survey (1971-2010).

**Figure 4.15. Political interest by educational level**
Figure 4.16 presents external political efficacy. This is a scale consisting of the following items: ‘MPs do not care about opinions of people like me’, ‘Parties only interested in my vote, not in my opinion’ and ‘People like me have no influence on politics’. For all educational groups, this figure is rather stable over time, with higher levels for people with higher levels of education. That is, until 2000. From 2000 onwards, efficacy for all levels goes down sharply, bringing the educational groups closer together. In general, the trend in efficacy seems similar to that of inequality: when inequality rises, also efficacy rises.
Overall, if there is a trend, educational groups seem to converge, rather than diverge. With rising income/economic inequality, one would expect divergence: rising inequality implies that interests for groups in the top and bottom of the income distribution change. In contrast, it seems that educational groups are closer in later years with regard to political interest and efficacy, and not to change much with regard to political cynicism. It seems hence rather the case that although the trends in efficacy and inequality are similar, there is no clear relation between the trend in inequality and the distance between groups.

4.4 Political values and legitimacy

What relation would we expect between inequality and left-right orientation of people? In so far as left orientations stand for more government intervention and more redistribution, one would expect with rising inequality that more vulnerable groups (such as the lowest educated) lean more towards the left because more redistribution can be an insurance against the higher risks that inequality implies. Groups in society that profit from higher inequality (for example, because their income grows disproportionally) are more likely to favour a smaller role of the government, as to avoid paying more taxes.

Figure 4.17. Mean left-right scale by educational level.

In Figure 4.17 the mean score on a five-point left-right political orientation scale is shown for the different educational groups. In this Figure, a higher mean, implies an average political orientation that is more towards the right of the political spectrum. As can be expected based on previous
research (De Vries, Hakhverdian & Lancee 2011; Hakhverdian, De Vries and Van de Brug 2011), lower levels of education are positioned more on the right and higher levels of education more to the left. There seems to be a slightly declining trend, meaning that the population on average is becoming more left-oriented. However, in the year 2002 this changes, where the educational levels are closer together, and the higher educated becoming more right orientated. It is unclear.

Figure 4.18 plots the percentage of people that indicates to be at the far right of the five-point scale (that is, scoring 5). This percentage is clearly decreasing until the beginning 2000s, and then goes up again. The distances between educational groups are rather stable, with the exception of the lowest educated, who converge towards the rest over time.

Figure 4.18. Percentage of people that indicate to be at the right by educational level.

In Figure 4.19, membership support for the European Union is plotted, based on data from the Eurobarometer. From the beginning of the ‘70s until the beginning of the ‘90s, the percentage of people that supports membership of the European Union shows a slight upward trend. Since then, the trend is downward, with an occasional outlier in the mid-2000s. The trend in inequality is somewhat similar, but there is no clear relation between the changes in inequality and those in the mean support.

Figures 4.20 and 4.21 cover a topic of increasing attention: attitudes towards immigrants and xenophobic feelings. It could be that, as inequality rises and pressure on resources hence goes up, this translates in more negative attitudes towards immigrants. Furthermore, the generally increasing
levels of stress and anxiety that Wilkinson and Pickett speak of could translate into hostility towards the out-group. This would imply that with rising levels of stress and status competition that is triggered by higher inequality, out-groups are increasingly a scape-goat and get all the blame.

Figure 4.19. Percentage of people saying that membership of the EU is a good thing

![Graph showing membership support over time](image)

Source: Eurobarometer.

Figure 4.20 presents the mean percentage of people that does not object to neighbours of another race moving in. Racial tolerance is higher for people with a higher level of education; there is no clear trend. If there is any movement, it is towards more tolerance. Also in Figure 4.20 we observe the political developments in the Netherlands in 2002. In that year, tolerance decreases sharply for all but the lowest educated. Figure 4.21 summarizes the mean xenophobic attitude of people for several educational levels. The variable is a summary of three items: whether in case of a promotion at your work, the position should go to a Dutch person or to an immigrant, whether if somebody has to be fired it should be an immigrant or a Dutch person, and last whether if there is social housing available whether this should go to an immigrant or to a native Dutch. There seems to be a downward trend with regard to xenophobic attitudes in the Netherlands: a sharp decline in the ‘80s, a rise in the late ‘80s and early ‘90s, followed by a hovering but gradual less xenophobic attitude. This implies that compared to the past, people in the Netherlands express less discriminating opinions against immigrants. Differences across educational levels are as can be expected based on previous studies: lower levels of education express a more xenophobic attitude (see, for example (Coenders et al. 2008; Coenders 1988)).
If inequality triggers anxiety and stress that subsequently translates into scape-goating the out-group, this may be in line with the trend in inequality and xenophobic attitudes in the Netherlands: in the period where inequality has risen (1985-1990), attitudes towards immigrants have become more...
negative. This is most clearly visible in Figure 4.21, a variable that is conceptually a better one then the one on which Figure 4.20 is based. In the years before 1985, the period where inequality decreased, we also see a decrease in xenophobia. In the second half of the 1980s, when inequality rises sharply, also xenophobia is increasingly high. After 1995, the pattern is less clear: there is a small decrease in income inequality (and little movement in xenophobia).

4.5 Values about social policy and welfare state

In this section, we examine values that concern policy, redistribution and attitudes toward the welfare state. As inequality is rising, one would expect attitudes towards redistribution to change as well. Larger differences in terms of income could mean a bigger incentive for the bottom income groups to desire redistribution, as they would benefit from it. On the other hand, one would not expect this to happen in the top of the income distribution, as this would imply paying more taxes.

Figure 4.22 and 4.23 visualize attitudes towards redistribution and income inequality. Both figures show a similar pattern: from the beginning of the ‘80s until the beginning of the ‘90s, less people think that income differences are too large, and less people think that income differences should be smaller. From 1992 approximately, this trend reverses with more people agreeing that income differences are too large (Figure 4.22) and should be smaller (Figure 4.23). Around 2005, this increase levels off and stabilizes (and even goes down for some groups).

Figure 4.22. Percentage of people agreeing that income differences are too large, by educational level

With regard to differences across educational levels, here we see what can be expected based on previous work on attitudes towards redistribution: the lower educated find income differences more often too large and express more desire for these differences to be reduced (see, for example Lancee, Gesthuizen and Van de Werfhorst, forthcoming). If there is a trend with regard to the distances of the groups, it seems that for the amount of people that wish income differences to be smaller, the differences across education decline.

Can these attitudes be related to the trends in income inequality that were laid out in chapter two? In the second half of the '80s, where inequality has increased sharpest, this is indeed mirrored by an (albeit slight) increase in demand for redistribution a few years later. In Figure 4.23, this declines again from 1989 onwards, a period that also showed a modest decrease in inequality. Although income inequality increases again from about 2000 onwards, we observe an increase in the demand for redistribution already from the mid ‘90s. There seems therefore to be an indication in the data that changes in inequality translate in people’s demand and desire for redistribution. However, on the other hand, with changes in inequality one would expect different changes in attitudes across the social gradient, something which could not clearly be seen in the data.

Figure 4.23. Percentage of people that wishes income differences to be smaller, by educational level

Figure 4.24. Percentage of people that agrees it is the responsibility of the government to reduce income differences, by educational level


Figure 4.24 visualizes the opinion of people with regard to the role of the government. Whereas the former two figures cover attitudes toward redistribution more generally, Figure 4.24 asks whether respondents think that it is the government that should reduce these differences instead of, for example, the market. This Figure shows a similar picture, albeit more clear: Support for government redistribution increase in the late ‘80s when inequality has risen. The years 1990-1993 show a steep decline, followed by an increase. In 2002, the last measurement year, support is lower again, most likely due to the political developments and the election results in that year. Differences across educational levels are similar to the former two figures, although the distances between the categories are smaller. Especially since the ‘90s, these distances are small. Also here it is interesting to note that the distance across educational groups does not seem to vary much over time.

4.6 Conclusion

In this chapter, we described the trend for several ‘political and cultural’ impacts, both in terms of attitudes and incidentally also in terms of behavior. As much as possible, long term trend data was used, as well as data for different educational levels, as to give an indication how people in different positions in society fare and express their opinions. If inequality affects political and cultural ‘variables’, this is likely to pan out differently for different groups.
Bearing in mind the difficulties with the data, some trends in indicators could be interpreted in line with the developments in inequality that were described in chapter two. Union membership, civic participation and attitudes towards distribution could be linked to the increasing inequality in the second half of the ‘80s. The trend in attitudes towards immigrants follows a somewhat similar pattern as the changes that were observed in income inequality.

Changing distances across educational groups could in general not be linked to developments in inequality. An exception is perhaps party membership for the higher educated, which - in contrast to the other groups- increased in the years of increasing inequality, suggesting that those better off capitalize their interests in times when there is most to gain.
5. Effectiveness in combating inequality

5.1 Introduction

Previous chapters have given an impression of the development of inequalities in Dutch society and its (potential) impacts. This chapter aims at answering the question whether policy has contributed to the increase of inequality and its (potential) impacts, or whether it was aimed at reducing it. To this aim, the sections in this chapter present time series on policy variables related to economic inequality, especially income inequality. Policy variables that affect labour income – minimum wages and wage-setting mechanisms such as, union density and collective bargaining coverage, centralization of wage bargaining – are discussed in section 5.2. Section 5.3 discusses the evolution from primary to secondary before tax income, which runs via public social expenditures. The growth or decline of those expenditures are discussed in this section, and includes sections on benefits and social welfare, old age pensions, health care, family benefits and housing subsidies. Section 5.4 studies the evolution of various taxes and their redistributive effects. Section 5.6 pays special attention to policies in the field of education.

5.2 Primary labour income

For most households, labour income constitutes the prime source of household income. Together with wealth income and income from self-employment (which basically is labour income too), labour income forms what we call primary income. As such, policies aimed at regulating wage setting contribute to income inequality through channels such as the minimum wage and collective bargaining rules. Wage setting mechanisms are found to have a substantial and significant impact on the distribution of earnings. High union density and bargaining coverage, and the centralisation/coordination of wage bargaining tend to go hand-in-hand with lower overall wage inequality (Aidt and Tzannatos, 2002; Blau and Kahn, 1999, 2002; OECD, 1997a). In addition, minimum wages reduce wage inequality. Koeniger et al. (2007) show that the 90-10 male wage differential is more compressed in the presence of higher minimum wages. This section presents the evolution of minimum wages and wage bargaining in the Netherlands during the last decennia.

5.2.1 Minimum wages

As a lower bound, minimum wages have implications for overall wage inequality. The Netherlands has a system of age specific minimum wages with lower minimum wages for young workers (see Fig.
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5.1. From age 23, the adult minimum wage applies. At age 15, the minimum wage is 30 per cent of the adult minimum wage, which gradually increases each year the individual grows older until he/she reaches the age of 23. As such, the minimum wage stimulates inequality between the young and adult households that was signalled in Table 2.4.

Figure 5.1 Youth minimum wage as percentage of adult minimum wage

Figure 5.2 Gross real adult minimum wage and median wages of full-time workers 1970-2010 (Euro per month, deflated)

Unlike other countries, such as Belgium and France, the Netherlands has no indexation system that automatically links minimum wages to the development of consumer prices. As a result, minimum wage earners are not automatically shielded from loss of purchasing power as a result of inflation.
Instead, minimum wages are linked to average collective agreement wages. This link has however been breached in 1983 and the minimum wage was frozen in the years 1984-1989. As a result, real minimum wages have declined since 1980 (see Figure 5.2). The compressing effect on the wage distribution, as observed by Koeniger et al. (2007) has weakened. As was noted by Salverda (2008a) the decreased minimum wage largely reduced its labour market significance and increased earnings inequality. Since median wages grew over this same period, the Dutch minimum wage earners have experienced an even larger relative decline in living standards. The minimum wage has been the baseline instrument to define all the thresholds for the access to benefits and various forms of benefits. As a result the absolute and relative decline in purchasing power of minimum wage earners is directly translated to a decline in purchasing power of benefit recipients, which was even aggravated by the fact that — since the early 1990s — a freezing of social benefits is possible whenever the inactivity rate falls below a certain threshold of 82.6 per cent (Salverda 2008, p. 82).

### 5.2.2 Wage bargaining

In the Netherlands wage bargaining takes place at the sectoral level. Social partners set sectoral wage scales that are in general somewhat higher than the legal minimum wage. That is, the lowest scale in the collective bargaining agreements exceeds the legal minimum wage in many CLA’s. As was mentioned in Chapter 4 only 25 per cent of all wage and salary workers are union members, but roughly 80 per cent are covered by a collective agreement. As such, collectively bargained sectoral minimum wages are as important for earnings inequality as the legal minimum wage, or even more so.

In Figure 5.3 the indices for the minimum wage, the lowest CLA scales and the average CLA wage are plotted. As can be seen from the Figure, the minimum wage and the lowest CLA-scales have been decreasing since the 1983, negatively affecting earning inequality (Salverda, 2008b).
5.2.3 Employment protection and temporary employment

An important source of growing labour market inequality is found outside the wage setting area, but rather in the unequal division of the flexibility/security divide. According to the OECD EPL-index the Netherlands employment protection is exactly the OECD average. This is achieved by a combination of rather stringent protection of ‘regular’ contracts, with large flexibility provided by temporary work arrangements. As many other European countries the Netherlands has chosen for partial flexibilisation of the labour market. In an attempt to combine security for the majority of the workforce with flexibility for employers, employment protection legislation for regular workers has been largely unaffected. Rules for hiring temporary personnel, on the other hand, are rather flexible. Nowadays approximately two thirds of new hires take place through temporary contracts, some with the option to extend into an open-ended contract. As a result the share of temporary contracts in the overall employment rate has grown from 8 per cent in 1990 to the current 18 per cent (Figure 5.4). For long, the flow from temporary to regular employment has been substantial, estimated at about 40 per cent by Zijl and Van Leeuwen (2005). Individuals who started in a temporary job were able to find regular work afterwards. Partially, this has been institutionalized by a type of contract that is temporary, but has the explicit intention to be transformed into an open-ended contract, in case of good performance. Dekker et al. (2011) have shown that fewer people make this transition
nowadays. They estimate that the transition rate declined from 30 per cent in 2001 to 23 per cent in 2009. This is partly attributable to labour market circumstances (De Graaf-Zijl and Berkhout, 2007), but if this decline in the transition rate from temporary to open-ended contracts persists, the Netherlands faces a future with a segmented labour market like in Spain, with highly protected insiders working in open-ended jobs and another group going from one temporary contract to the other or circulating between temporary employment and unemployment. The new government is planning to reduce the differences between flexible types of jobs and regular jobs. They way in which they will do so has not been decided yet at the moment this report is written.

**Figure 5.4 Share of fixed-term contracts (ftc) and temporary agency work (taw) in overall employment**

![Graph showing the share of fixed-term contracts and temporary agency work from 1990 to 2009](image)

Source: Berkhout and Van den Berg (2010)

### 5.2.4 Part-time employment

The Netherlands stands out in the abundance of part-time work arrangements among women (see section 2.2.1). Three quarters of the female workforce works part-time, half of whom work fewer than 25 hours a week. What is special in an international context is not only the high incidence of part-time employment, but also the fact that it is mostly voluntary. According to the OECD only 4 per cent of the women who work part-time do so involuntarily. Since the year 2000 there is even a law (Wet Aanpassing Arbeidsduur) that gives each employee the right to demand shorter (or longer) working hours. Employers have the obligation to cooperate and need to formulate the objections if they do not wish to grant the employee’s request.
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Part-time work has been stimulated since the recession in the early 1980s, when reduction of working hours was regarded as a fruitful option to redistribute the few employment opportunities among the labour force. During the rest of the 1980s and 1990s, part-time work was praised as a way to increase the low female participation rates. This has led to a culture in which part-time work is regarded as the standard for women, and a desirable standard as well. Over the last decade, when the Netherlands was confronted with shortages on the labour market, policy makers have been striving for extended working hours for women. Incentives to work part-time or not to work at all, which were present in the tax system and the health insurance system, were replaced by incentive to work (more). Prior to 2001, all individuals had a general tax allowance and additional tax allowances for working and parenting. It was possible to transfer unused tax allowances between partners. Due to the progressive nature of the Dutch tax system, it was financially unattractive for women to work at a low income if they had a high-income partner. The 2001 tax reform replaced the general allowance by a tax credit, a reduction in tax, independent of the marginal tax rate. The tax credit was still transferable between partners, but the total tax reduction would not be affected by the transfer. Therefore, the tax reform reduced the costs of entering the labour market (Bosch et al., 2009).

Those efforts have been effective in stimulating labour force participation of women, but have not been very effective in stimulating the number of working hours. Sociologist have argued that it is a change in culture that is necessary to achieve the policy goal of longer working hours for women (Portegijs et al., 2008). Financial incentive are not sufficient to bring about this cultural change. The ‘problem’ is that women are satisfied working part-time, relatively high-skilled work can be done part-time, full-time work is not a financial necessity, and the burden of additional working hours is not shared within partnered families (Bosch et al., 2009).

The high incidence of part-time employment is an important aspect of the rise in two-earner households (see Chapter 2). This increase in the number of two-earner households has been argued to be an important factor for the rise in the poverty threshold (Marx and Nolan, 2012) and household income inequality. Given the uniquely high rate of part-time jobs in the Netherlands, its effect on income inequality can be argued to have been important as well.

5.2.5 Self employment

Since early 2000 the number of self-employed has increased substantially from 11 per cent to 15 per cent of employment. This increase is nearly entirely attributable to the increase in the number of self-employed without personnel, which grew from 6 per cent to 10 per cent of employment.
Potentially, this is attributable to a number of tax deduction options available to the self-employed in the new 2001 tax law:

- the self-employment tax deduction, which amounts to 7,280 in the year 2012. Until 2011 the amount of self-employment tax deduction depended on the profit made by the self-employed.
- the so-called starters tax deduction, a 3-year top up of the self-employment tax deduction of approximately 2000 Euros.
- an additional starters tax deduction for disabled people of 4,000-12,000 Euros depending on the number of previous years the person received the starters tax deduction.
- Tax deduction of expenses made for the benefits of the ‘own company’.
- Research and development tax deduction (topped up with an additional R&D tax deduction in 2012).
- Tax deduction for partners that work unpaid in the company of the self-employed. The amount that can be deducted depends on the profit and the number of hours the partner worked in the company.
- Tax deduction of the share of profit that a person sets aside in order to save for his/her old age pension.
- SME profit deduction (MKB winstvrijstelling): of the profit after the above-mentioned deductions, self-employed, and other small and medium sized companies, can deduct 12 of their profits. Since 2010, there is no longer a requirement regarding the number of hours worked in the own company in order to qualify for this deduction.

Even though the largest share of new self-employment without personnel is found among higher educated and older age cohorts. Nearly two thirds of the self-employed without personnel come from this group (CBS Statline). There is however more and more debate about an important potential drawback of this phenomenon, found in the lower end of the labour market. Trade unions and popular media mention employees being forced to resign and start to work as self-employed for the same company. Supposedly, this phenomenon is especially found in construction, agriculture and the postal market. There are no numbers to support this. There is however evidence of an important share (20 per cent) of newly starting self-employed who experienced self-employment as their only option to (re-)enter the labour market (De Vries et al., 2011). Given the fact that income inequality among self-employed is much larger than among employees, this...
5.3 From primary income to gross income: public social expenditures

Social expenditures, in terms of social benefits, play a major role in shaping the income distribution. Several authors have found a strong negative cross-country relationship between the level of social spending and the incidence of poverty, especially for the non-retired population (see e.g. Bradbury and Jäntti, 2001; Cantillon et al., 2003; Förster and d’Ercole, 2005; Nolan and Marx, 2009). The OECD keeps track of social expenditures in the so-called SOCX-database. For an expenditure item to be classified as ‘social’ in the OECD SOCX data, two main criteria have to be simultaneously satisfied. First, the benefits have to be intended to address one or more social purposes, also called risks (old age, invalidity, widows/widowers and orphans, health, unemployment, family, housing, reintegration into the labour market). Second, programs regulating the provision of benefits have to involve either a) inter-personal redistribution or b) compulsory participation. ‘Public’ social expenditure is social spending with financial flows controlled by General Government (different levels of government and social security funds), as social insurance and social assistance payments. Figure 5.6 reveals a downward trend in public social expenditures in the Netherlands, with some increases due to automatic stabilizers in times of recession. The period 1993-2001 is responsible for the major share of the downward movement of social expenditures. As will be shown below this is mainly caused by the restructuring of the disability benefit and sickness regulation.
Figure 5.6 also reveals the breakdown of social expenditures by expense category. Here, it becomes clear that the decline in public social expenditures is mainly due to the decrease in incapacity related benefits. For a long time, the Netherlands were renowned for their large share of disability benefit recipients (to complement the relatively low rate of unemployment). Policy has been adapted in order to successfully reduce the number of people receiving disability benefits. Several new laws were introduced in order to enhance private responsibility for sickness benefits and a clear divide between long-term full disability and short-term partial disability. Other expense categories, such as social expenditures on old age benefits, survivor pensions and family benefits, were reduced as well, but their impact on total public expenditures was far less. In only two categories expenditures were increased: health and active labour market policies. The latter coincides with the trend of cuts in many other benefit areas, all with the intention to stimulate labour force participation. As such, the Lisbon goals of achieving higher labour force participation had an impact on social policies and through that on income inequality. Below, in sections 5.4.1-5.4.7, the developments in the expense categories are discussed in greater detail.

In many countries we see a recent trend towards more in-kind provision of social benefits (as opposed to cash income replacement), as well as a growing share of voluntary private social expenditure. This trend is also, even stronger than in the OECD average, visible in the Netherlands.
Over time, the share of in-kind social expenditure has increased. From one fourth (26%) in 1980, it grew to 45% in 2007. This shift is due mainly to the increase in health care spending, which represents the bulk of in-kind social expenditures. The only other category that represents a somewhat significant share of in-kind benefits are expenditures on family benefits, which grew due to the extension of subsidized child care, a measure that was aimed at stimulating (female) labour force participation. Cash public social expenditure declined relative to in-kind spending, mainly because (cash) disability benefits declined and (in-kind) health expenditures grew.

The second international trend, a growing share of voluntary private social expenditures, is as good as non-existent in the Netherlands. Its share grew from 0.45% of GDP in 1980 to 0.63% in 2007 and is mainly the result of private pension plans (OECD SOCX). Public debate does appear to head for stimulating private responsibility for pensions and social security, e.g. additional insurance against invalidity. Goudswaard and Caminada (2010) argue that changes in the public/private mix in the provision of social protection may affect the redistributive impact of the welfare state. They find a negative relationship between public social expenditures and income inequality and a positive relationship between public social expenditure and income redistribution. But they do not find a
significant relationship between private social expenditures and income inequality or income redistribution.

**Figure 5.8 In kind public spending by expense category, % GDP**

![Graph showing in kind public spending by expense category, % GDP](image)

Source: OECD SO CX

### 5.3.1 Unemployment benefits and social welfare

The Dutch system of unemployment benefits and social assistance resembles that of many other European countries, with mandatory insurance against unemployment for all workers, who receive unemployment benefits dependent on the last earned wage, unconditional upon wealth and partner income. Policy discourse has led to a decline in the maximum duration of receiving unemployment benefits in order to stimulate job search. Even though the benefit level has been cut from 80 per cent to 70 per cent of the last earned wage in 1985, it is still rather generous in an international perspective. It is the maximum duration of benefit receipt, which depends on the years worked, which has been the subject of more recent policy interventions. The maximum duration has been reduced substantially to a maximum of three years. In an international setting this is still quite long and policy intentions are to reduce the maximum duration even further. The new government, in place since November 2012, is planning to reduce the maximum duration to two years: one year with benefits equal to 70 per cent of the last earned wage and one year with benefits equal to 70 per cent of the minimum wage. The latter equals the level of social assistance, but without the partner tests or means testing that the social assistance regime applies.
According to Figure 5.9 the lower income deciles receive a somewhat, though not spectacular, larger share of their income from unemployment benefits than the higher income deciles. The distribution did not change much over time. Clearly, it is the business cycle that determines the share of gross income coming from unemployment benefits for all income groups. The lower income groups are more sensitive to the business cycle than the higher income groups; the difference between the peaks and the troughs is larger for the lower income deciles.

When the maximum duration of the unemployment benefits is reached, or a person does not qualify for unemployment benefits, social assistance is the safety net that people can rely upon. A system of family related social assistance benefits is universally available, conditional on a means and a partner income test. In recent years, policy has been to reduce reliance on social assistance especially for the young. Recently income earned by children living in the households has been added to the means testing. Also, persons below the age of 27 no longer qualify for social assistance. If a person aged 18-27 applies for social assistance, he/she is required to look for a job and investigate options to follow (additional) education first, for a period of four weeks. If this obligation is not fulfilled sufficiently, the municipality will reject the application for social assistance and the person will instead need to continue looking for work, go to school or depend on their family. All these measures have had an impact on income inequality. It are probably these policy interventions that had the biggest impact on income inequality, since people who qualify for social assistance are by definition in the bottom of the income distribution, a fact that does not hold for most other social benefits.

Social assistance is clearly redistributive, as it was meant to be. Figure 5.10 shows that social assistance is an important income source for the three lowest income deciles. Especially the lowest decile, where about 20 per cent of gross income comes from social welfare. Since the late 1990s the dependency of the 2nd and 3rd decile on social assistance has decreased, while it has remained equally important for the lowest decile. The total amount spent on social assistance has been reduced in real terms since 1994, possibly as a result of the abovementioned restrictive policy. The figure shows that this affected the 2nd and 3rd deciles most. Whether the decline in expenditures on social assistance contributed to income inequality depends on the alternative of the households that

59 For people 50-60 years of age there is the IOAW, which provides an income of 70 per cent of the minimum wage at the expiration of unemployment benefits. This equals the level of social assistance benefits, with the associating test on partner income, but without the associating test on household wealth. For people aged 60+ there is the IOW, which is very similar to the IOAW, but without the test on partner income. The new government is planning to abolish the IOAW and instead provide IOW to individuals aged 55 and over whose unemployment benefits expire.
no longer receive social assistance. If they now earn a wage that exceeds the benefits level, their position in the income distribution shifted upwards and poverty may have decreased. But this relation is not immediately clear, nor is it easy to determine.

Figure 5.9 Unemployment benefits as percentage of gross income by income decile (income deciles based on gross income)

Source: CBS, own calculations

Figure 5.10 Social assistance benefits as percentage of gross income by income decile (income deciles based on gross income)

Source: CBS, own calculations
Just like many other countries the Netherlands has experienced a shift from passive to active labour market policies, both for recipients of unemployment benefits and social assistance. Active labour market policies were introduced under pressure of the OECD 1994 Jobs Study and the European Employment Strategy (EES) that was introduced in 1997. This does not really show in Figure 5.11, due to the fact that active measures included subsidized employment as well. In the earlier years, subsidized employment was the most important labour market measure. Since the introduction of the EES and OECD Jobs Study the Netherlands has followed the international trend of introducing other labour market integration programs that are specifically aimed at participation in the regular labour market and not in subsidized segments.

5.3.2 Disability benefits

The decline in spending on incapacity related benefits has contributed to growing income inequality not only by reducing access to the benefits involved, but mainly by the introduction of a maximum duration for partially disabled workers. Incapacity related benefits have decreased substantially as a share of GDP. This decline is responsible for the major part of the decline of social expenditures in the 1990s. For a long time, the Netherlands was renowned for its large share of disabled workers (which complemented the relatively low rate of unemployment). In order to combat this undesirable situation, and to enhance the labour force participation, requirements for entering disability schemes
were restricted, as were the rules for periodic re-evaluation of the (dis)ability percentage. The (dis)ability percentage is the estimated percentage of the previous wage that the person is deemed able to earn in his/her current condition. The disabled who never worked receive a benefit more or less equal to the social assistance level, by National Insurance scheme Wajong. For the self-employed there is the WAZ. The policy discourse has developed in a direction in which the full time, fully disabled persons are well taken care of in terms of benefits that are higher than before (now 75 per cent of the previous wage), whereas the temporary and/or partially disabled face declining payments and obligations to look for work.

The policy change that was most important for the declining number of disability benefits was the introduction of private responsibility for sick leave. Since 1994 employers were obliged to pay for the first two to six weeks of sick leave, depending on the firm size. In 2004 this was extended to the first year and in 2006 to the first two years. Obviously, this saves public expenditures on disability since the government does not pay for these first two years of sick leave. Since employers are now financially responsible for this sick payment, they feel the incentive to reduce long-term sickness. Further on this, another law was introduced to make sure that both employer and employee contribute to a quick return to work. If one of the two does not cooperate, he/she feels the financial consequences. This led to another decrease in the inflow into disability schemes. This decline in disability expenses did not contribute to an increase in income inequality. On the contrary, workers that might have been disabled under the former regime are now in work and earn a wage which is probably higher than the benefits they would have received otherwise.

The second important policy change did enhance income inequality. In 2006 the original disability act, called the WAO, was replaced by two new ones: the WGA for partial disability and the IVA for fully disabled persons (remaining earnings capacity to work below 80 per cent of the last earned wage). Benefits for fully disabled workers have been increased from 70 to 75 per cent of the previous wage, which is also the case for the partially disabled during the first two months. In the WGA the focus is no longer on disability, but on the remaining ability to work. In resemblance of the system for unemployment benefits, the maximum duration of partial disability benefits has been reduced. If the partially disabled worker does not succeed in finding work, his benefits are cut to a level of maximally the minimum wage. The rate of the cuts depends on the severity of the incapacity to work. As a result, this group faces a potential future of living in poverty.

Despite the recent drop, the number of people of working age in the Netherlands who receive disability benefit is still among the highest in the OECD; in 2008, 8.2 % compared to an OECD average of 5.7%. Public spending on sickness and disability makes up 3.7% of the Netherland’s total GDP, compared to an OECD average of 1.9%. The current policy aim is therefore to address the large
number of disability benefit claims at age 18-22. The annual number of claims by young people with childhood and adolescence disability into a specific program for youth handicapped (Wajong, which covers individuals who do not have any work history) is massive. Here too, policy is aimed at distinguishing long-term full disability from short-term and/or partial disability. In the near future, the latter group will no longer receive disability benefits but basic social assistance. This implies a serious income decline for this vulnerable group. Again, the policy intention is to stimulate labour force participation and reduce benefits dependence. Research has shown persistent small opportunities on the labour market, irrespective of wage subsidies available for employers hiring Wajong-recipient, especially in slack labour markets.

Figure 5.12 Disability benefits (WAO/WIA, WAZ, and until 2000 Wajong) as percentage of gross income by income decile (income deciles based on gross income)

Just like the other employee insurance, the unemployment insurance, the lower income deciles receive a somewhat, though not spectacular, larger share of their income from disability benefits than the higher income deciles (see Figure 5.12). This is the result of the fact that those employee insurance benefits are a percentage of the last earned wage and therefore end up with both the higher and lower deciles.

The aim of reducing benefit dependency of (partially) disabled individuals has taken the shape of reduced access to rather generous benefits schemes. They are supposed to find a job and, if they do
not succeed in finding this job, rely on social welfare.\textsuperscript{60} Due to the means testing of social welfare, (partially) disabled individuals with a partner will no longer have any right to benefits of any kind. It seems reasonable to assume that this will enhance income inequality by a growth of the group of lowest incomes. But this effect also depends on the success of the partially disabled on the labour market.

There is a new trend visible in the labour market of small private consultancy companies that help employers to reorganize their internal labour market in a way that makes the inclusion of workers with disabilities possible, by so-call job carving. Easy tasks are taken away from other functions and combined into new functions that less able individuals are capable of performing. Only if this trend takes on large proportions, the policy aim on enhancing employment participation of all groups that are pushed out of benefits, can be achieved and the inequality enhancing effect that follows from benefit reducing policies.

5.3.3 Old age pensions

Old age pensions are an important source of income inequality, since they are – together with wealth as a source of revenue – responsible for the inequality between age groups. As in most other countries, the Dutch old age pension is based on the 3-pillar system as outlined by the World bank in 1998:

- Pillar 1 – Public scheme with universal coverage.
- Pillar 2 – Employer plans
- Pillar 3 – Personal savings and investment plans

It is pillar 1, a flat-rate public scheme, that forms part of public social expenditure that was presented in the graphs above. Social expenditures on old-age pensions are comprised of the flat-rate public scheme of the first pillar, and have declined from 6.1 per cent of GDP in 1980 to the current 5.3 per cent. Clearly, social expenditures on old age pensions grew at a lower rate than GDP, despite the growth in the number of recipients from 1.8 million in 1980 (11 per cent of the total population) to 2.5 million in 2011 (15 per cent of the population). The decline occurred because the AOW level, like many other social benefits, lagged strongly behind other wages and incomes. There was a cut in 1984 and since then a freeze in the level in real terms. Valorization is based on average CLA-growth, which lags behind the evolution of actual wages.

\textsuperscript{60} For this group the same IOAW and IOW schemes are available for the older disabled workers (50+), as were already described in the section on unemployment benefits for older unemployed whose disability benefits expire.
The basic benefit (called AOW, introduced in 1957) accrues at 2% of the full value for each year a worker lives or works in the country. Due to the aging of the population, there is currently a lot of discussion about cuts in the basic pension provided by the state. Recently, cuts have been introduced for elderly with partners younger than 65 and for elderly living outside the Netherlands. The retirement age will be gradually increased from the current 65 years to 66 in 2020 and 67 years in 2025. There are plans to make the benefit dependent on the age of retirement from the workforce in order to stimulate labour force participation. For the future we may therefore assume a further decrease in public social expenditure on old age pensions.

Every person aged 65 and over receives the same amount in Euros from the general pension scheme. Figure 5.13 shows that benefits from the general old age pensions make up a larger share of gross income of the lower deciles than for the higher deciles. If the higher income groups are 65 or older, they generally receive additional pension or other types of income too. In general there are fewer households receiving general old age benefits in the higher deciles. As a result the general old age pension ends up mostly in those deciles and the scheme can be said to redistribute not only from the young to the old, but also from the rich to the poor (see also Bonenkamp and ter Rele, forthcoming).

Figure 5.13 Old age pensions (first pillar) as percentage of gross income by income decile (income deciles based on gross income)

Source: CBS, own calculations

The Netherlands also has a private pension system with earnings-related occupational plans with broad coverage (pillar 2). Although there is no statutory obligation for employers to offer a pension
scheme to their employees, industrial-relations agreements mean that 91% of employees are covered (OECD, 2011). Approximately 90% of the employees in pension funds are covered by a defined-benefit scheme. The remaining employees in pension funds, mostly working in small and medium sized enterprises, are covered by a defined contribution scheme. For about 97% of participants in defined benefit schemes the earnings measure is based on lifetime average earnings, and for about 1.3% on the final salary. We see an increase in the number of people covered by defined contribution schemes and, within the defined benefit scheme in the lifetime average earnings. Until the mid-2000s benefits based on the final salary used to be the rule. All these development are relevant for the inequality in pension incomes.

Most final-salary schemes give 1.75% of those earnings for each year of service, implying a replacement rate of 70% after a complete 40-year career. In most average-salary schemes the accrual rate varies from 1.75% to 2% per year of service. There are no legal requirements for valorization of earlier years’ pay and practice varies between schemes according to rules agreed upon by the social partners. For approximately 85% of the participants in average wage schemes, past earnings are valorized in line with growth of average earnings while for 15% the rate of inflation is used. Due to the current economic crises, pension funds have problems with their funding rates and are obliged to cut pensions.

Figure 5.14 Old age pensions (second and third pillar) as percentage of gross income by income decile (income deciles based on gross income)

Source: CBS, own calculations
As we can see in Figure 5.14 old age pensions are a bigger share of household income in the lower deciles, with the exception of the first decile. As we saw above, the lowest decile does receive the biggest share of their income from the basic old age pension. Clearly, this group never built up a substantial occupational pension at their employer. To a lesser extent this also holds for the second decile. Deciles 4, 3 and 5 receive the biggest chunk of their household income from second (and third, but those are very small compared to the second pillar) pillar old age income schemes.

**Effect on income inequality**

Basic pensions have lagged behind GDP-growth. Old-age pensions have declined from 6.1 per cent of GDP in 1980 to the current 5.3 per cent because the basic pension (AOW) lagged strongly behind other wages and incomes. Occupational pensions have shown a clearly rising trend, which – after 1980 – has more or less compensated for the decline in the AOW, while private life insurances have risen from 1995 onwards (Salverda, 2007). On balance, total pension payments have increased from around 7% of GDP in about 1970 to over 11% today due to rises of 4.2% for occupational pensions and 2.6% for life insurances on top of the AOW. A growth that lags behind the increase in the number of pensioners.

This shift from flat rate publicly funded basic pensions to earnings dependent occupation and private pensions has important implications for inequality within the population of elderly. Redistribution is an important objective of unfunded first-pillar pension schemes. According to the well-known proposal of the World Bank, first-pillar pensions should exactly perform this task, while the saving function should be achieved by the second pillar (see World Bank (1994)). Ter Rele (2007) assesses how the Dutch system of taxation, cash transfers and non-cash benefits redistributes between the rich and the poor by incorporating the full life cycle and taking account of both direct and indirect taxes and direct and indirect benefits. He studies the average net benefit from government policies for an average representative person of each level of education. The results indicate a sizable redistribution from the rich to the poor and a significant reduction of welfare inequality. In practice, however, redistribution may also play a role in second-pillar pensions. Bonenkamp (2007) analyses redistribution in the second pillar of the Dutch pension system and finds a sizable redistribution from low educated to higher educated workers. In other words: the first pillar reduces income inequality, whereas the second pillar enhances it and the third even more. Bonenkamp and Ter Rele (forthcoming) show that taking together the benefits and premium for first and second pillar old age pensions, the system is redistributive from higher to lower educated and from men to women.
5.3.4 Survivor pensions

The area of survivor pensions is another example of the policy attempt to stimulate employment participation by reducing benefit eligibility, benefit levels and especially the duration of benefits. Survivor pensions have been cut systematically since the early 1980s. The old legislation was based on the breadwinner model of the 1950s and supplied widows aged 35 and older (and their children) with a benefit that since 1970 equaled the net minimum wage. In 1980 this was reduced to the level of the basic old-age pension (AOW) and in 1990 to 75 per cent of the net minimum wage. Due to anti-discrimination law, this AWW was extended to widowers in 1988, drawing even more attention to the fact that the pension was provided irrespective of the work opportunities of the widow(er)s.

In 1996 a new law was introduced: The NWW replaced the AWW in an attempt to enhance private responsibility for earning your own income and supplying safety net only to those incapable to do so. Eligibility rules were restricted and the benefit level was reduced to a maximum of 70 per cent of the net minimum wage, dependent on the income of the widow(er). Widow(er)s and their children that earn their own income, or receive benefits through other sources, are therefore excluded from the benefit regime.

Health care

Public social expenditures on health comprise spending on in- and out-patient care, medical goods and prevention. This is the only expense category that grew at a faster rate than GDP during our observation period. It steadily grew from 5.1% of GDP in 1980 to the current 10.2% (CPB, 2012). This is due to ageing of the population and innovations in health care. The latter are most probably responsible for the increase in (healthy) life expectancy reported in section 3.6. Policy has been aimed at combating the trend of growing government spending on health care. This policy has several aspects to it:

1. Policies were meant to enhance cost elasticity of demand for health care. Until 2006 health insurance used to be a two tier system. For the low income group, there was the Ziekenfonds, with income dependent insurance premiums. The public insurance company paid all bills directly to the health care provider. Patients were completely unaware of the costs, which made their demand fully inelastic. Higher incomes were insured on a different basis. They paid bills in advance, which were refunded by private insurance companies. Since 2006 all Dutch citizens face mandatory health insurance with private insurance companies. Since then, every person is in principle aware of the price of their treatments, since they
receive periodic overviews of the price of the expenses made for them. Since there is now a compulsory excess in place for all individuals, the insured have to bear part of the cost of an insurance claim. Everyone can choose between high premium high coverage insurance and low premium low coverage insurance. Lower incomes now receive an income dependent subsidy to make up for part of the health insurance cost in order to compensate for the higher costs they face in the new system. For singles the threshold for receiving the income dependent subsidy is 35,000 Euro. For couples the threshold is 51,500 Euro. At income decile P10 a household earns 9800 Euros gross per year. If this is a single household, it receives 835 Euros subsidy, which is 8.5 per cent of its income. In case of a couple, the household receives 1,753 Euros of subsidy, or 17.8 per cent of its income. Depending on the type of insurance the households opts for, the subsidy can in principle fully cover the insurance premium.

Figure 5.15 Health insurance premiums as percentage of income by income decile (deciles based on gross income)

2. The former two-tier system with income dependent premiums for the Ziekenfonds in combination the flat-rate premiums for the private insurance was known to be rather regressive (Van Doorslaer and Van der Brug, 1995). The highest decile spent 6 per cent of their income on health insurance premium, whereas it cost the lowest decile 16 per cent of their income. By compensating the lower incomes for their health expenditures by the ‘zorgtoeslag’ the new system has been made less regressive. As argued above the lowest deciles were fully compensated for their health insurance. However, the subsidy was reduced in 2012 and can now no longer fully cover expenses. This is mostly due to the fact
that the individual excess is no longer covered by the subsidy; a measure that was introduced in order to enhance price sensitivity of the lowest income category as well. This especially harms the individuals with a chronic illness in the lowest income decile. Figure 5.15 shows that the lower income deciles do pay the highest share of their income on health insurance premiums and this regressive nature has increased during the last decades. Again one can say that the wish to simulate citizens to respond to financial incentives in a way that reduces government spending leads to inequality enhancing policy.

3. Long-term care is organized according to a system with income dependent premiums. Until 2005 all expenses were directly covered by the government. Now there is a system with vouchers. Patients who need long-term care are provided with an individual budget, which they can spend as they prefer. The idea behind this system was that patients will become more sensitive to prices of treatments when they are free to spend their own budget. The costs of this system have however been exploding, mostly due to generous allocation of budgets. Since 2012 the application for the personal budget has been restricted in order to cut expenses.

4. Policies were aimed at structuring the costs of treatment at various health care suppliers. The so-called DBC-system replaced the former system of hospital financing in 2005. The old system of fixed tariffs for each treatment was replaced by a system based on the diagnosis. For each diagnosis health care suppliers are paid the same amount, irrespective of the actual treatment a patient receives. This way, the government hopes to put a stop to the practice of supplying patients with more and more treatments and more and more expensive medicines.

5.3.6 Family benefits

Family benefits consist of child allowances and credits, childcare support, income support during leave and sole parent payments. Its share in GDP halved from 2.5 per cent in 1980 to 1.2 per cent in 1996. Since 1996 its share has been gradually increasing again to 2.0% in 2007. The increase in expenditures on family benefits since 1996 is mainly due to the extension of subsidized child care, a measure that was aimed at stimulating (female) labour force participation. Until 2005 child care was financed by government and employer subsidies to providers of childcare, in combination with parent contributions. This system led to long waiting lists and non-responsiveness of providers to the preferences of parents (Berden and Kok., 2009). Hence, the Dutch Act on Child Care came into force.
in 2005. The aim of the Act was to make the market more demand-driven in order to improve the functioning of the market for child care. Since the introduction of the new act parents pay the full market price to the provider of child care. Part of the price they pay is reimbursed by the government. The reimbursement depends on household income with a maximum compensation for hourly costs. Providers do not get any subsidy in this system. All subsidies go directly to the parents. With the introduction of the new act in 2005 the parental contribution to child care expenditures was substantially reduced, especially for medium and high incomes. Recently, these subsidies have been reduced again, especially for the higher incomes and policy intentions are to reduce them even further. The effect on income inequality will depend on the shape of the budget cuts and the labour market reaction of households that result from the cuts in the child care subsidies.

Tax credits are another source of family benefits. As describes in section 5.3.2 the 2001 tax reform introduced tax credits for working parents with young children, for parents who take parental leave and for some time there was a tax credit for having children. The last was abolished again after a few years and was replace in 2008 by the ‘kindertoeslag’, which was again replace by the ‘kindgebonden budget’ in 2009. These are both income dependent subsidies for all children below age 18 in the household, which adds to the general flat rate child allowance.

5.3.7 hairs ubsidies

The Dutch housing policy is based on a concept of universal access to affordable housing for all and the prevention of segregation. Renting is composed of a social housing sector which is large by international comparison (about 35 per cent of the total housing stock) and a small private rental segment. The rigidity of the rental sector arises from strict rent regulation and only 10 per cent of all rentals are unregulated. Even though the system is meant to reduce inequalities, this is not the case in practice. The below-market rents are combined with eligibility checks only at entry, which has led to low tenant turnover and only 40 per cent of the social dwellings being occupied by households with low incomes. According to OECD (2010), creating a more flexible rental sector is necessary and requires a well-designed transition path, including a gradual reduction in the extent of rent regulation, free rent setting in all new rental constructions and time limits on rental constructions in order to stimulate households to adjust their consumption of housing to changes in family and income situations. If policy succeeds in achieving this aim, social housing will become more aimed at the lower income groups, enhancing the progressivity of the housing subsidies.
As was mentioned in section 5.3.2, the owner-occupied segment is characterized by a high transaction tax of 6 per cent of the value of the house and a generous tax treatment of mortgages. The latter is an important regressive component of the tax system, since the interest paid on mortgages is deductible at the marginal tax rate. The Dutch housing market is now internationally regarded as a threat for the stability of the financial situation of the country. House prices are pushed up by the generous tax treatment of mortgages and a rigid supply which is related to strict land use policies. The high mortgages in combination with a potential overvaluation of the houses are regarded as a dangerous combination. Combined with the lack of mobility in the rental segment, these issues point to the need for a fundamental change of housing policies combined with rethinking land use regulation (OECD, 2010). The housing market is an issue of public debate, but political parties do not dare to burn their fingers on the topic. Even in the current discussion on the reduction of the budget deficit, the issue is left unspoken. Recently a large group of economist have come up with a plan to reform the entire housing market by lowering the tax rate at which interest paid on mortgages is deductible, the abolishment of the transaction tax on houses, a maximum mortgages equal to 90 per cent of the value of the house and prices for subsidized rental houses equal to their market value, while at the same time continuing to subsidize the poor for their rental expenses. The question remains whether any political party in the government will actually pursue those changes that are generally deemed necessary and would potentially reduce income inequality.

5.4 From gross to disposable income: taxes and social security premiums

Taxes and social security premiums determine the difference between gross and disposable household income, and therewith affect income inequality, depending on the way the tax system is organized. Two guidelines for a tax system have received wide acceptance from the perspective of social justice (Musgrave, 1959). First, the principle of horizontal equity, which prescribes that equals should be treated equally (see Feldstein 1976; Atkinson, 1980; Plotnick, 1981 and 1982). Second, the principle of vertical equity, which states that unequal can be treated unequally, i.e. according to their different economic strength. This second principle justifies the progressivity of a tax system. The redistributive effect of taxes results basically from the progressivity and the level of taxes (Kakwani, 1977). The sections below describe the evolution of the Dutch tax system during the last decades and its implication for income inequality.
5.4.1 Tax revenues by origin

According to the OECD tax database, as presented in Figure X, the total tax revenue is currently about 53 per cent of GDP. Dutch tax revenues are primarily based on personal income taxes (PIT, 20 per cent of revenues), social security contributions (SSC, 27 per cent of revenues) and taxes on goods and services (VAT, 22 per cent of revenues). Taxes on property contribute only a minor 3 per cent of tax revenues. The Dutch tax revenues from various sources do not differ substantially from the OECD average for most taxes: tax revenues from income, profits and capital gains, tax revenues from goods and services, tax revenues on property, and payroll taxes are all around the OECD average. The only exceptions are social security contributions, where the Dutch share in GDP nearly doubles the OECD average.

Figure 5.16 Tax revenue by origin as percentage of GDP

![Graph showing tax revenue by origin as percentage of GDP from 1970 to 2008.]

Source: OECD Tax database

5.4.1 Redistributive effect

By origin

Some types of taxes are more progressive than others, the various types of taxes and social security premiums each have their specific implications for inequality. Figure 5.17 shows the picture of the
redistributive effect of the various types for the year 2010. In total, each decile spends more or less
the same share of its income on taxes and social security premiums. PIT is the most progressive
element, indirect taxes the most regressive. Health insurance premiums are regressive as well. Social
security premiums are progressive until the 8th decile. The upper two deciles pay relatively little. In
the paragraphs below, we discuss these elements of the tax and social security premiums in more
detail, especially aimed at understanding the development of the progressive or regressive nature
over time.

Figure 5.17 Taxes and social security premiums as percentage of gross income by income decile,
year 2010, deciles based on gross income.

<table>
<thead>
<tr>
<th>Decile</th>
<th>PIT</th>
<th>SSC employee insurance</th>
<th>SSC national insurance</th>
<th>Health insurance premiums</th>
<th>Indirect taxation</th>
</tr>
</thead>
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<tr>
<td>1st decile</td>
<td>2%</td>
<td>3%</td>
<td>4%</td>
<td>23%</td>
<td>23%</td>
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<tr>
<td>2nd decile</td>
<td>6%</td>
<td>9%</td>
<td>9%</td>
<td>23%</td>
<td>23%</td>
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<tr>
<td>3rd decile</td>
<td>7%</td>
<td>7%</td>
<td>9%</td>
<td>16%</td>
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<tr>
<td>4th decile</td>
<td>11%</td>
<td>9%</td>
<td>9%</td>
<td>14%</td>
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<tr>
<td>5th decile</td>
<td>11%</td>
<td>11%</td>
<td>9%</td>
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<td>6th decile</td>
<td>6%</td>
<td>6%</td>
<td>11%</td>
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<td>7th decile</td>
<td>7%</td>
<td>6%</td>
<td>8%</td>
<td>11%</td>
<td>11%</td>
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<tr>
<td>8th decile</td>
<td>9%</td>
<td>6%</td>
<td>8%</td>
<td>10%</td>
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<td>9th decile</td>
<td>11%</td>
<td>6%</td>
<td>10%</td>
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<td>10th decile</td>
<td>20%</td>
<td>4%</td>
<td>7%</td>
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<td>6%</td>
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Source: CBS Statline, own calculations

**Personal income tax**

*Personal income taxes* (PIT) contribute substantially to total tax revenues as well. The share of PIT in
the overall tax rate varies with the business cycle between the maximum of 15.1 per cent of all taxes
in 1991 and the minimum of 9.1 per cent in 2001. In 1970 the share of taxes originating from PIT was
11.9 per cent, in 2008 10.6 per cent. This relative stability of the share of PIT in all taxes hides the
changes that took place in the build up of PIT. Two clear trends are visible in Table 5.16:

1. top marginal rates have declined and
2. the number of tax brackets has been reduced.

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61 When interpreting Table 5.18 one should keep in mind that the low tax rates in the lower brackets are a
result of the fact that the lower tax bracket mainly pay social security contributions, whereas the higher tax
brackets pay taxes based on wage earnings.
Two major reform operations have taken place in 1990 and 2001. The main idea behind the two reforms was to stimulate employment by reducing taxes on income. In 1990 the simplification of the tax system by reducing the number of tax brackets was another important justification for the reform. The reduction in the higher marginal tariff in 2001 that was meant to stimulate employment was accompanied by an increase in VAT rates and the ecotax in order to protect the environment and a reduction in the number of tax deductibles that were mainly used by the higher income groups. As a result the highest income groups gained from the reduction in the highest marginal tax rate, but lost out on the cut in tax deductibles. The 2001 reform was therefore not fully regressive.

Once more, one of the purposes of reform was to make the system more transparent. The new government is planning to reduce PIT rates in the near future. They highest tax rate will be lowered from the current 52 per cent to 49 per cent and the income in the third tax bracket will be taxed at 38 instead of the current 42 per cent. Figure 5.18 shows that PIT in general have decreased over time, for all deciles. The progressivity did not change much over time.
Table 5.1 Central government (statutory) personal income tax rates for wage income and the taxable income thresholds at which these statutory rates apply

<table>
<thead>
<tr>
<th>Year</th>
<th>Personal allowance / Tax credit</th>
<th>Marg. rate</th>
<th>Thresh. hold</th>
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<td>Year</td>
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<td>Taxable Income</td>
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<td>Effective Tax Rate</td>
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<td>52%</td>
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<td>2008</td>
<td>2,074 (wc)</td>
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<td>2009</td>
<td>2,007 (wc)</td>
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<tr>
<td>2010</td>
<td>1,987 (wc)</td>
<td>18,218</td>
<td>11%</td>
<td>32,738</td>
<td>42%</td>
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</table>

Source: OECD Tax database

The information is applicable for a single person without dependents. The threshold, tax allowance and tax credit amounts are expressed in national currencies (guilders before 2002, Euros since 2002).

a: Basic (fixed) allowance available to all (single) taxpayers without dependents.
w: Basic wastable tax credit, non-tapered, available to all (single) taxpayers without dependents.
The progressivity of the personal income tax does not just depend on the tax rates. Tax deductibles are an important factor as well. The Dutch tax systems has a large number of tax deductions, e.g. for interest paid on mortgages, for expenditures on education and training, on public transport when travelling to work by train or bus. As was mentioned above, the reform of the tax system in 2001, when the top marginal tariff was reduced from 60 to 52 per cent, was accompanied by a major cut in the possibility to deduct expenses from taxable income. Still, various tax deductions remain, but far less than before. The deduction of interest paid on mortgages is the most important example.

**Figure 5.18 Personal income tax and wealth tax as percentage of gross income by income decile (deciles based on gross income)**

It is common wisdom that one of the most important regressive component of the Dutch tax system lies in the tax treatment of mortgage interest payments. The interest paid on mortgages is deductible at the marginal tax rate which makes higher income group profit more than the lower income groups. This group does not only own the most expensive houses with accompanying high mortgages, they can also deduct at the highest tax rate. This system originates from the 1890s, when income taxation was first introduced. Until then, taxes mainly consisted of indirect taxes, based on the purchase of goods and services. Left wing political parties opposed to this, because the poor consume a larger share of their income and thus spent a larger share of their income on taxes. With the introduction of income taxation came the introduction of the ‘eigen-woningforfait’, since the own house was regarded as a source of income: owners either live in their house and do not need to pay taxes, or let the house and receive rental income. Home owners were obliged to pay taxes based
on the value of the house. In exchange, home owners could deduct the costs of owning their home from the tax base. This implies that the system of mortgage reduction and paying taxes based on the value of the house was in its origin meant to reduce inequality. Even though the system in itself hardly changed since the 1890s, the ideology behind the system faded away and was replaced by the reasoning that the mortgage reduction was meant to stimulate home ownership. The idea that the combination of income taxation, including taxes paid on the value of the house and deduction of interest paid on mortgages served the purpose of lowering the regressive effect of tax payments was forgotten. Due to major increases in house prices in the 1990s and early 2000s, in combination with mortgage constructions invented by financial institutions in order to make individuals (and banks) profit as much as possible from the deduction regime, the tax deductible on mortgage interest has more and more become a regressive component of the Dutch tax system. Since the system stimulates people not to repay the mortgage, and financial institutions have been creative in inventing mortgage constructions where the mortgages is not repaid, many people have mortgages that exceed the value of the house and can deduct it at the marginal tax rates. Figure 5.19 shows that the tax treatment of mortgage interest payment is not as regressive as one might have thought. The

Figure 5.19 From gross to taxable income: percentage of untaxed income and tax deductibles as percentage of gross income by income decile (year 2009)

Source: Mol, 2012 (own calculations)
1st and the 5th decile are the ones that deduct the biggest share of their gross income due to mortgage interest payments. In absolute terms the mortgage interest deduction is indeed by far the largest in the 10th decile. But as a percentage is their income, which is what we are interested in if we want say something about the redistributive effect, it is not the largest.

**Social security contributions**

Social security contributions (SSC) are, and have been so for the entire observation period since the 1970s, the most important source of tax revenue. As in other countries, SSC are partly paid by employers and partly by employees. The share paid by employers has been going up and down over time. In the 1980s employers paid approximately 40 per cent of SSC contributions. In the 1990s this was reduced to about 25-30 per cent. During the 2000s the employers share gradually increased from 40 per cent to 46 per cent in 2009 (source: CBS, Inkomens-en vermogensrekeningen). Social security contributions are only paid on earnings below a certain threshold. As a result they are an important source of the lower tax pressure faced by higher incomes relative to lower incomes. The income level above which no contribution for the National Insurances (NI) are levied have decreased due to the tax reform in 1990. In real terms the threshold above which no NI contribution is due was lowered from 40 thousand Euros in the 1980’s (expressed in Euros of 2000) to 24 thousand Euros in 1990, which gradually decreased further afterwards to 22 thousand Euros in the year 2000. This pushed earnings inequality upwards. The new tax reform of 2001 increased the threshold to around 26 thousand Euros and was one of the countervailing forces against the reduction of the marginal top rate.

Next to the regressive effect of the upper limit of SSC-contributions, the system has a progressive effect as well. People without earnings do not pay any contribution to the National Insurance (Volksverzekeringen, comprising the first pillar elderly pensions, the AWBZ part of the health insurance system, survivor pensions and the flat rate part of family benefits), while they are insured. This effect can be seen in Figures 5.20 and 5.21. The share of gross income paid on social security premiums increases from decile 1-5 (1-8 for employee insurances) and decreases thereafter.
GINI Country Report The Netherlands

Figure 5.20 National insurance premiums as percentage of gross income by income decile (income deciles based on gross income), includes both the parts paid by employee and employer

![Graph showing national insurance premiums by income decile.](image)

Source: CBS, own calculations

Figure 5.21 Employee insurance premiums as percentage of gross income by income decile (income deciles based on gross income), includes both the parts paid by employee and employer

![Graph showing employee insurance premiums by income decile.](image)

Source: CBS, own calculations

VAT

Even though VAT tariff levels have increased somewhat, taxes on goods and services have remained relatively stable as a source of revenue, at about 10 per cent of GDP in 1975 to the current 12 per cent of GDP, which is slightly above the OECD average of 10.8 per cent (source: OECD tax database).

The level of the regular Dutch VAT tariff has been gradually increased from 12 per cent in 1970 to 19.5 per cent in 2001. In October 2012 the VAT level increased for the first time in decades, to 21 per
cent, as a means to combat budgets deficits due to the economic crisis. The lower tariff on food and beverages increased from 4 per cent in 1970 to the current 6 per cent (since 1986). Since all individuals pay the same VAT rates, VAT is hardly progressive. This is somewhat mitigated by the fact that lower income groups spend a higher share of their income on food and beverages, for which the lower VAT rate applies. But is we look at the data, this is not confirmed by a lower VAT tax pressure borne by the lower incomes. Figure 5.22 shows that it is especially the lowest income decile for whom the tax pressure due to indirect taxation is higher than for the rest of the population, five times as high as for the highest income group. The recent increase in the VAT-rate therefore most probably had a regressive effect. Bettendorf et al. (2012) indicate that income might not the best entity to compare VAT expenses to. In their view, VAT expenses should be compared to total expenditures. Their argument is that the expenditures based comparison gives a more stable picture of the distribution of VAT tax pressure since income varies more over the life cycle than consumption does. If expenditures are used as a comparison instead of income, VAT is not regressive, nor is it regressive. Tax pressure is evenly spread over the deciles.

Figure 5.22 VAT pressure on gross income by income decile (gross income)

Source: Netherlands Statistics (Statline, Indirecte belastingen en bestedingen)

Tax credits

Table 5.1 has shown that major reforms in Personal Income Taxation took place in 1990 and 2001. The first column signals that an important aspect of the 2001 reform was the replacement of the
GINI Country Report The Netherlands

basic allowance by a tax credit. Before 2001 households could deduct a fixed amount per adult household member from their taxable income at the marginal rate of the highest earner. So the higher incomes profited more than the lower ones. As from 2001 each individual can deduct a fixed amount from the tax it needs to pay. So the tax deduction is no longer at the marginal rate, but the same for all individuals. Apart from the general tax credit available to all citizens, the Dutch tax system now has an extensive array of tax credits for people in work, an extra tax credit for those with young children who are in work, for people entering the labour market, for elderly people continuing to work, for parents taking parental leave, for elderly people, for elderly single people and for a specific group of disabled people.

The transition from the deduction from the basic taxable income to the new tax credits served three purposes. On the one hand it made the tax system more progressive and was as such a counterpart to the cut in the marginal top rate, which made the system less progressive. On the other hand the new system with its various tax credits was meant to introduce financial incentives for various groups to work. Not only is there a tax credit for all people in work, but also additional tax credits for parents of young children in work and for elderly people in work. As such the tax credits were an important instrument for the Dutch government to stimulate Dutch citizens to act in a way that they deem necessary for the welfare of the country. Thirdly, the tax credits were used as an instrument to provide income support to some vulnerable groups, such as elderly and disabled people.

5.5 From secondary to tertiary income: government subsidies and social services

The previous chapter described the step from gross to disposable secondary income. The final step is to go from disposable secondary income to tertiary income. Tertiary income is the income including household gains from public facilities such as education, health care, public transport and other infrastructure, museums and other cultural events that are provided by or (partly) financed or subsidized by the government.

The Netherlands Institute for Social Research (SCP) has been keeping track of the gains from those government services and subsidies since the late 1970s. In several studies they have shown the gains
from those services and subsidies for the ten income deciles. Table 5.2 provides an overview of their results for the years 1977 and 2007. Clearly, education is the biggest source of subsidy for all Table 5.2 Receipt subsidies and tax deductibles per household by income decile as percentage of their net income

<table>
<thead>
<tr>
<th></th>
<th>1st decile</th>
<th>2nd decile</th>
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<th>4th decile</th>
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<th>9th decile</th>
<th>10th decile</th>
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<td>1977</td>
<td>5.2%</td>
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<td>2007</td>
<td>8.0%</td>
<td>17.7%</td>
<td>11.8%</td>
<td>8.3%</td>
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<td>1977</td>
<td>141.5%</td>
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<td>12.4%</td>
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<td>2007</td>
<td>82.9%</td>
<td>11.4%</td>
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<td>1977</td>
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<td>2007</td>
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<td>1977</td>
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<td>7.0%</td>
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<tr>
<td>1977</td>
<td>6.7%</td>
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<td>1.9%</td>
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<tr>
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<tr>
<td>1977</td>
<td>163.1%</td>
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<td>15.3%</td>
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<td>2007</td>
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<td>1977</td>
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<td>10.2</td>
<td>7.9</td>
</tr>
</tbody>
</table>

Source: Pommer et al. (2011) and SCP (1977), own calculations. *All deflated to 2010 Euros

income groups, with housing as the second most important subsidy/tax deductible. Social services and health care provide big chunks of subsidies for the lower income categories. In percentage of their income share the lowest income decile receives the highest share of their income from subsidies and the highest decile receives the least. In terms of Euros, however, it is the two lowest

62 One should note the definition of a household in those reports deviates from the standard in the sense that students who live at their parents are counted as separate households. The lowest decile therefore consists mainly of students.
and the two highest income deciles that profit the most from government subsidies and tax deductibles.

5.6 Education
5.6.1 Expenditures on education
Educational policy has been aimed at achieving a higher educated population. As has been shown in section 2.3 educational levels have increased substantially over recent decades. Figure 5.23 shows that expenditures on education have increased at a rate of 4.3% per year in the period 1998-2008. This is partly due to increased numbers of students, especially in higher education, but is also due to higher spending per student (Figure 5.24).

![Figure 5.23 Expenditures on education by level (Euros of 2000)](image)

Source: OECD Education database

Since 2008 expenditures have not increased any further. Due to budget cuts, the educational sector is confronted with lower budgets over the entire distribution. Even though nearly all educational institutions are public, the trend over the last decades has been to give schools more autonomy in spending their budgets. Nowadays a much smaller share of the expenses is earmarked for specific purposes. In 1995 lump sum financing, based on the number of enrolled students replaced the old system based on the salary costs of teachers and material costs. In 2006 the same transition was made for primary education. As a result schools, collaborating in partnerships, have more autonomy.
and decide on the mission of the school, the type of education and teaching they provide and the way they spend their money. This against the background of centrally set goals, tested by national exams in the last year of the primary school and the last year of upper secondary school. No central tests exist for lower secondary education and higher education. Discussions about the quality of schools and the standards attained by pupils have led to a political debate about the need for more central tests and exams.

**Figure 5.24 Expenditures on education per student (Euros of 2000)**

![Expenditures on education per student](image)

Source: OECD Education database

### 5.6.2 Compulsory education and school drop out

Since the introduction of the compulsory education age in 1900 it has gradually expanded. For a long time, since the 1970s, the compulsory education ended at the age of 16, with only partial obligations until the year the pupil turned 17. In recent years policy has been focused on combating joblessness among young workers by pushing up the educational level attained. Increasing the compulsory education age for those who have not yet obtained a so-called starting degree – higher secondary education or at least two years of intermediate vocational education – to the age of 18 was one of the instruments that the Ministry pushed forward in the battle against early school dropout and joblessness. The Ministry regards all young people up until the age of 23 without a starting degree as dropouts. The aim is to get those youngsters back in school and make sure they obtain the starting degree, and with it the inequality in labour market opportunities.
Table 5.3 Developments in the legal compulsory education age

<table>
<thead>
<tr>
<th>Year</th>
<th>Compulsory education age</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900</td>
<td>6-&lt;12 years of age</td>
</tr>
<tr>
<td>1969</td>
<td>6-&lt; 15 years of age</td>
</tr>
<tr>
<td>1975</td>
<td>6-&lt;16 years of age + partial (two days a week) compulsory education up until the year in which the pupil turns 17</td>
</tr>
<tr>
<td>1985</td>
<td>5-&lt;16 years of age + partial (two days a week) compulsory education up until the year in which the pupil turns 17</td>
</tr>
<tr>
<td>2007</td>
<td>5-&lt;16 years of age + full compulsory education -&lt;18 years of age for anyone who has not yet obtained a starting degree (startkwalificatie in Dutch), which is the level of education deemed necessary to obtain a stable position on the labour market. The starting degree equals higher secondary education or at least two years of intermediate vocational education.</td>
</tr>
</tbody>
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5.6.3 Educational system and tracking

The timing of tracking and the extent to which pupils with similar ability, socio-economic characteristics and interest are allocated into separate schools constitute and important dimension of the educational system that has key implications in terms of equity. The Dutch school system is unified and comprehensive until age 12, after eight years of primary school, when the first selection into school tracking takes place. Only Austria and Germany (age 10), Czech Republic, Hungary and Slovakia (age 11) have earlier tracking. Based on test scores, children continue their education in lower vocational education or one of the three levels of general secondary education. Van Elk et al. (2009) found that early tracking has a detrimental effect on enrolment in and completion of higher education for pupils that leave primary school with an advice to follow lower secondary education. A study by Van der Steeg (2011) shows that early tracking is positive for pupils who leave primary education with an advice for higher secondary education. When students are allocated to separate tracks according to their ability, more able pupils benefit from being with each other, while low ability pupils loose from not having the more able peers around. Early tracking is thus likely to increase educational inequality, and therewith earning potentials. This implies that early tracking increases educational inequality.

With the aim of becoming a true knowledge economy with a high educated labour force, the Dutch government has been active in stimulating students to follow higher education. For long, policy has stimulated people to attain the highest possible education level by allowing full flexibility in the routes through the educational system. Due to early tracking, the ‘piling up’ of degrees is the only option to achieve a diploma in tertiary education after a student has started in lower secondary education. Some pupils, especially from lower social classes—who are known to started in lower
secondary education more often—continue in higher secondary education, thereafter in vocational tertiary education and some even end with a university degree. During the last decade, policy has been aimed at decreasing the costs of the educational system by shutting down those inefficient routes through the system, the routes that were mostly used by the lower social classes and children from immigrants. In 2010 the possibilities to ‘pile up’ have been stimulated once more, which enhances the possibilities for pupils with lower scores in primary school.

5.6.4 Preprimary education

Investments in early education have higher rates of return than investment in higher levels of education (Cunha and Heckman, 2007, 2009). They have a direct impact on equity, since the rates of return to investment in early education tend to be higher for children from disadvantaged families, while at older ages they tend to be higher for children from well-off families.

Dutch primary schools consist of 8 grades covering the age groups of 4 to 12-year-old children. While in most countries children typically enter primary school at the same date, in the Netherlands the rule is that children are allowed to enrol in primary school the first school day after their 4th birthday, while enrolment is compulsory from the first school day of the month after the child reached the age of 5 onwards. About 98 per cent of the children start school before their 5th birthday. This implies that preprimary education is education aimed at children below the age of four.

Preprimary education used to be rather limited in the Netherlands. Formal child care facilities for children in this age range consisted of child care centres (kinderdagverblijven) and in-home care by childminders (gastouderopvang). Pre-kindergarten facilities (peuterspeelzalen) are not considered child care facilities, because of their shorter opening hours: children attend two mornings per week, which makes the care they provide less suited to the schedules of working parents. Until the year 2000 child care facilities did not have the explicit aim to educate children. They were mostly aimed at caring. Of course they also had the aim to stimulate the development of children, but this aim was secondary and rather unorganized.

Since the year 2000 there have been important developments in the area of preprimary education. Stimulated by scientific research results that showed the importance of early childhood stimulation, the Dutch government introduced programs aimed at young children from disadvantaged families. The programs were both aimed at the families themselves, e.g. by free access to libraries, teaching parents to talk to their children, etc. and aimed at formal child care institutions. In 2000 the so-called Regeling voor- en vroegschoolse educatie (VVE) was introduced. This stimulation measure was aimed at stimulating children from disadvantages backgrounds, especially those with language difficulties.
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(e.g. children from ethnic minorities), by providing preschool education based on specially developed programs. This type of education is offered to children aged 2-6 at new sections of primary schools, or at the existing child care centres and pre-kindergarten facilities. It is an area that is still very much developing. According to Weever et al. (2005) the fraction of child care centres that offers preprimary education according to the standards of the VVE-regeling lags behind. Most VVE that does qualify the standards, is offered by the newly developed segments of existing primary schools and the pre-kinderkarten facilities. The standards comprise working according to a certified methodology, called Piramide, Kaleidoscoop, Startblokken and the like. The same education methodologies are applied in the first two years of primary education. Those methodologies follow a structured didactic approach, with a focus on language acquisition. Recently the focus on children from disadvantages families has been broadened to include all children aged 2-6.

Evaluations of the effectiveness of those pre-primary education initiatives are disappointing. In contrast to the international evidence, the Dutch programs do not seem to produce better outcomes for children that followed pre-primary education. The new policy challenges are to integrate the various institution that offer pre-primary education, level the quality of education offered by the various institutions involved and try to reach as many children as possible. A problem here is that parental costs differ substantially depending on the institution that offers the program. At the new preschool section of primary schools children can generally follow pre-primary education for free. At pre-kindergarten institution there is a fee involved, subsidized by the municipality. Child-care facilities are expensive, but subsidized according to the level of parental income.

5.6.5 Free school choice

In the Netherlands parents are free to choose the primary school for their children. This is in contrast to many other countries where the options are restricted to the neighbourhood. Compared to the neighbourhood-based system, the choice based system increases social stratification along lines of ability, ethnicity and socio-economic status. Indeed, the big cities in the Netherlands face the problem of black and white schools, due to the sorting of children from native Dutch and non-natives into different schools. At the local level initiatives have taken place to combat this unwelcome phenomenon, and some have been successful. Overall, they are hindered by article 23 in the Dutch constitution, which states that each religion is free to set up its own schools and reject children from different religious backgrounds. Those special schools are funded by the government, just like public schools. The problem is that public schools have the duty to accept every child. The result is often that native Dutch children go to school with a certain religious background, that is very often not
actively used in their teaching, and children from immigrants sort into the public schools, or even one of the few Islamic schools. Rotterdam and Nijmegen are two big cities that have pursued the introduction of a neighbourhood based admission system. In Amsterdam there have been some successful parent initiatives that strived for mixing the school such that all school are half-black half-white.

Private schools are a rarity in the Netherlands. In higher education there are a few private institutions that offer tertiary education, but in primary and secondary education practically all schools are publicly funded.

5.6.6 Student allowances

Student allowances in the Netherlands have always been provided as state subsidies contingent on parental income. As such they have had an impact on income and educational inequality. They have been especially important for the intergenerational mobility of educational and earnings levels. The first scholarships were provided in 1815. Highly gifted poor young people qualified for those grants. A lot has changed since then. The budget was increased in order to stimulate children from poor families to study. But not everyone that qualified for the scholarship took the opportunity, because they were a loan and not a gift. After the second World War the scholarships were also provided to middle class children who could show that they were very talented. As a result, the requirements for the student allowances became higher and higher, which did not add to the accessibility of the educational system.

In 1986 a new system of study grants was introduced, which opened doors for many more students. This new system provided grants based on parental income: the richer the parents, the lower the allowance. An additional grant, also dependent on parental income (plus the type of education and whether living with parents or alone), was available as well. This system was so attractive for students that the costs exploded. In 1990 there was a large cut in the budget and the grants were lowered. A number of trends can be seen since the early 1990s:

- The basic grant has been reduced, while the grant based on parental income has increased. This clearly has an inequality reducing aim.
- Gradually the open-ended regime was abolished and students can now only receive grants for a limited number of years. The maximum number of years the students were provided with the study grant as a gift was limited from six to five to the current four years. Currently the government is preparing a new law that restricts this period to the bachelor phase (three years).
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- The period for receiving a loan was reduced and is now three years beyond the nominal duration of the study.
- Requirements for showing yearly progress were added (prestatiebeurs). Only if a student shows enough progress his loan is converted into a gift.
- The current policy discussion is about making the transition to a new system in which the scholarship is no longer converted into a gift, but is restricted to a loan for everyone. Concerns are raised about the accessibility of tertiary education for children from lower social classes. Research has shown that those children are more risk averse than children from richer families and will therefore potentially be scared off by the loan.

Figure 5.25 Student grants in Euros (deflated to 2000).

![Graph showing student grants in Euros](image)

Student fees have been subject to change as well. Until recently the government set the fees students had to pay to the educational institution. The general fee students need to pay for tertiary education has gradually increased until 1998. Since then the fees have been stable in real terms, since they grew at the same rate inflation. In 2011 the student fee is 1713 Euro per year. A recent policy change is to demand a higher fee for students that exceed the nominal duration of their study, or follow a second master. For those students universities set their own price, the so-called ‘instellingsgelden’. Those fees are usually around 6000 Euros.

In general one may argue that the aim of this policy has been to reduce government spending, in a way that enhances students’ productivity. This is in line with what we have seen in the previous section regarding social benefits: the Dutch government subsidizes what is necessary as a measure of...
last resort or as an investment for future labour market success, but cuts spending above the necessary first period.

With the reduction of the grants came less stringent rules regarding the amount of extra income student could earn without losing the right to the study grant. In the period 2001-2007 the amount that students were allowed to earn without losing the entitlement to their student allowance remained steady in real term around 9000 Euros per year (Euros of 2000). In 2008 this threshold made a discrete jump to nearly 11 thousand Euros. The effect has been an increased labour supply at the lower end of the labour market. Many argue that student are in competition for low educated job seekers and have pushed the latter into unemployment (see e.g. Steijn and Hofman, 2000). Still, it is mostly the lowest decile that receives the biggest share of its household income from student allowances. These are of course the students living on their own, outside of their parents’ household. They form a large share of the households in the lowest income deciles, as do the retirees.

Figure 5.26 Student allowances as percentage of gross income (income deciles based on gross income)

5.7 Conclusions: inequality as collateral damage?

The increase in income inequality as described in Chapter 2 can to a large extent be attributed to policy developments during the period of observation. Most importantly, the real minimum wage lagged behind median wages and since benefits levels are automatically linked to the level of the minimum wage, they lagged behind too. The period 1985-1990 has been most important for the
growth in income inequality in the Netherlands. This was the period during which the minimum wage was reduced and frozen, and benefit levels were reduced accordingly. But inequality enhancing policies have not been restricted to this period. The benefit system has continued to evolve towards a system with shorter benefits durations, more active labour market policies and restriction of the long-term benefits to the severe case of invalidity. The decline in public social expenditures is mainly due to the decrease in incapacity related benefits.

During the observation period, the Dutch tax system has been adjusted a number of times. Tax reforms in 1990 and 2001 cut the top marginal rates, though supplemented by other reforms in the tax system that enhanced progressivity, such as reduction of deductibles, replacement of the basic allowance (at the marginal tax rate) by a tax credit (a fixed amount irrespective of income) the lifting up of the income threshold above which no social security contributions are levied. Even though many of these policies were aimed at stimulating employment participation, they have had a serious impact on income inequality. In this sense the increase in inequality might be regarded as collateral damage of the political goal of stimulating financial incentives of citizens to take up employment and increase working hours.

Various other policy changes have contributed to the rise in income inequality as well. E.g. the shift from (equal) public pensions to (unequal) pensions in the second pillar; the increase in the VAT-level; the tax deduction of interest paid on mortgages, in combination with prices increases and inventive financial mortgage constructions; changes in the invalidity benefit regime pushing partly disabled to work and if they do not succeed potentially into poverty; allowing high earners to live in subsidized houses.

Policy changes that had a progressive effect are scarce. Reforms in health insurance have successfully shed the lowest income categories, even though this will be reduced in the near future in order to stimulate price sensitivity of the poor. Again, this is an example of a reform at the expense of the lowest income category that is based on ideas of financial incentives. If they do not pay, they do not react to incentives, which leaves the government with empty hand if they want to stimulate them to act in the direction they prefer (reduce spending on health care, find employment, etc). Very recently however, the new Dutch government is aiming to redistribute income, with the aim of providing the lowest income groups with a buffer against what is to come in terms of budget cuts. The overall effect of those redistributive measures and cuts are yet unclear.
6. Conclusion: Inequality changes, their impacts and policies

We summarise the findings following the sequence of above arguments, moving from inequality to impacts and then to policies.

Inequalities

Throughout the report the Gini coefficient of household incomes, after benefits and tax and equivalised for household composition, has been taken as a point of reference. It has increased by 14 per cent between 1977 and 2011. Most of this change is concentrated in the short period between 1985 and 1990. It is an episodic rise which brought inequality to a permanently higher level. Poverty – using the closely related definition of less than below 60% of median net equivalised household income – shows much the same picture: the same episodic rise, from 8 to 13.5 per cent of all households, followed by near stability. The rise in the poverty rate bridged the gap to the rather stable EU15 average, moving up from 55 per cent to 95 per cent of that average between 1985 and 1995, and then gradually diminishing again to 80 per cent.

A deeper analysis (Chapter 2) reveals that this evolution seriously underestimates the rise in inequalities in the Netherlands. First, the Gini coefficient ignores strong developments at the tails of the distribution. These are well captured by direct comparisons of average incomes in deciles and the top-to-bottom ratio of such averages for the 10th decile to that of the first decile that aims to gauge the width of the distribution. The first decile shows what amounts to a permanent 30 per cent decline in real income while all other deciles show real increases, mostly ranging between 17 and 23 per cent. The top-to-bottom ratio shows a 78 per cent rise over the period, which encompasses both a rapid rise (42%) over the same episode of the late 1980s and a continued further increase (35%) over the 1990s and 2000s. In addition, a breakdown of the ratio into two parts for the lower and upper half of the income distribution shows that virtually all of the rise is concentrated in the lower half while the ratio for in the upper half remained unchanged. Second, the customary use of net equivalised income as the type of income for measuring inequality adds to the underestimation.

63 Though the precise levels of change up to 2011, also for the ratios that follow, are sensitive to the way the serious statistical break in series of 2000 is mended, this does not affect the main conclusions regarding the different measures, parts of the income distribution, and sources of income.

64 Poverty according to national definitions is at a lower level as it uses different factors for equivalisation and leaves out student households and households without a full-year income.
other types – market, after-transfers, and after-tax – show a stronger growth in inequality. It implies that household formation has effectively lowered inequality growth somewhat. Third, even a stable picture may hide important shifts under the surface, and it actually does.

This is most apparently when looking at the shares of top incomes. Though for the first time in a long period the Top-10% share has risen somewhat over the year 2001–2012 (29.7–30.9%), this has not really changed the long-run and internationally comparative perspectives of stability. However, underneath that stability there is a strong growth in top incomes from labour earnings. These primary incomes have grown from 19.4 per cent of all gross income in 1977 by 7 percentage points to 26.7 per cent in 2012. This can be fully attributed to the share of earnings received by partners in households, which grew by 9 percentage points (2.6→11.7%); note however that partner earnings also play an important and increasing role at lower levels of the distribution. This affects inequality among all types of households as well as among households with a labour income – witnessing a rise in in-work poverty especially over the later 1990s. At the same time incomes from enterprise and wealth have seen their top shares decline correspondingly, whilst the share of transfers (which include occupational pensions) remained unchanged. With the decline in wealth incomes the share of the Top 1% has fallen since 2008 meaning that the slow continued growth of the Top 10% concerns only the lower nine percentiles of that decile. As to labour earnings further analysis shows that though the combination of labour supply within households may contribute to household income inequality it also mitigates the individual inequality of (annual) earnings in the labour market. It is also striking that among labour-income household the inequality of net-equivalised income has changed very little; apparently, the above effects of household formation are most strongly felt here, plausibly because most of it occurs and changes within the bracket of working age. Lower earnings concentrate increasingly on single-person households, implying a smaller effect of equivalisation at the bottom, while at higher earnings the effects of equivalisation grow. One can only speculate about the explanation of that effect. The numerical growth of singles together with their increased concentration at the bottom pushes other larger households up the distribution by definition. In addition, the rapid growth of two-earner households may have pushed relatively larger households higher up the labour-income distribution.

A different but evidently not unrelated field concerns wealth and the inequality of wealth holdings. As in most countries, the wealth distribution is much more skewed than the income distribution. Basically, the lower half of the distribution has no or negative (debt exceeds property) wealth. The wealthiest Top 10% owns considerably more than half of all net wealth, and a massive 70 per cent of total financial wealth. Comparing to wealth millionaires it is evident that the Top 10% is also skewed
within itself and that the very top stands out against the rest. Homeownership, and therewith debt, is more equally distributed and the wealthiest Top 10% has seen its share in total debt decline from 24 per cent to 18 per cent, and so have the next three deciles (46→33%); this contrasts with a strong and relentless growth in the debt share of the bottom deciles from 11 per cent in 1993 to 27 per cent in 2011. As far as data are available (1993-2000, 2006-2011), the level of wealth has grown substantially but the inequality of its distribution has changed little over time. At the same time the aggregate burden of debt has grown even more, as its ratio to wealth rose from 39 per cent to 64 per cent, and its distribution has become more unequal. Debt is almost entirely related to the massive Dutch mortgage debt.

However, when relating wealth to income the ratio of wealth to income is surprisingly similar across the income deciles with the exception of the bottom and top deciles. Though low-income households may actually have top-decile wealth the frequency and average level of wealth holdings does increase with the level of income. Generally, the debt-to-income ratio is also rather stable over the income distribution, with the exception of the bottom decile, which is, naturally, where households with large debts end up.

Finally, we have looked for inequalities in educational attainment. Cohort-wise attainment has become much more equal over time. The relevant post-school cohorts registered a 55% increase in mean educational attainment and a 26% decline in the corresponding Gini coefficient. In cross-section, the share of the least skilled among the working-age population fell by two thirds in recent decades while that of tertiary educated grew from 6 to 28 per cent. At the same time, in spite of greater equality, the level of attainment has become a very strong gradient for income, employment chances, and many of the societal outcomes below. This has opened up a significant employment gap between the least-educated and best-educated men, which was absent before. Among women, where job chances have been lifted at all levels of education, it actually left the existing 50 percentage-point employment-rate gap between the least and best educated women fully intact. This has been reinforced by a part-time working-hours gradient that depends steeply on educational attainment and also on the occupational level of jobs: the great majority of low-skill persons and low-level jobs are now part-time. Educational earnings differentials seem largely stable but they still bend the income distribution towards the best educated because of the growing quantitative importance of that category. Close to half of all earnings may now be received by the best educated category, up from 30 per cent in the early 1990s.

We conclude to a considerable and on-going rise in inequalities far beyond what the Gini coefficient of net equivalised household incomes can tell us.
Impacts

The core question now is what impacts these rising inequalities may have – social, political and cultural. Thereto we have, in line with the GINI project, taken a look at many areas where impacts may potentially be found. The prime aim is to take stock of the relevant material that can be unearthed, preferably regarding the outcome that variables show across the income distribution but in practice often regarding other indicators of stratification and status such as educational attainment as no direct information of incomes is available. Preferably the material also covers as much of the thirty-year period for which we cover changes inequality – note the episodic change of the late 1980s – but in practice data availability is seldom long run. Note that such scrutiny may be hampered also by the rather slight moves in the Dutch Gini coefficient since 1990, though one should keep the caveats of Chapter 2 concerning other (measures of) inequality showing continued growth in the back of one’s mind. For what is found we scrutinise the possible relationship to (changes in) inequality primarily at face value, meaning a visual inspection considering whether univariate trends in impact variables and inequality move in the expected direction or not. The latter case is interpreted as telling for the lack of any obvious impact. The former case, by contrast, will be interpreted not as proof of the effects of inequality but as putting particular impact variables on the table for future research. At least, a possible link cannot be rejected out of hand, and more detailed research of a relationship, including the complex issues of method and causality which that will raise, seems warranted. Where we can we try to vary on the univariate approach by looking at aspects of stratification because average outcomes may be misleading to the extent that an increased stratification goes together with a shifting composition, e.g. when problems of the least educated – and least paid – deepen while at the same time their quantitative importance in society declines. If inequality affects impact ‘variables’, this is likely to pan out differently for different groups. We address a number of social impacts, using both factual statistics and respondent opinions, and describe the trends for several ‘political and cultural’ impacts, both in terms of attitudes and incidentally also in terms of behaviour.

65 See Van de Werfhorst and Salverda (2012) for an overview of such issues and the introduction to a number of papers dealing with this for different fields and countries beyond the Netherlands, or Lancee and Van de Werfhorst (2012) for another example.
The broad scan that is performed in Chapter 3 and 4 has generated a number of candidates for inclusion and exclusion respectively of further research. In the former case we include also cases where it seems to work at one moment work but not at another.

On the side of issues to retain for further scrutiny we have, first, the details beyond that go beyond the general increase in the level of healthy life expectancy, which is likely due to educational expansion, economic prosperity and technical improvements in health care. There are clear educational inequalities in healthy life expectancy which show a slight increase over the past decades. This seems in line with the economic unfortunate position of the lowest educated and lowest income group. Also, although there are constant proportions of people reporting a good and or a poor health, there are differences underneath between social groups. Second, turning to family issues, the decline in the divorce rate during the second half of the 1980s might relate to the economic recession and sharp increase in poverty rate in this period as well. Since the beginning of the 2000s, when the poverty rate and general income inequality show a slight increase, the number of legal divorces slightly declines again. This, in combination with the (increased) gap in income between couples with children and single parents likely represents the economic explanation of the fluctuations in number of divorces. Third, the fertility rate has declined dramatically in the early 1970s. Except for the sharp decline towards the 1980s, which correlates with a sharp increase in income inequality in that period, a linkage between overall trends in fertility and inequality is unclear. Yet, the favourable economic climate (as in higher GDP) may be one of the reasons for the slight increase in fertility rate in recent years. Fourth, in the Netherlands, the number of home-owners has increased since the 1990s and seems rather in line with the increase in net equivalised household incomes. The economic recession and rising housing prices since 2006 have put a brake on this growth and since the Financial Crisis started in 2008 the sales of homes have fallen. Between 1992 and 2003 home ownership increased in the higher educational and income groups, but it remained quite stable in the middle and lowest income and educational group. This might relate to the slight increasing income inequality since the year 2000. Fifth, the general increasing level of (property) crime is rather in line with the increasing trend in poverty and income inequality from 1977 to the 1990s. The decline in criminality since 2002 may be a result of a better economic climate towards 2007 and lower levels of poverty. Sixth, general levels of happiness and life satisfaction were rather stable over the past decades. Inequality in life satisfaction seems increasing mainly due to divergence between the lowest educated and the rest. In general, the subjective evaluation of income shows a rising trend; an increasing proportion of people (between 1995 and 2004) perceive their income as insufficient. Educational differences suggest rising levels of inequality in the subjective evaluation of income. Seventh, there is a clear pattern of intergenerational transmission of
poverty (income). When persons are born in a lower income household, they have a rather high risk of ending up in a low income group themselves (in adulthood). However, not all people from lower income parental homes stay poor; most of them actually climb up the income ladder. Overall, the intergenerational association of educational levels is becoming weaker and educational mobility has been predominantly upwards. This might indicate that the general decrease in educational inequality, which was found, finds its way to the next generation, resulting in less educational inequality according to social or family background. Finally, some trends in political and cultural indicators could be interpreted in line with the developments in inequality. Union membership, civic participation and attitudes towards distribution could be linked to the increasing inequality in the second half of the ‘80s – leaving any consideration of the direction of causality or a joint third cause aside. The trend in attitudes towards immigrants follows a somewhat similar pattern as the changes that were observed in income inequality.

On the other side we have a number of issues where no link is found even at visual inspection. Some of these certainly have an aspect of inequality in itself, which however does not seem to change under the influence of changing inequalities. First, we find an increase in material deprivation in the period 2000-2011, especially for the more vulnerable social groups, resulting in persistent social differentiation in material deprivation. However, gaps seem to remain persistent between the most vulnerable social groups (single parents, low educated and low income) in comparison to the rest, despite increasing income inequality and educational expansion. Second, over the past two decades the percentage of Dutch citizens that reports no social disconnectedness or social isolation has remained rather stable (about 90% of the total population). Though there are clear social dispersions in feelings of social isolation, with the lower educated and single (parent) households reporting higher levels of social isolation, the changing level of inequality in the Netherlands since the 2000s does not straightforwardly affect the general level of social (dis)connectedness, as could be expected according to Wilkinson and Pickett (2009). Third, over the past decades household formation has changed drastically. Over the years there is a sharp increase in the proportion of single person households, whereas the percentage of two-person households or couples has decreased, in particular those with children living at home. The increase in single-person households (and decrease in couples) might be related to an overall higher level of economic independency of women and educational expansion, not to inequality – as far as causality is thought to run from inequality to household formation. We have seen possible effects in the opposite direction above. Fourth, in the area of health, more recently there has been a clear trend towards higher levels of overweight and obesity but differences between gender and educational groups in (over)weight status are rather
constant. Furthermore, costs of housing differ across income groups, with relatively higher costs (as % of total household expenditure) in the low income group. Since 1992 housing expenditure slightly increased for renters but remained rather stable for home owners. Whether this diverging process relates towards an increasing trend in inequality is not visible. Sixth, unlike property crime violent offences seem to increase steadily during the past decades, and might be more related to a cultural change than to inequality. The proportion of people reporting to be a victim of crime and people who feel unsafe (around 20-25%) remains rather stable from 1995 onwards, with some fluctuations (2002, 2005). Changes in inequality at the national level seem to affect (property) crime rates but hardly influence the proportion of crime victims or people feeling unsafe. Finally, changing distances across educational groups could in general not be linked to developments in inequality. An exception may be membership of a political party for the higher educated, which - in contrast to the other groups – increased in the years of increasing inequality, suggesting that those better off might capitalize their interests in times when there is most to gain (or lose).

The overall conclusion must be that convincing results of negative societal impacts of growing inequality are not easily found. Much more detailed results, including international comparisons, will be needed for further progress.

Policies

The increase in income inequality can to a large extent be attributed to policy developments during the period of observation. Most importantly, the real minimum wage lagged behind median wages and since benefits levels are automatically linked to the level of the minimum wage, they lagged behind too. The period 1985-1990 has been most important for the growth in income inequality in the Netherlands. This was the period during which the minimum wage was reduced and nominally frozen for many years, and general benefit levels were reduced accordingly while benefit entitlements were also specifically reduced. But inequality enhancing policies have not been restricted to this period. The benefit system has continued to evolve since 1990 towards a system with shorter benefits durations, more active labour market policies and the restriction of long-term benefits to severe cases of disability. A notable decline found in public social expenditures is mainly due to the decrease in disability-related benefits.

During the observation period, the Dutch tax system has been adjusted a number of times. Tax reforms in 1990 and 2001 cut the top marginal rates, though supplemented by other reforms in the tax system that enhanced progressivity, such as reduction of deductibles, replacement of the basic allowance (at the marginal tax rate) by a tax credit (a fixed amount irrespective of income) the lifting
up of the income threshold above which no social security contributions are levied. Even though many of these policies were aimed at stimulating employment participation, they have had a serious impact on income inequality. In this sense the increase in inequality might be regarded as collateral damage of the political goal of stimulating financial incentives of citizens to take up employment and increase working hours.

Other policy changes have contributed to the rise in income inequality as well. For example, the increase in the VAT-level, also very recently during the years of the Financial Crisis, or the changes in the disability benefit regime that push the partly-disabled to work and if they do not succeed potentially into poverty. Various existing policies also contribute, such as the shift from (equal) first-pillar public pensions to (unequal) second-pillar occupational pensions; the continued tax deductibility at the marginal tax rate of interest paid on mortgages, in combination with price increases and inventive financial mortgage constructions aimed of exploiting this deductibility; the possibility for higher earners to continue living in subsidized social housing, which they entered at a lower level of income.

Policy changes that have had a progressive effect are scarce. Reforms in health insurance have successfully protected the lowest income categories, even though this will be reduced in the near future in order to stimulate the price sensitivity of the poor’s demand for health care services. This will be another example of a reform ultimately at the expense of the lowest income category, which is based on ideas of financial incentives. If they do not pay, they do not react to incentives, which leaves the government empty-handed when it aim stimulate behaviour in a preferred direction of reducing spending on health care, finding employment, etcetera. Also here existing policies may have a favourable effect. For example, with tax progressivity an increased inequality in primary incomes will augment the means for redistribution. Note, however, that benefits are responsible for most (80%) of redistribution and taxation for only 20 per cent.

At the same time the combination of internationally average income inequality with below-average poverty seems to point to a still more effective redistribution of income in the Netherlands. The cumulative effects that such redistributive measures and cuts may have are a matter of increasing concern.
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