Household Income Distribution and Working Time Patterns. An International Comparison

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I Introduction

The aim of this paper is twofold. First to analyze the relationship between the distribution of household income and the distribution of working time in six European countries and in the United States. The second objective is to assess how the tax and transfer systems affect the gender allocation of working time within married or cohabitant households. This paper is structured in the following manner. Section 2 briefly describes the data set used (Luxembourg Income Study database) and the definition of the population and variables retained in this study. Section 3 describes the main features of income distribution, earnings inequality and household working time patterns in the selected countries. Section 4 tries to assess the impact of national tax and transfer systems on the net earnings return for various household working time patterns. In particular, we provide some preliminary estimates on the marginal effect of an increase of wife's working hours on household's net disposable income.

II. Data sources and variables definition

The empirical evidence provided in this note is based on the Luxembourg Income Study database. Launched in 1983, the Luxembourg Income Study (LIS) aims to promote comparative research on the economic and social status of population in different countries. By using a common conceptual framework and by improving data comparability, LIS facilitate cross-country comparisons of earnings inequality, and other distributional issues. In order to insure a high degree of comparability demographic and socio-economics data have been harmonized by LIS.

The LIS database contains over 70 data sets from 26 countries; from these we have selected seven countries with a large variety of institutional arrangements. Six countries belong to the European Community (Belgium, Finland, Germany, Netherlands, Sweden and the United Kingdom) and one pertains to the OECD area (USA)[1]. Contents of the LIS database are derived directly from household's surveys and/or administrative records from the various countries (See Table A1 in the appendix for the source of the various country surveys). These countries have

[1] The relative limited number of countries selected is mainly due to lack of data, in particular working hours.

been selected because they provide measures of earnings, marital status, educational attainment and working time. Since we are primarily interested in the shape of earnings distribution and the design of working time patterns within households we have restricted the sample to married or cohabitant households. Because young people are often still in training, while older workers are prone to be eligible for retirement, we have further restricted our sample to persons aged 25 to 55. Concerning the employed we have limited the sample to wage earners. The exclusion of self-employed is due to data reliability and/or definition problem. First the definition of a "self-employed worker" varies across the selected countries. Second self-employment income is frequently misreported and average weekly working time for self-employed in some country was misreported (United Kingdom). Excluding self-employed may have some drawbacks. In particular as shown by other studies (see Sullivan and Smeeding 1997) households with earnings exclusively from self-employment tend to concentrate in the tails of the household income distribution. Excluding the earnings of self-employed workers would tend to decrease measured earnings inequality for some countries, in particular for those having a relative high share of self-employed (USA and UK). The samples generally exclude persons living in institutions (hospitals, and nursing homes; the homeless; military living in barracks) and undocumented immigrants. Registered immigrants are included. Coverage in every country is 96 percent or more of the remaining civilian non-institutionalized populations
For the country and the population selected in this paper the sample size ranges from 1203 (Belgium) to 4113 (USA).

While LIS overcomes some problems of comparability, several problems remain. As mentioned above, the underlying data were originally designed in different countries and so they clearly depart from the advantage of a single survey uniformly applied to all countries. Some data set are based on expenditures survey (United Kingdom), other are separate waves of longitudinal household panel data (Belgium, Germany, and the Netherlands,) while others come from government administrative data (Finland, Sweden) or current population survey (USA). Another major drawback is that data is available only for the early 1990:s (1991-92 for all countries except Germany (1994)).

Variable definition

As mentioned above, LIS is based on household surveys, which report household income from a variety of sources, including earnings from wages and salaries, property income, private and public pensions, and means-tested transfers. Table Ab in the appendix displays the definition of the various components of household income. Four main categories of income can be distinguished: *annual earnings* consist of gross wages and salaries, *factor income* comprises gross earnings plus cash property income, *total gross income* includes social transfers and *disposable income*, corresponds to total gross income net of income tax and mandatory employee contribution. All of the selected countries have the same definition of disposable income. We also report a measure of household net disposable income per equivalent adult, using an "intermediate" income sharing rules (the square root of household size)[2]. Data are weighted by the number of persons in each family, so income is measured as (after tax and transfer) disposable personal income per adult equivalent.

All countries income measures are transformed into a common currency (US dollars) by using the OECD purchasing power parity indices (PPP's)[3]. Using a single index across countries presents a certain number of drawbacks. First by applying such an index across country, we assume implicitly that the PPP conversions, intended to reflect differences in purchasing power, is the same for the average household than for households at all points in the distribution. Second the PPP indices are mainly used for comparing GDP per capita. Using such index on micro data may not be appropriate when there are large differences across countries in the tax-financed provision of public goods, such as education and health. While the public goods are included in GDP they are not embodied in the money income received by households. The fact that most of the selected European countries we examine have publicly provided health or pension insurance schemes and other publicly

[2] The adjusted net disposable income is equal to : net disposable income/(family size)$^{0.5}$ .This is a commonly used equivalence scale which increases at a decreasing rate with family size (see for instance. Atkinson, Rainwater, and Smeeding 1995 and Gottchalk and Smeeding, 1998.)
[3] Economic Outlook

provided goods means that the exclusion of these goods may affect relative measures of earnings inequality. This drawback is particularly problematic when earnings are compared in absolute terms (see for instance Gottschalk and Smeeding, 1998).

To compare education across countries is not without problems. We have used the same classifications as in Sullivan & Smeeding (1997) In order to measure the level of education three different categories has been defined; low, medium and high. The low education level consists of elementary school (or less) and short vocational training. The break between Low and Medium is the completion of high vocational training and secondary school (gymnasium, high school etc). High attainment level includes individuals with college or university degree (See Table Ad in the appendix). Some comparability problems are, however, to be stressed. For instance in the United Kingdom education is expressed in years of attendance rather than attainment for the other selected countries. Our classification for the UK can be regarded as a calibration in order to obtain figures that are comparable to the other countries, obviously the results must be interpreted with care. On the other hand, the fact that the German system is characterized by a high incidence of vocational education leads to an overstating of the Middle category for this country. Actually, many German workers without a University degree have comparable job skills than American College or European University graduates.

The last measurement issue we need to confront is the definition and measurement of working time (see Table Ac in the appendix). All of the selected country uses the week as unit of measurement. Nevertheless, some differences have to be stressed. While some countries notify a measure of actual average weekly working time (Belgium, Germany and United States), others report a measure of usual weekly working time inclusive overtime or regular weekly working time excluding overtime (Finland). The treatment of overtime varies also between countries, some refer explicitly to paid overtime (United Kingdom, Sweden), while others include all types of overtime. This difference in definition induces some bias, which must be kept in mind when we compare the length and the distribution of working time between different countries.

III. Income distribution and earnings inequality

In Table 1 three household income measures are reported for married or cohabitants: households annual earnings (col. 1), total gross income (col. 2) and net disposable income adjusted or not to households size (col 3 and 4). The last three columns display the first decile, the median and the ninth decile respectively.

Table 1. Cross-national comparison of average earnings, gross factor and net disposable income. Percentiles. Ranking in parenthesis.

Country	Earnings (wage and salaries)	Total Gross Income	Net Disposable Income	Adjusted Disposable Income.	P10	P50 Median	P90
Belgium 1992	34422 (5)	38740 (6)	26488 (7)	14211 (7)	16450 (5)	26190 (5)	40060 (5)
Finland 1991	35938 (4)	40745 (3)	29647 (4)	16558 (4)	20950 (2)	29860 (2)	45680 (3)
Germany 1994	37807 (2)	40410 (4)	27247 (5)	15387 (5)	15580 (6)	23740 (7)	36980 (6)
Netherlands 1991	33107 (7)	36973 (7)	26979 (6)	15165 (6)	16480 (4)	24960 (6)	38290 (5)
Sweden1992	33576 (6)	40323 (5)	29852 (3)	17166 (2)	21480 (1)	28580 (3)	41350 (4)
United Kingdom 1991	36962 (3)	41132 (2)	30055 (2)	17023 (3)	13410 (7)	27200 (4)	48700 (2)
United States 1991	46177 (1)	49381 (1)	39102 (1)	21354 (1)	17390 (3)	36400 (1)	62060 (1)

Note: All income measures in USD/year adjusted by PPP
P10: First decile, P50= Median and P90 = 90th percentile
Income Definition: Net Disposable Income (see Table Ab in the appendix for the definition)
Person Weighted Net Disposable Income (Equivalence Scale: Square Root of Family Size)

Independently of the type of earnings concept used, the United States has the level. The ranking of the European countries shows, however, a larger variation with regard to the type of income categories. For instance, Germany has the second position for gross earning, but drops to the fifth position when net disposable income (adjusted or not to family size) is considered. On the other hand, Sweden ranks among the countries with the lowest gross earnings but ranks among the countries with the highest net disposable income; the distributional impact of the Swedish transfer and tax system explaining the relative improvement of this country. Worth

noticing also is that the country ranking of net disposable income is hardly affected when net disposable income is adjusted to family size.

As shown by the fifth column, the average net income for the low-income groups (P10) is significantly higher in the Nordic country compared to the other countries, specially compared to the United Kingdom and the United States which exhibit the lowest net disposable income for this income group. In other words, married and cohabitant households at the 10th percentile in the United Kingdom and the United States have a lower standard of living than comparable households in the Nordic countries.

Cross-national disparities in household earnings reflect both institutional differences (education level, industrial relation systems, wage setting and wage differential, productivity and efficiency aspects, tax and transfer systems etc) but also differences in households labour market commitments and working hours. For instance, the relative high average wage level in United Kingdom and in the United States (see Table A1 in the statistical appendix) and the relatively long average working time contribute largely to explain the relatively high gross earnings level in these countries (see below, section 3.4).

Table 2 below displays three common measures of income inequality. The first measure is the ratio of earnings at the 90th percentile to that at the 10th (P90/10), reported in the first column of Table 2.

Table 2. Measures of Earnings Inequality, households net disposable income. Ranking within parenthesis

Country	P90/P10	P10/P50	P90/P50
Belgium1992	2,44 (3)	0,63 (3)	1,53 (4)
Finland 1991	2,18 (6)	0,70 (6)	1,53 (4)
Germany1994	2,37 (4)	0,66 (4)	1,56 (3)
Netherlands1991	2,32 (5)	0,66 (4)	1,53 (4)
Sweden1992	1,93 (7)	0,75 (7)	1,45 (7)
United Kingdom 1991	3,63 (1)	0,49 (2)	1,79 (1)
United States1991	3,57 (2)	0,48 (1)	1,70 (2)

Note: Greater levels of inequality are associated with higher values of P90/P10 and P90/P50, but with lower values of P10/P50

This measure tends to emphasize the tails of the distribution without giving undue weight to extreme values. It is often helpful to break the P90/10 ratio into a bottom

and a top portion, P10/50 and P90/50, as shown in the last two data columns. Greater levels of inequality are associated with higher values of P90/10 and P90/50, but with lower values of P10/50. As shown in Table 2, a married or cohabitant household at the 90th percentile in the United Kingdom and United states has almost three and half times the income of an household at the tenth percentile, while the distance is less than two times in Sweden and two and half time in the other European Countries.

The results in Table 2 are generally consistent with the stylized facts reported in other studies (see for instance, Gottschalk and Smeeding (1997) etc). Independently of the measures selected, earnings inequality is almost always greater in the United Kingdom and the United States than in any other European country. For the most part these rankings produce the same pattern of inequality with Nordic countries (Sweden and Finland) having the least inequality, while the United Kingdom and the United States exhibit the least equal distribution of family income among all countries covered in this study. The largest differences between the UK and US and the rest of the countries is found in the lower tail of the distribution. The high level of income inequality in these two countries may partly be ascribed to the relatively modest level of welfare expenditures, partly to the design of the tax system (relatively low marginal tax rate).

We have so far examined differences across countries in relative incomes by focusing on percentile differences, comparing the average income of households at the 10th percentile relative to each country's 90th percentile or median. Even though these measures reflect the degree of inequality they do not take into account differences in absolute incomes across countries. While Nordic married or cohabitant households at the 10th percentile may have incomes closer to the median than the comparable low income household in the United Kingdom or in the United States, this does not necessarily mean that the Nordic low-income households have a higher standard of living. The higher median disposable income in the United States or in the United Kingdom may more than offset the higher degree of inequality.

Following standard procedure we compare the different deciles in each country to the corresponding decile in the United States. As shown in Table 3 below the value for (P^{50}i / P^{50}United States) for the Nordic countries is roughly equal to 0.8, indicating that the Nordic median household has a level of disposable income that is roughly 80 percent of the United States median family.

Table 3: Differential in disposable income, at various percentile points, relative to the United States.

Country	P10i/P10 us	P25i/P25 us	P50i/P50 us	P90i/P90 us
Belgium1992	0,95	0,81	0,72	0,65
Finland 1991	1,20	0,98	0,82	0,74
Germany1994	0,90	0,75	0,65	0,60
Netherlands1991	0,95	0,79	0,69	0,62
Sweden1992	1,24	0,97	0,79	0,67
United Kingdom 1991	0,77	0,77	0,75	0,78
United States1991	1,00	1,00	1,00	1,00

Source: LIS

However, in the lower tail of the income distribution (first decile), the real net disposable incomes for married and cohabitants households in the Nordic countries clearly exceed household earnings for similar households in the United States and the other European countries. To illustrate: Swedish couples at the first decile has a disposable income that is roughly 20 percent higher than in the United State, 30 percent higher than in Germany and 55 percent higher than in the United Kingdom. From the first quartile, all the European countries are below the United States. In other words this means that real disposable income is lower at all percentiles greater than the 25th in the selected European countries than in the US. At the other end of the distribution (90th percentiles), couples in the Nordic Countries has a disposable income that is between approx. 65 % (Sweden) and 70 % (Finland) of the corresponding couples in the United States. Worth noticing also is that for all points in the income distribution (i.e. independently of the percentiles) the disposable income for British households is roughly 75 % of the household income in the United States indicating a similar profile of income distribution in the two countries (see Figure A1 on income distribution in the statistical appendix).

To sum up, the empirical evidence reported here produces some rather consistent patterns. Earnings inequality is almost always greater in the United Kingdom and the United States than in any other European country. British and American low-income groups appear to be further from the median of the distribution than in other countries. In particular, the analysis of income distribution reveals that American and British households in the lower tail of the distribution have lower absolute as well relative disposable income than comparable households in the Nordic countries. Low-income families in the other European countries have an higher disposable income than in the United Kingdom but lower than in the United States.

3.1 Education and income

Sullivan & Smeeding (1997) analyze the relationship between educational attainment and earnings inequality in several LIS-countries. According to their findings there is no evidence of a correlation between educational attainments and the inequality of earnings. However, they do find a positive correlation between returns to education and inequality. One important difference between our study and Sullivan & Smeeding's is that they only include full time earners, our sample includes both earners and non-earners. Supposedly, the important difference is that we include non-earners. If there is a positive correlation between education and the probability to work then the effect of education on earnings should be quite strong. Therefore we expect to find that the level of education as well as return to education is important in explaining earnings inequality.

As shown in Table A1 in the statistical appendix Sweden, closely followed by Belgium and the US, has the highest proportion of high educated, whereas Finland has the lowest. Only 11% of the spouses in Finland have a university degree as opposed to 28-29% in Sweden. The highest incidence of low educated individuals is found in the UK, where 39% of the males and 35% of the females have a primary education or less. However, as mentioned above the figures for the UK are fragile due to the definition of this measure. Finland also has a high proportion of low educated, 26% for females and 30% for males. In the US the proportion of individuals with only a primary education is quite low, 11-12%. As expected the gender differentials in educational attainment is relatively low, except for Germany. Around, 20% of the German

males have the highest education whereas only 10% of the German females belong to this group.

Table A2 displays the relationship between education and earnings inequality. The figures in the table are obtained from a simple regression analysis. For each country the following model has been estimated

$$(1) \qquad \text{Log(earnings)}=\beta_0+\beta_1(\text{education}_{\text{medium}})+\beta_2(\text{education}_{\text{high}})+\beta_3(\text{age}_{31\text{-}40})+\beta_4(\text{age}_{41\text{-}50})+\beta_5(\text{age}_{51\text{-}55})$$

where education and age are measured by dummy variables (1 if the male belongs to the group zero otherwise). Note that we have used the age and education of the male as a measure of household age and education. Since there is a high correlation between the spouse's age and education (except for Germany), the choice of the male is not important.

As an illustration of the interpretation, take the value 211 in the bottom right hand side of the US-table. This value means that US households with a male aged 51-55 and the highest education earns 211 % more than households with males in age 25-30 and the lowest education (the baseline)[4].

Overall, household earnings increase with both age and education (see Table A2). However the impact of age and education on households earnings differs notably between the countries. The highest return to education is, as expected, found in the US. For the youngest households the expected return to high education is 135% (compared to a low educated household). The return to education increases with age up to 211% for the oldest age group.

The Netherlands displays the lowest return to education. For the youngest households the expected return to high education is 53% (compared to a low educated household). The returns to education increase over age up to 83% for the oldest household. Thus the earnings age profile appears to be quite flat in the Netherlands. The returns to education are similar in

[4] The returns to education have been calculated as 100 $[\exp(b_2+b_5)-1]$, where the b:s are the OLS-estimated values for the US.

Finland, Germany, Sweden and the United Kingdom, with the highest returns ranging from 109-129-%. Among the European countries, Belgium displays the highest return to education (157 %).

Table A3 relates the household's earnings distribution and the spouse's level of education. In order to illustrate the meaning of the entries in this table take Finland as an example and use the first figure, 0.42. Thus, in Finland 42% of all the households with earnings below the first decile have a male with a low education.

A closer inspection of Table A3 reveals that the level of education is a major determinant of the level of earnings. However, once again the results differ widely between the countries. As mentioned above the US had the highest return to education, this is confirmed in Table A3 that shows that of all US-households with earnings above the ninth decile only 1% of the spouses has a low education. As a contrast, in the Netherlands 17% of the males and 20% of the females in the highest income groups belong to the lowest education group. There is also a very high proportion of low educated in high earner household in the UK, but again this result might be a consequence of the measurement problems mentioned above. Like in the US, a very low fraction of low educated spouses in Belgium is found among the high-income households. For the remaining countries (Finland, Sweden and Germany) the share of low educated in high earner household range from 15% (German females) to 6% (German males). Except for Germany, the gender difference within the countries is small.

It is also interesting to compare the number of high-educated people in low earner household. Sweden have the highest proportion (16% females and 13% males) and Finland the lowest (3% for both males females). This difference is quite large and there may be several reasons for this finding, but remember that Finland had the lowest number of high educated and Sweden the highest. A market interpretation would be that the higher educational attainment in Sweden has reduced the return for education. However, this is not quite consistent with the results in Table A2, which reported a return for education in Sweden only slightly below those in Finland. Another interpretation is that there exist important differences in the quality of higher education between the countries. It is possible that many Swedish individuals that we coded as "highly educated" would not have belonged to this group by a Finish standard. As noted by Sullivan & Smeeding the definition of high attainment is relatively liberal in Sweden.

3.2 Children and family income.

To study the effect of children on earnings and disposable income is quite interesting since this is directly related to family policy. In countries like Finland and Sweden that are characterized by a generous family policy small differences on earnings as well as disposable income are expected between households with and without children. The figures reported in Table A4 are consistent with this expectation. In order to study the effect of younger children, we concentrate on the first age group (25-30 years). The drop in household's earnings due to one child is only 2% in Sweden (compared to couple without children), and there is not much difference in households with two children. In Finland the number of children (up to 2 children) does not significantly affect earnings. However, for three and more children the impact on earnings becomes negative, especially in Sweden (-17%). A major difference is that a large share of women in the Nordic countries returns to the labor market when the children gets older and hence the impact of children on household earnings for older households is limited.

Two countries that stand in a sharp contrast to the Nordic welfare states are the UK and Germany. A young household with two children in both the UK and Germany earns approximately 25% less than a young household with no children. Furthermore, the negative income effect of children remains when the households get older. A British household with two children in the oldest age group (51-55) earns 33% less than the young household with no children. The negative income effect of children is also pronounced in the Netherlands and the US while the impact of children in Belgium appears to be relatively small, except for households with 3 children or more (22 % less).

The effect of children on disposable income is listed in Table A5. Again, the Nordic countries stand out as generous welfare states. Note that there is not one single negative figure in the table for Finland and Sweden. Thus, all households with children are better off regardless of number of children and the age of the head. For instance young households with two children have 12% higher disposable income in Finland and 8% higher in Sweden compared to young households with no children. Also, Belgium belongs to this league, with no negative entry. Again the largest negative effect is found in the UK. A young household with two children has a disposable income 16% below the comparable household with no children. The negative

effect is also persistent for older households. For Germany, Netherlands and the US, there is also a clear negative income effect of children for the young households. Young German couples with two children have a lower income (about 14%) compared with couples without children. The corresponding figures for the Netherlands and the US are 8 and 7 percent respectively.

The interesting message from Table A4 is the importance of a high female participation rate. In countries with a high female participation rate the negative effect of children on earnings are quite small. If the females return to the labor market after the parental leave, the effect should be limited to an effect of very young children. Even though a comparison of Table A4 and A5 indicates the presence of a welfare system in all countries, (the effects of children are smaller on disposable income than on earnings), obviously the level of ambition in family policy differs sharply between the selected countries.

3.3 Working time patterns and income distribution.

As mentioned above, cross-national disparities in household earnings and disposable income reflect both institutional differences (education level, industrial relation systems, wage setting and wage differential, productivity and efficiency aspects, tax and transfer systems etc) and also cross-country differences in households labour market commitments and working hours. In this section we investigate to what extent differences in earnings level and income inequality may be explained by cross country differences in gender division of labour and the allocation of working time within married/cohabitant households.

As shown by table A1 in the statistical appendix the female labour market commitment, measured here by employment rate, vary widely across country (between 50-93 %) while the male employment rate exhibits much lower variation (89-97 %). The Nordic countries display the highest employment rate both for male and female, while the female employment rate is low in countries as Belgium (56 %) and the Netherlands (50 %).

Table 4: Distribution of married/cohabitant household between dual earners single earners and no earners. Ranking within parenthesis

Country	Dual earners	Single earners (male)	Single earners (female)	No earners
Belgium	53,8 (6)	36,3 (2)	2,3 (5)	7,6 (2)
Finland	89,2 (2)	7,3 (6)	3,0 (2)	0,5 (7)
Germany	63,8 (4)	30,6 (3)	2,7 (4)	2,8 (4)
Netherlands	47,5 (7)	46,6 (1)	2,1 (6)	3.8 (3)
Sweden	92,3 (1)	5,1 (7)	1,6 (7)	1,1 (6)
United Kingdom	63,9 (5)	23,4 (4)	4,4 (1)	8,3 (1)
United States	73,1 (3)	22,2 (5)	2,9 (3)	1,8 (5)

Source: LIS

As shown by Table 4, in all countries, except the Netherlands, the share of married or cohabitants dual earner households exceed significantly the share of single male earner households (male breadwinner model). However, the share of dual earner households varies widely across the countries ranging from around 90 % in the Nordic countries to around 50 % in Belgium and the Netherlands. Hence, the male breadwinner model is still an important feature in Germany, Netherlands and Belgium (31 to 47 %) while its incidence is significantly lower in the United States and the United Kingdom (around 20 %) and smallest in the Nordic countries. Worth noticing also is the relatively high incidence of household with no earner in Belgium and the United Kingdom (around 8 %), compared to the other countries.

Table 5 below displays the cross-country differences in the gender allocation of work-time among dual earners. Finland and the United States have the highest incidence of dual earner households where both spouse work full time. Conversely, in the Netherlands the share of dual earner household where both spouse work full time is extremely low (11 %). In the remaining European countries the share of dual earners household with either two full time or a female working part-time is more evenly distributed.

Table 5: Distribution of dual earners household (married or cohabitants) by working time patterns (%). Ranking within parenthesis

Country	Male working full time Female part-time	Both full time
Belgium	50,5 (3)	49,5 (5)
Finland	11,3 (7)	88,7 (1)
Germany	40,7 (5)	59,3 (3)
Netherlands	76,8 (1)	23,2 (7)
Sweden	45,7 (4)	54,3 (4)
United Kingdom	55,6 (2)	44,4 (6)
United States	27,0 (6)	73,0 (2)

Source: LIS

As mentioned above a part of the cross-country differences in household's earnings level may be explained by the above disparities in the gender division of labour and working time. To illustrate: the high incidence of dual full time earners in Finland, the long average working time for both men and women may partly explain the relative high average earnings in this country despite a relatively low wage level (See table A1 in the appendix). Conversely, the relative low ranking of Netherlands, both in terms of earnings and disposable income, may partly be ascribed to the low female employment rate, the low incidence of dual full time earners and the high incidence of female part-time, in particular marginal part-time[5], despite the highest average hourly wage. Apart to this polar case the analysis of the relationship between earnings level and the gender division of labour is far from being obvious.

As described in the previous sections, the United States have the highest average earnings and disposable income for married and cohabiting household. Several interrelated factors may explain this result. The relatively high male and female employment rate (96 % and 76 % resp), the high incidence of dual earner households (70%), the relatively low incidence of female part-timers (20 %) in particular short part-timer (7 % of all female employees) and thereby the long average working hours for both male (43,8 h) and female (35.9 h) combined to the relatively low dispersion in the gender distribution of working time[6] explain largely the higher average earnings and net disposable income in the United States. On the other hand, the high wage differential, the relatively high return to education and low average and marginal

[5] Short part-time is defined as 1-17 hours and long part-time as 18-34 hours.
[6] See table A10 a and A10b and Figures A2 in the statistical appendix

tax rate coupled to the relatively modest level of welfare expenditures explain the high income inequality in this country.

Compared to the other European countries, the United Kingdom is characterized by both a relatively high average earnings and disposable income but by the highest income inequality. As far the gender division of labour is concerned the United Kingdom exhibits a medium female employment rate and relatively low incidence of male breadwinner model (20%). The main striking difference is the larger dispersion of working time and the higher gender polarization in the distribution of working time (see figures A2). The male distribution of working time exhibits the highest cross-country dispersion, is heavily skewed with a high incidence of long working time (more than 40 % of male employee work more than 40 hours). Event though the dispersion in female working time is also high, the female distribution of working time on the other hand is significantly flatter with a relatively high concentration of short part-timers. (36 % of female part-time employees). The high wage differential coupled to the large dispersion and polarization in the gender distribution in working time contribute to reinforce earnings inequality in the United Kingdom. Besides, the high incidence of couples with no earners (8 %), the lower level of social transfers explain also the high earnings inequality in these countries.

Among the European countries the Nordic country are both characterized by relatively low average earnings, high average disposable income and the lowest income inequality. The two country exhibits the highest gender employment rate and the highest share of dual earner household (over 90 %). The main difference between the two countries concerns the female distribution of working time, with a much higher incidence of female full timer (90 %). Even though Sweden exhibits a high share of female part-timer the proportion of marginal part-time is compared to other country very low. The low-income inequality in the Nordic country can be largely explained by the high incidence of dual earner household, the low wage differential (compressed wage structure), by the redistributive impact of the transfer and tax system and by the low dispersion of the gender distribution in working time.

The Netherlands exhibits the lowest earnings, a low net disposable income and a medium income inequality. Once again the Netherlands constitutes a extreme case, with the lowest

employment rate for married/cohabitant women (50%), a clear dominance of traditional male-breadwinner model (42% of households), the highest incidence of female part-time in particular short part-time (40 % of all part-time employees) and thereby the shortest female average working hours (23.9 h). Compared to the male, the distribution of female working time is negatively skewed, very flat with a high dispersion of working time. On the other hand the male distribution of working time is highly peaked around 38-40 hours (75 %). Worth also noticing is that the male average working time is the shortest among the country analyzed. Hence, the relatively low earnings and disposable income level may largely be explained by the gender division of labour and working time, despite the highest hourly wage among the country studied.

Germany has relatively high average earnings but relatively low net disposable income and a medium income inequality. The relatively high earnings in Germany may be explained by the relatively high average hourly wage rate and long average hour for male (43.5 h) and female (32 hours). Both the male and female distributions of working time are characterized by a high dispersion in working time. But the male working time is positively skewed while the female is negatively skewed. Germany is also characterized by a large incidence of long working time (36% with a weekly working time exceeding 40 hours) for men, a medium incidence of female part-time (29 %) and a relatively low incidence of short part-time (12 % of all female employees) On the other hand, Germany has a relatively low participation rate for married women (65 %) and a relatively high share of traditional male-breadwinner household (30%).

Finally, Belgium, like the Netherlands, has relatively low earnings and the lowest net disposable income. Belgium exhibits a relatively low female employment rate (57 %) and a relatively high share of traditional male-breadwinner model (35%). The male distribution of working time is characterized by a relatively high working time dispersion and is positively skewed, with a relatively high incidence of long working time (20 % of male have a weekly working time exceeding 40 hours). The female distribution of working time is rather flat and displays a medium dispersion with a relatively low incidence of female short part-time (7% of all female employees). A relatively low average hourly wage, the low gender employment rate and the relatively high incidence of the traditional male-breadwinner model may explain the relatively low ranking of Belgium in terms of earnings and disposable income. Like the United Kingdom, Belgium has a relatively high share of couples with no earners (8 %) which partly

may explain that Belgium has the highest income inequality after The United Kingdom and the US.

Table 6 below, is an attempt to classified the various countries according to earnings level, income inequality, labour market commitments (employment rate), working time length and status (average working time, share of part timers) and the gender division of labour (incidence of male breadwinner model). The correlation matrix (table 7) summarizes the relationship between the various national employments' and working time regimes and the cross-country variation in earnings and income inequality.

Cross-country differences in earnings do not appear to be strongly related to disparities in female employment rate. However, a larger part of the cross country variation in earnings and disposable income may be ascribed to differences in both female average working time and the overall average working time at the household level, here measured by the total average working time (male + female). Surprisingly, cross-country differences in earnings level seems not to be directly correlated neither to the share of dual earners nor to the incidence of the male breadwinner model.

As far as income inequality is concerned, the cross-country differences in female employment rate and the incidence of male breadwinner couples do not seem to explain a large part of cross-country income inequality. On the other hand, the extent of income inequality seems more strongly related to the cross differences in the incidence of couples with no earners or with single female earners.

Table 6: Taxonomy

Country	*Earnings*	*Net Disposable Income*	*Income inequality*	*Employment rate*		*Incidence of Female part-time*	*Average Working hours*		*Couples with no earners*	*Incidence of male-bread winner model (Male full time, female not working)*
				Male	*Female*		*Male*	*Female*		
Belgium	Medium	Low	Medium	Low	Low	Medium	Medium	Medium	High	High
Finland	Medium	Medium	Low	High	High	Low	Medium	Long	Low	Low
Germany	High	Low	Medium	High	Med.	Medium	Long	Medium	Low	High
Netherlands	Low	Low	Medium	High	Low	High	Medium	Short	Low	High
Sweden	Low	Medium	Low	High	High	High	Medium	Medium	Low	Low
United Kingdom	High	Medium	High	Low	Med.	High	Long	Short	High	Low
United States	High	High	High	High	High	Medium	Long	Long	Low	Medium

Table 7 : Correlation matrix. Absolute earnings, income inequality, employment rate and working time patterns

Variables	*Household Earnings*	*Disposable income*	*Income Inequality (P90/P10)*	*Female employment rate*	*Female average working time*	*Household working time*	*Dual earners*	*Single earners (Male)*	*Single earners (Female)*	*No earners*
Household Earnings	1,00									
Disposable income	0,89	1,00								
Income inequality (P90/P10)	0,71	-0,60	1,00							
Employment rate women	0,15	0,39	-0,17	1,00						
Female average weekly working time	0,49	0,52	-0,05	0,78	1,00					
Household working time	0,68	0,62	0,27	0,65	0,90	1,00				
Dual earners	0,12	0,36	-0,23	1,00	0,78	0,64	1,00			
Single earners Males	-0,12	-0,35	0,12	-0,99	-0,76	-0,67	-0,98	1,00		
Single earners female	0,37	0,22	0,77	-0,03	-0,04	0,22	-0,11	-0,04	1,00	
No earners	-0,19	-0,33	0,44	-0,64	-0,59	-0,35	-0,68	0,53	0,47	1,00

3.4 Returns on working hours:

The purpose of this section is a further analysis of the relation between working hours and income inequality. Section 3.3 above discussed this relation and Table A7a reported working hours and income levels. The results so far indicates a rather low correlation between hours and income, in order to obtain a direct measure of this correlation, a simple regression model is estimated for each country. The dependent variable being household earnings and the independent variables (apart from an intercept) are the spouses working hours. Of course, the regression model used here should be considered from a purely descriptive perspective and not given any behavioral interpretation. The results, in Table A11, demonstrate the relatively small importance of working hours on earnings. The measure of R^2 varies from 0.13 for Finland to 0.39 for Belgium. Thus, at most spouses working hours can explain 40% of the variation in household earnings. As expected the marginal rate of return is always higher for the male. The smallest difference (11%) is found in Finland and the largest in the Netherlands (54%), Germany (51%) and the US (46%).

In Table A12 the regressors have been extended by square of hours, education, age and children. This results in a strong increase in goodness of fit, ranging from 0.34 for Sweden to 0.59 for Belgium. With the exception of the females in the Netherlands, the marginal rate of return for working hours have the expected concave shape, that is a positive coefficient for hours and a negative for hours squared. In order to facilitate the interpretation, elasticities have been calculated and are reported in the last two rows in Table A12. These elasticities are evaluated at the mean working hours. The largest male elasticities are 0.57 for the Netherlands and 0.45 for the UK 0.43 for Belgium and US. The smallest values are found for Finland, 0.27, and, 0.36, for Germany. The female elasticities are always below the males. The variations in the values for females are smaller from 0.14 for the Netherlands 0.23 for the US.

Apart from the effects of hours on earnings Table A12 also presents the effects of education, age and children. The effect of education has been discussed above (Table A2) but now we control not only for age. All significant education coefficients are positive, indication a positive return of education compared to the lowest. The coefficient for high education is always above those for medium. Concentrating on the effect on high education, there is always a significant effect and it is always higher for the males. Two countries, the Netherlands and Sweden are characterized by small returns to education whereas Finland and the US exhibit higher returns on

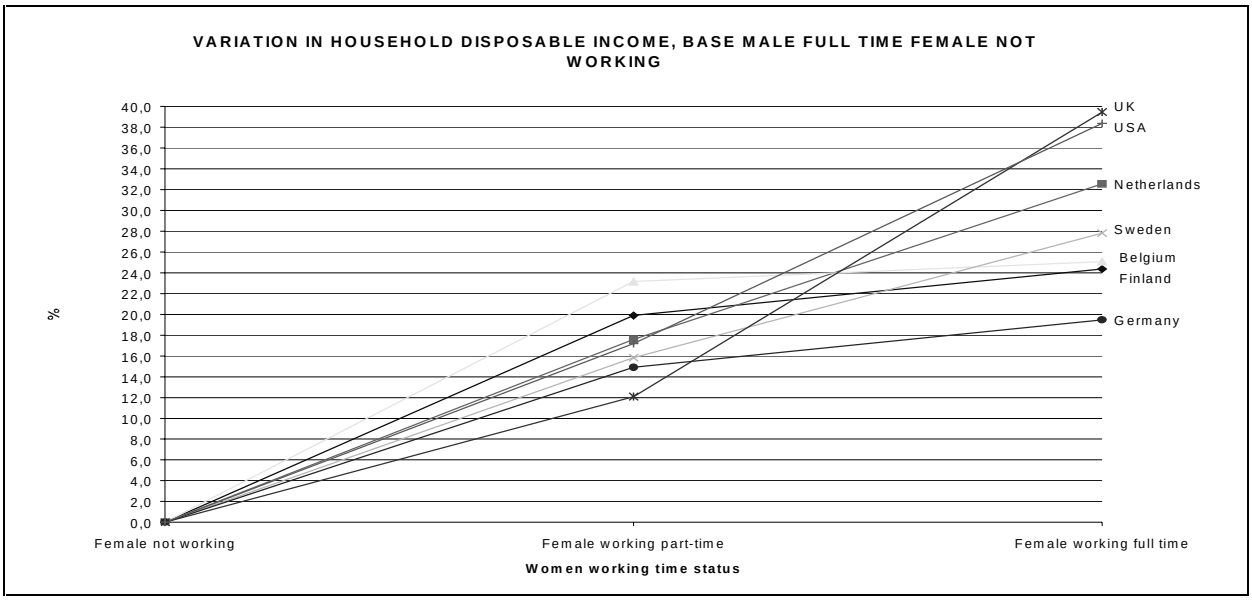
education. Again the results for Germany indicates a relatively high return for males but a very low return for females.

The effects of children were presented in Table A4, but again Table A12 controls not only for the age effect. In general the results from Table A4 are in agreement to those in A12 (a large negative effect of children on earnings in Germany and UK), but one difference is that there is now a relatively strong negative effect in Sweden.

Next, we focus on analyzing the relation between working hours and inequality in household disposable income. In principle the effect of a change in working hours on disposable income is a measure of marginal effects. That is, how much does the disposable income change as a result of a small change in working hours. The important difference compared to earnings is that disposable income takes into account the impact of tax and benefit system.

The figure below illustrates the marginal return of an increase of wife's working hours on net household disposable income (see also Tables A13a and A14b in the statistical appendix). The reference scenario is a pure male breadwinner model (male working and female not working).

Figure 1: Changes in household disposable income as female working hour increases. Percentage changes in net income compared to households where males work full time and females do not work.



Source: LIS and own calculation.

As shown by Figure 1, the net return of an increase of a wife's working time on household disposable income varies widely among the countries. Given the prevailing tax and the social transfer system, the highest return from the transition of the traditional male breadwinner model to a dual full-time earners is found in the UK and USA (over 30 % net increase) while the lowest return is clearly found in Germany (17 %). For the remaining countries (Belgium, the Netherlands, Finland and Sweden), the returns is roughly of the same order of magnitude (25 %-27 % net increase). It is also worth noticing that the type of transitions affects the rate of returns. To illustrate: the transition from the pure male breadwinner model to a situation where the woman works part-time leads to a significantly higher return in Belgium and Germany, compared for instance to the UK and the United States. Even thought the general income tax level is low both in the US & UK this does not mean that the marginal effects is small. The design of the tax and welfare programs is such that there are substantial marginal effects for low-income households, partly explaining the relatively low marginal return from the pure male breadwinner model to the situation where the wife works part-time.
Worth noticing also is that the transition from a situation where the wife works part-time to the situation where both spouses work full time leads to unchanged disposable income in Belgium and to a reduction in household disposable income in Germany. Conversely the marginal returns for this kind of transition is significantly higher in Sweden, UK and the USA.

If one decomposes the rate of return by educational attainment the patterns are reinforced (See Table A13b in the appendix). For example, in the high education group, the transition from part-time to dual full-time earners leads to a huge reduction in household disposable income in Germany.

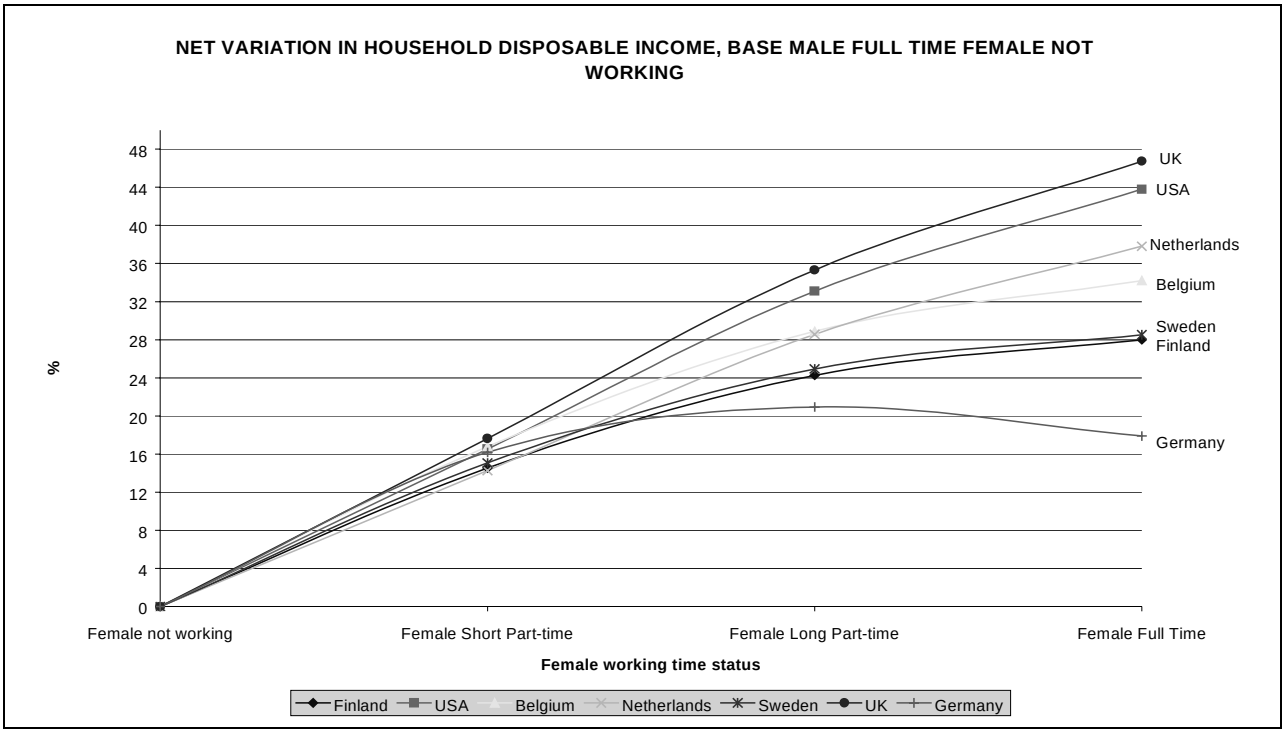
Finally, in order to isolate the effect of working hours, a model is estimated using household disposable income as dependent variable and hours, square of hours, education, age and children as independent variables. Thus, this is the same model as presented in table A14, with the exception that disposable income instead of earnings is used as dependent variable.

Again, the marginal rate of return for working hours has the expected concave shape, (with the exception of the females in the Netherlands). As expected the elasticities for disposable income are smaller compared to the elasticities for earnings. Small values (0.10 – 0.12) are found for females in Finland, Netherlands, Sweden and Germany. Thus, for these countries a one percent

increase in female working hours only results in a 0.10-0.12% increase in disposable income. The highest values are found for the males in the Netherlands (0.31%) and the US (0.28%).

In order to verify the robustness of the profiles displayed in Figure 1, we re-estimate the model and exclude all households where the males work less than full-time. Thus, the sample is reduced to the male breadwinner households. The results are listed in Table A16. The estimated female elasticities are quite similar to those in Table A15. In order to clarify the "marginal effects" the effects of female working hours on disposable income are summarized in Figure 2 below.

Figure 2: Changes in household disposable income as female working hour increases.



The profiles have the expected shape and are similar to those in Figure 1.

Thus, we may argue that the joint tax system coupled to relatively high marginal taxes in Germany clearly strengthens the male breadwinner model, in particular for highly educated and high-income groups. On the other hand the taxation and transfer systems in the other countries do not appear to penalize either the transition from women inactivity to market work, or the transition from part-time to full time even though we can identify a weak decreasing marginal rate of return in Belgium, Sweden and Finland.

References

LIS (1998): Author's calculation from the Luxembourg Income Study database.

Gottschalk P. & Smeeding T (1998): "Empirical Evidence on Income Inequality in Industrialised Countries; Luxembourg Income Study Working Paper nr 154. Luxembourg.

Sullivan H. & Smeeding T (1997): "Educational Attainment and Earnings Inequality in Eight Nations". Luxembourg Income Study Working Paper nr 164. Luxembourg.

Appendix: Definition and Sources

Table Aa: Source of the country survey data

COUNTRY	SURVEY NAME
Belgium 1992	Panel Survey of the Centre for Social Policy
Finland 1991	Income Distribution Survey
Germany 1994	German Social Economic Panel Study (GSOEP)
Netherlands 1994	Socio-Economic Panel (SEP)
Sweden 1992	Income Distribution Survey (Inkomstfördelningsundersokningen)
United Kingdom 1991	The Family Expenditure Survey
USA 1991	March Current Population Survey

Sources: 1998 Luxembourg Income Study all rights reserved

Table Ab Definition of LIS household income variables

	VARIABLE DEFINITION
	Earnings (*Gross wages and salaries*)
+	Cash property income
=	**Factor Income**
+	Sick Pay
+	Disability Pay
+	Social Retirement benefits
+	Child or family allowances
+	Unemployment compensation
+	Maternity pay
+	Military/vet/war benefits
+	Other social insurance
=	**Social Insurance Transfers**
+	Means-tested cash benefits
+	Near-cash benefits
=	**Social Transfers**
+	private pensions
+	Public sector pensions
+	Alimony or Child Support
+	Other regular private income
+	Other cash income
=	**Total Gross Income**
-	Mandatory employee contribution
-	Income tax
=	**Disposable Income**

Source: Luxembourg Income Study all rights reserved Last update: 23/01/98

Table Ac: Definition of weekly working time

Country	Definition of weekly working time
Belgium1992	Average actual weekly working time
Finland 1991	Average usual weekly working hours (regular)
Germany1994	Average actual weekly working time inclusive overtime
Netherlands1991	Average usual weekly working hours incl. overtime
Sweden1992	Average usual weekly working hours incl. paid overtime usually worked
United Kingdom 1991	Usual weekly working time (excluding breaks) incl. paid overtime usually worked
United States1991	Average actual weekly working time

Source: Luxembourg Income Survey and National survey.

Table Ad: Definition of educational attainment.

Country	Description d10,d11	***Coding***	**Country**	Description d10,d11	***Coding***
Belgium 92	1 kindergarden 2 primary education 3 special primary educ	Low	**Sweden 92**	0 unspecified 2 primary 1 3 primary 2	Low
	4 2lev. lw. cycle prof 5 2lev. lw. cycle tech 6 2lev. lw. cycle gene 7 special 2nd level 8 2lev. up. cycle prof 9 2lev. up. cycle tech 10 2lev. up. cycle gene	Medium		4 secondary 1 5 secondary 2	Medium
	11 higher non-univ. 2-3 12 higher non-univ. 4 y 13 university 14 other 15 other 2lev. low. cyc 16 other 2lev. up. cycl 17 other higher educati	High		6 university 1 7 university 2 8 research	High
Finland 91	no educ/unknown/<9 y	Low	**United-Kingdom 91**	0 - 15	Low
	3 10-11 years 4 12 years 5 13-14 years	Medium		16 - 20	Medium
	6 15 years 7 16 years 8 post-graduate educ	High		21 - 34	High
Germany 94	1 no degree 2 no degree, w/tech 3 other degree 4 other degree, w/tech 5 secondary 7 non-class sec	Low	**USA 91**	1 elementary school 2 some high school	Low
	6 secondary, w/tech 8 non-class sec, w/tec 9 tech school degree 10 tech school, w/tech 11 high school degree 12 high school, w/tech	Medium		3 high school diploma 4 some college 5 associate degree	Medium
	13 technical college 14 univ,tech college 15 foreign univ	High		6 bachelor degree 7 masters degree 8 doctorate	High
Nether-lands 91	2 primary	Low			
	3 secondary lower 4 secondary higher	Medium			
	5 tertiary lower 6 postgrad or old mast	High			

Statistical Appendix

Table A1. Mean values for LIS samples of married/cohabitants where the age of the spouses is between 25-55 and self-employed are excluded.

	Finland 91	USA 91	Belgium 92	Nether-lands 91	Sweden 92	United Kingdom 91	Germany 94
Female variables:	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN
hours worked per week	34.1	27.5	17.7	12.3	31.2	19.6	20.8
hours worked per week (employees)	37.0	36.0	31.3	24.5	33.7	28.4	32.2
hours=0	0.08	0.24	0.44	0.50	0.07	0.31	0.35
hours 1-34	0.10	0.21	0.27	0.37	0.42	0.38	0.28
hours > 34	0.82	0.55	0.30	0.13	0.50	0.31	0.36
age 25-30	0.18	0.21	0.20	0.23	0.19	0.22	0.21
age 31-40	0.40	0.43	0.38	0.41	0.36	0.37	0.42
age 41-50	0.35	0.31	0.34	0.30	0.38	0.33	0.30
age 51-55	0.07	0.06	0.08	0.07	0.07	0.08	0.07
education low	0.26	0.12	0.17	0.22	0.20	0.35	0.21
education medium	0.63	0.66	0.56	0.64	0.51	0.53	0.69
education high	0.11	0.22	0.27	0.14	0.29	0.12	0.10
gross wage/salary	13455	13302	9145	6181	11979	8674	9429
Imputed hourly wage rate [1]	7.7	9.0	10.9	9.7	7.5	8.4	9.0
Male variables:							
hours worked per week	37.9	41.6	36.8	36.5	39.6	38.8	41.3
hours worked per week (employees)	39.3	43.6	41.3	38.9	41.0	44.4	43.6
hours=0	0.04	0.05	0.11	0.06	0.03	0.13	0.05
hours 1-34	0.03	0.03	0.05	0.07	0.04	0.03	0.03
hours > 34	0.94	0.93	0.84	0.87	0.92	0.84	0.89
age 25-30	0.12	0.14	0.12	0.13	0.12	0.14	0.12
age 31-40	0.39	0.40	0.40	0.41	0.34	0.37	0.41
age 41-50	0.37	0.35	0.33	0.33	0.41	0.34	0.32
age 51-55	0.12	0.11	0.14	0.13	0.14	0.14	0.15
education low	0.29	0.13	0.17	0.21	0.28	0.39	0.16
education medium	0.59	0.62	0.55	0.57	0.44	0.48	0.65
education high	0.12	0.26	0.28	0.22	0.28	0.13	0.19
gross wage/salary	20561	30674	23156	25698	21451	25657	26474
Imputed hourly wage rate[7]	10.6	14.2	12.5	14.3	10.5	13.0	12.7
Household variables:							
number of persons in unit	3.4	3.7	3.6	3.5	3.3	3.4	3.4
number of earners in unit	2.2	2.0	1.6	1.7	2.1	1.8	1.8
number of children < 18	1.2	1.3	1.2	1.2	1.3	1.1	1.1
total unit earnings	35938	46177	34422	33107	33576	36962	37807
total unit factor income	36774	47526	34448	33575	34950	38204	38471
total unit gross income	40745	49381	38740	36973	40323	41132	40410
Disposable income after taxes	29647	39102	26488	26979	29852	30055	27247
Adjusted disposable income[8]	16558	21354	14211	15165	17166	17023	15387
Sample size	3704	4113	1203	1535	3588	2052	2052

Note: All income measures in USD/year adjusted by PPP

[7] Hourly wage rates have been imputed as gross wage/salary divided by hours worked per week multiplied with 52 weeks

[8] The adjusted net disposable income is equal to : net disposable income/(family size)$^{0.5}$

Table A2. Education and earnings: Percentage Earnings differentials based on education an age.
Baseline; head of household low education and age 25-30

	Finland 91			Netherlands 91			Belgium 92		
	Education			Education			Education		
Age of head	Low	Medium	High	Low	Medium	High	Low	Medium	High
25-30	.	15	66	.	9	53	.	36	102
31-40	15	33	91	-3	6	49	8	47	118
41-50	43	64	136	8	18	66	28	74	159
51-55	38	58	128	20	31	83	27	73	157
	Sweden 92			**United Kingdom 91**			**Germany 94**		
25-30	.	14	45	.	32	79	.	30	83
31-40	20	36	74	8	43	93	0	30	83
41-50	44	63	109	33	76	138	20	57	120
51-55	44	64	109	24	64	122	25	63	129
	USA 91								
25-30	.	65	135						
31-40	16	92	174						
41-50	32	117	210						
51-55	32	118	211						

Note: the estimated model is

$$\text{Log(earnings)}=\beta_0+\beta_1(\text{education}_{\text{medium}})+\beta_2(\text{education}_{\text{high}})+\beta_3(\text{age}_{31\text{-}40})+\beta_4(\text{age}_{41\text{-}50})+\beta_5(\text{age}_{51\text{-}55})$$

Table A3 Distribution of household earnings and level of education

			Below first decile	Below first quartile	Below the median	Above third quartile	Above ninth decile
Finland 91	Male	Low	0.42	0.37	0.36	0.14	0.07
		Medium	0.55	0.58	0.59	0.42	0.32
		High	0.03	0.05	0.04	0.44	0.61
	Female	Low	0.35	0.30	0.29	0.15	0.09
		Medium	0.62	0.67	0.66	0.48	0.40
		High	0.03	0.03	0.04	0.36	0.51
Netherlands 91	Male	Low	0.38	0.31	0.25	0.18	0.17
		Medium	0.57	0.65	0.65	0.39	0.36
		High	0.05	0.04	0.09	0.43	0.47
	Female	Low	0.40	0.29	0.24	0.18	0.20
		Medium	0.56	0.67	0.71	0.52	0.45
		High	0.04	0.04	0.06	0.29	0.34
Belgium 92	Male	Low	0.45	0.35	0.24	0.05	0.02
		Medium	0.50	0.59	0.62	0.37	0.31
		High	0.05	0.06	0.14	0.58	0.66
	Female	Low	0.44	0.35	0.26	0.06	0.04
		Medium	0.46	0.57	0.62	0.45	0.40
		High	0.10	0.08	0.12	0.49	0.55
Sweden 92	Male	Low	0.36	0.33	0.35	0.12	0.08
		Medium	0.51	0.51	0.49	0.33	0.22
		High	0.13	0.15	0.17	0.55	0.70
	Female	Low	0.31	0.27	0.24	0.10	0.07
		Medium	0.52	0.55	0.57	0.37	0.29
		High	0.16	0.17	0.19	0.54	0.64
United Kingdom 91	Male	Low	0.56	0.52	0.47	0.23	0.21
		Medium	0.39	0.42	0.46	0.49	0.44
		High	0.05	0.06	0.06	0.28	0.34
	Female	Low	0.45	0.44	0.41	0.25	0.23
		Medium	0.50	0.51	0.54	0.51	0.47
		High	0.04	0.04	0.05	0.24	0.31
Germany 94	Male	Low	0.35	0.34	0.30	0.13	0.06
		Medium	0.56	0.59	0.63	0.54	0.50
		High	0.10	0.07	0.07	0.33	0.44
	Female	Low	0.42	0.38	0.33	0.19	0.15
		Medium	0.52	0.57	0.62	0.64	0.61
		High	0.05	0.05	0.05	0.17	0.24
USA 91	Male	Low	0.39	0.31	0.22	0.03	0.01
		Medium	0.52	0.60	0.65	0.49	0.40
		High	0.09	0.10	0.13	0.49	0.59
	Female	Low	0.38	0.29	0.20	0.03	0.02
		Medium	0.56	0.63	0.69	0.58	0.50
		High	0.06	0.09	0.11	0.40	0.48

Table A4. Children and earnings: Percentage Earnings differentials based on number children and age.
Baseline; no children and age 25-30

	Finland 91				Netherlands 91				Belgium 92			
	Number of children				Number of children				Number of children			
Age of head	0	1	2	3>	0	1	2	3>	0	1	2	3>
25-30	.	0	2	-8	.	-8	-13	-12	.	-5	-3	-22
31-40	18	18	20	9	3	-6	-11	-10	8	3	5	-15
41-50	43	43	45	32	12	3	-3	-2	20	14	17	-6
51-55	33	33	35	23	15	6	0	1	11	6	9	-13
	Sweden 92				**United Kingdom 91**				**Germany 94**			
25-30	.	-2	-3	-17	.	-10	-22	-31	.	-12	-25	-29
31-40	24	21	21	3	11	0	-13	-23	20	5	-10	-15
41-50	45	41	41	20	18	6	-7	-18	33	17	1	-5
51-55	40	37	37	16	-4	-13	-24	-33	29	13	-3	-8
	USA 91											
25-30	.	-4	-12	-22								
31-40	21	16	6	-5								
41-50	32	27	16	3								
51-55	23	18	8	-4								

Table A5. Children and disposable income: Percentage income differentials based on numb of
children and age. Baseline; no children and age 25-30

	Finland 91				Netherlands 91				Belgium 92			
	Number of children				Number of children				Number of children			
Age of head	0	1	2	3>	0	1	2	3>	0	1	2	3>
25-30	.	7	12	17	.	-5	-8	-2	.	0	9	12
31-40	10	18	24	29	0	-5	-8	-2	7	7	16	19
41-50	22	30	37	43	13	7	4	10	20	20	31	34
51-55	21	29	36	42	12	6	3	10	11	11	21	24
	Sweden 92				**United Kingdom 91**				**Germany 94**			
25-30	.	2	8	10	.	-11	-16	-20	.	-8	-14	-11
31-40	6	8	15	16	14	1	-5	-9	15	6	-1	2
41-50	14	16	24	25	25	11	5	1	29	19	12	15
51-55	14	15	23	24	9	-4	-9	-13	25	16	8	12
	USA 91											
25-30	.	-2	-7	-13								
31-40	19	17	10	3								
41-50	34	32	24	16								
51-55	28	26	19	11								

Table A6a. Household working pattern.

Male	Finland 91 Female				Netherlands 91 Female				Belgium 92 Female			
	0	1-34	34 >	Total	0	1-34	34 >	Total	0	1-34	34 >	Total
0	0,54	0,24	2,78	3,56	3,78	1,24	0,85	5,86	7,56	0,83	1,50	9,89
1 - 34	0,30	0,67	1,92	2,89	2,67	3,06	1,04	6,78	1,50	1,41	2,41	5,32
34 >	6,99	9,17	77,39	93,55	43,97	32,90	10,49	87,36	34,83	25,27	24,69	84,79
Total	7,83	10,09	82,08	100,00	50,42	37,20	12,38	100,00	43,89	27,51	28,60	100,00
	Sweden 92				**United Kingdom 91**				**Germany 94**			
0	1,10	0,56	0,99	2,65	8,28	2,53	1,90	12,72	2,79	0,76	1,98	5,53
1 - 34	0,28	1,61	1,61	3,49	1,12	0,83	0,97	2,92	0,94	0,86	0,81	2,64
34 >	4,79	40,76	48,31	93,86	22,27	34,50	27,58	84,36	29,70	24,97	37,16	91,83
Total	6,17	42,93	50,90	100,00	31,68	37,87	30,46	100,00	32,92	27,03	40,05	100,00
	USA 91											
0	1,85	0,80	2,12	4,77								
1- 34	0,66	0,61	1,53	2,80								
34 >	21,49	19,09	51,86	92,44								
Total	24,00	20,50	55,51	100,00								

Table A6b. Educational Attainment and Working time status, Males employees

Working hours	Finland 91 Level of education				Netherlands 91 Level of education				Belgium 92 Level of education			
	Low	Medium	High	Total	Low	Mediu	High	Total	Low	Medium	High	Total
1-17	0.26	0.21	0.1	0.57	0.33	0.33	0.39	1.04	0.18	0.28	0.28	0.73
18-35	1.27	2.59	1.73	5.59	1.24	2.60	2.99	6.84	0.46	2.02	4.5	6.98
> 35	26.7	52.89	14.24	93.84	18.75	54.17	19.21	87.14	11.48	54.55	26.26	92.29
Total	28.2	55.68	16.08	100.0	20.31	57.10	22.59	100.0	12.12	56.84	31.04	100.00
	Sweden 92				**United Kingdom 91**				**Germany 94**			
1-17	0.14	0.22	0.08	0.45	0.11	0.28	0.00	0.39	0.31	0.83	0.21	1.34
18-35	1.03	1.62	1.23	3.58	1.23	3.91	2.29	7.43	0.93	0.83	0.72	2.48
> 35	25.3	42.45	27.82	95.67	34.12	46.18	11.8	92.18	20.37	61.27	14.54	96.18
Total	26.5	44.30	29.14	100.00	35.46	50.36	14.1	100.00	21.61	62.92	15.47	100.00
	USA 91											
1-17	0.07	0.25	0.12	0.45								
18-35	1.10	2.26	0.95	4.31								
> 35	11.1	57.72	26.36	95.25								
Total	12.3	20.43	54.96	100.00								

Table A6c. Educational Attainment and Working Time Status, Females employees

Working hours	Finland 91				Netherlands 91				Belgium 92			
	Level of education				Level of education				Level of education			
	Low	Medium	High	Total	Low	Mediu	High	Total	Low	Medium	High	Total
1-17	0.73	1.35	0.24	2.33	7.43	21.23	2.71	31.37	1.18	4.12	2.06	7.36
18-35	3.47	7.77	3.68	14.92	9.55	25.47	10.38	45.40	3.09	21.21	19.15	43.45
> 35	21.3	50.46	10.94	82.75	4.25	13.33	5.66	23.33	3.98	26.95	18.26	49.19
Total	25.5	59.59	14.87	100.0	21.23	60.02	18.75	100.0	8.25	52.58	39.47	100.00
	Sweden 92				**United Kingdom 91**				**Germany 94**			
1-17	0.99	1.74	0.46	3.19	8.56	12.77	1.85	23.18	3.54	7.65	0.65	11.84
18-35	8.61	24.64	11.74	44.99	14.27	20.11	5.35	39.73	7.08	20.79	3.03	30.90
> 35	8.61	24.29	18.93	51.83	10.56	20.90	5.63	37.09	11.84	39.28	6.14	57.26
Total	18.2	50.67	31.13	100.00	33.38	53.78	12.8	100.00	22.45	67.73	9.82	100.00
	USA 91											
1-17	0.54	5.13	1.61	7.27								
18-35	2.46	17.66	5.00	25.12								
> 35	6.04	43.88	17.69	67.61								
Total	9.03	66.67	24.30	100.00								

Table A7a. Mean values of household gross earnings and household working hours

Male hours	Female hours	Finland 91	Nether-lands 91	Belgium 92	Sweden 92	United Kingdom 91	Germany 94	USA 91
		MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN
0	**1 - 34**	12,450	15,684	13,543	9,816	10,421	20,094	6,694
0	**34 >**	15,907	19,996	17,859	13,449	17,634	18,305	23,673
1-34	**0**	16,165	26,428	26,825	11,456	24,381	19,847	11,343
1 -34	**1 -34**	34,791	36,213	50,143	22,929	33,779	40,608	21,426
1 -34	**34 >**	36,847	36,526	44,437	28,629	42,194	35,512	31,431
34 >	**0**	22,476	30,245	28,999	21,145	33,145	31,008	36,293
34 >	**1 -34**	34,875	37,274	41,587	32,877	37,688	38,216	44,290
34 >	**34 >**	38,135	44,537	44,718	38,280	49,393	43,952	55,146

Table A7b. Mean values of household disposable income and household working hours

Male hours	Female hours	Finland 91	Nether-lands 91	Belgium 92	Sweden 92	United Kingdom 91	Germany 94	USA 91
		MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN
0	**0**	13,256	13,796	13,560	17,299	12,971	8,666	12,701
0	**1 - 34**	22,348	21,823	23,352	22,953	18,615	24,746	17,738
0	**34 >**	22,956	21,151	18,169	20,727	24,427	19,009	30,314
1 -34	**0**	24,052	25,452	22,760	21,386	25,498	18,718	17,572
1 -34	**1-34**	29,605	29,951	36,614	26,401	26,600	29,780	22,529
1 -34	**34 >**	30,203	27,185	30,416	27,143	34,098	25,827	29,416
34 >	**0**	24,492	24,723	24,007	25,106	26,544	24,279	32,286
34 >	**1-34**	29,361	29,074	29,564	29,080	29,752	27,897	37,835
34 >	**34 >**	30,459	32,769	30,029	32,089	37,022	29,005	44,675

Note: All income measures in USD converted by PPP

Table A8a. Male average weekly working hours by age and education level (Hours per week).

	Finland 91			Netherlands 91			Belgium 92		
	Education			Education			Education		
Age of head	Low	Medium	High	Low	Medium	High	Low	Medium	High
25-30	36,2	39,2	37,7	36,3	37,7	37,4	22,3	40,7	40,3
31-40	38,9	39,6	38,9	35,5	37,1	38,1	27,2	39,6	41,2
41-50	39,7	40,0	39,3	36,2	37,6	37,5	33,1	36,9	41,7
51-55	35,7	36,7	40,5	23,5	34,3	37,0	23,1	29,4	39,7
	Sweden 92			**United Kingdom 91**			**Germany 94**		
25-30	39,0	39,4	38,3	31,5	39,3	44,2	37,5	43,2	43,3
31-40	39,9	40,1	40,6	36,1	41,4	40,3	38,9	43,2	42,8
41-50	40,3	41,0	41,6	38,6	39,8	42,6	36,8	42,2	43,4
51-55	38,8	39,0	42,5	33,3	34,3	33,5	29,4	42,1	43,2
	USA 91								
25-30	40,4	43,1	44,0						
31-40	37,6	42,6	45,4						
41-50	35,7	40,4	44,6						
51-55	35,2	38,2	43,5						

Table A8a. Female average weekly working hours by age and education level (Hours per week).

	Finland 91			Netherlands 91			Belgium 92		
	Education			Education			Education		
Age of head	Low	Medium	High	Low	Medium	High	Low	Medium	High
25-30	29,4	33,3	37,0	18,9	16,2	28,8	9,8	24,6	31,0
31-40	32,4	34,2	36,5	9,6	9,1	17,5	9,5	18,0	26,8
41-50	35,7	35,3	36,3	11,7	9,6	16,8	7,0	12,4	25,5
51-55	32,3	33,9	35,0	5,1	4,9	6,7	6,0	2,9	15,5
	Sweden 92			**United Kingdom 91**			**Germany 94**		
25-30	25,5	31,4	34,2	15,9	19,0	29,1	15.2	26.1	32.4
31-40	27,6	29,9	33,1	17,0	17,8	22,1	16.5	22.1	24.4
41-50	30,6	31,7	35,5	18,6	22,7	23,8	18.4	25.8	31.2
51-55	26,3	33,2	36,2	15,5	15,5	24,3	15.5	20.9	22.5
	USA 91								
25-30	15,2	26,1	32,4						
31-40	16,5	22,1	24,4						
41-50	18,4	25,8	31,2						
51-55	15,5	20,9	22,5						

Table A9a. Male average weekly working hours by age and education level (Hours per week). *Male employees*

	Finland 91			Netherlands 91			Belgium 92		
	Education			Education			Education		
Age of head	Low	Medium	High	Low	Medium	High	Low	Medium	High
25-30	38,2	40,0	37,7	37,1	38,4	37,4	44,5	41,9	42,1
31-40	40,4	40,6	38,9	38,5	39,2	38,3	39,2	40,5	41,8
41-50	41,9	40,6	39,4	40,3	39,8	38,8	39,6	41,5	43,5
51-55	40,7	40,6	40,5	36,7	39,0	38,2	38,0	39,7	40,8
	Sweden 92			**United Kingdom 91**			**Germany 94**		
25-30	40,3	40,5	39,6	44,1	44,1	45,3	41,5	45,6	45,1
31-40	41,1	41,2	40,8	45,3	44,7	43,8	41,8	44,4	44,7
41-50	41,8	42,2	42,1	45,3	43,4	44,1	40,9	43,9	45,2
51-55	41,0	41,1	42,8	43,6	44,1	40,5	39,4	43,5	45,0
	USA 91								
25-30	42,1	43,8	44,7						
31-40	42,2	43,9	45,6						
41-50	41,6	43,1	45,4						
51-55	40,4	42,0	45,5						

Table A9b. Female average weekly working hours by age and education level (Hours per week). *Female employees*.

	Finland 91			Netherlands 91			Belgium 92		
	Education			Education			Education		
Age of head	Low	Medium	High	Low	Medium	High	Low	Medium	High
25-30	37,1	37,2	37,7	30,3	27,7	32,6	29,5	33,2	34,4
31-40	37,0	37,1	37,1	19,4	20,5	25,1	32,2	30,0	30,7
41-50	38,8	37,6	37,3	22,6	20,8	24,1	26,8	30,4	32,2
51-55	37,1	36,8	36,4	17,5	14,9	20,0	30,0	25,6	26,6
	Sweden 92			**United Kingdom 91**			**Germany 94**		
25-30	31,8	33,2	36,1	27,3	29,5	35,5	31,3	36,1	39,1
31-40	32,1	31,5	34,0	26,1	26,4	33,0	30,3	32,1	36,9
41-50	33,3	33,7	36,1	27,1	29,6	27,6	31,5	34,0	34,6
51-55	33,4	36,0	36,8	25,3	24,1	32,3	28,9	33,3	32,6
	USA 91								
25-30	35,5	35,0	38,6						
31-40	34,3	35,0	36,8						
41-50	38,5	36,6	37,4						
51-55	38,3	33,8	36,8						

Table A10a. Male weekly working hours: mean values and standard deviations.

Working hours:	Finland 91	USA 91	Belgium 92	Nether-lands 91	Sweden 92	United Kingdom 91	Germany 94
	Mean (std)	Mean (std)	Mean (std)	Mean (std)	Mean (std)	Mean (std)	Mean (std)
1 - 19	11.4 (4.2)	11.6 (4.5)	14.3 (4.4)	10.1 (6.8)	12.3 (4.7)	13.3 (4.8)	10.3 (3.8)
20 - 40	38.1 (2.1)	39.3 (2.8)	37.6 (3.4)	38.1 (3.0)	39.3 (2.8)	37.5 (2.8)	38.6 (2.4)
41 - 60	50.3 (5.2)	49.9 (5.2)	49.6 (8.0)	49.0 (6.0)	50.3 (6.1)	48.6 (5.7)	47.7 (5.5)
1 -	40.5 (7.6)	43.8 (5.1)	41.2 (9.0)	38.9 (6.6)	41.5 (7.2)	44.4 (10.1)	43.7 (9.2)

Table A10b. Female weekly working hours: mean values and standard deviations.

Working hours:	Finland 91	USA 91	Belgium 92	Nether-lands 91	Sweden 92	United Kingdom 91	Germany 94
	Mean (std)	Mean (std)	Mean (std)	Mean (std)	Mean (std)	Mean (std)	Mean (std)
1 - 19	12.3 (4.5)	11.7 (4.6)	15.9 (4.0)	11.0 (4.9)	12.7 (4.1)	12.1 (4.5)	11.6 (3.4)
20 - 40	36.8 (3.7)	36.1 (6.2)	32.6 (7.1)	29.8 (7.6)	33.8 (7.0)	32.0 (6.8)	33.1 (5.3)
41 - 60	48.3 (4.5)	48.1 (5.1)	47.2 (4.9)	47.0 (7.0)	49.5 (5.4)	46.6 (5.0)	45.9 (4.9)
1 -	37.5 (7.4)	36.0 (10.4)	31.1 (10.5)	23.5 (11.5)	33.7 (8.9)	28.1 (12.7)	33.2 (12.2)

Table A11. Regression results of household Earnings on working hours

	Finland 91		Nether-lands 91		Belgium 92		Sweden 92		United Kingdom 91		Germany 94		USA 91	
	Estimate	**Std**	**Estimate**	**Std**	**Estimate**	**Std**	**Estimate**	**Std**	**Estimate**	**Std**	**Estimate**	**Std**	**Estimate**	**Std**
Intercept	8,2608	1,2268	5,5442	1,0795	7,3287	1,1398	3,5256	1,1122	6,9268	0,9503	11,8227	1,2639	5,2592	1,3153
Men hours	0,4014	0,0268	0,6140	0,0276	0,5189	0,0278	0,4653	0,0257	0,5226	0,0217	0,4439	0,0283	0,6775	0,0285
Wife hours	0,3603	0,0209	0,3978	0,0211	0,4469	0,0251	0,3675	0,0212	0,4470	0,0225	0,2941	0,0200	0,4643	0,0193
$\mathbf{R^2}$	0,1312		0,3631		0,3924		0,1859		0,3676		0,2052		0,2278	

Table A12. Regression results of household Earnings income on working hours, education, age and children.

	Finland 91		**Nether-lands 91**		**Belgium 92**		**Sweden 92**		**United Kingdom 91**		**Germany 94**		**USA 91**	
	Estimate	**Std**	**Estimate**	**Std**	**Estimate**	**Std**	**Estimate**	**Std**	**Estimate**	**Std**	**Estimate**	**Std**	**Estimate**	**Std**
Intercept	-11,2655	1,3792	-7,0136	1,5331	-10,8713	1,7398	-10,5690	1,4805	-9,6064	1,5870	-0,7902	1,7677	-23,0024	1,8479
Men hours	0,8283	0,0535	0,8851	0,0615	0,7862	0,0534	0,6750	0,0567	0,9053	0,0485	0,8309	0,0635	1,0428	0,0639
Men hours^2/1000	-7,5418	0,8484	-4,9995	1,0869	-5,1637	0,7413	-4,1870	0,7976	-6,1784	0,6983	-6,0692	0,8888	-6,7963	0,8805
Wife hours	0,5946	0,0574	0,2982	0,0596	0,6075	0,0679	0,5850	0,0586	0,3752	0,0515	0,6132	0,0629	0,4889	0,0540
Wife hours^2/1000	-5,7576	1,2283	3,5177	1,6175	-5,0166	1,5270	-5,7052	1,1016	-0,1081	1,0438	-7,9698	1,3719	-1,8652	1,1203
Men education medium	3,9999	0,4695	-0,4024	0,6930	3,6219	1,1065	1,8541	0,5593	6,1910	0,8375	1,7077	1,0176	7,7722	1,0402
Men education high	15,6852	0,7660	7,7880	0,8628	12,8007	1,3628	9,1777	0,6714	14,0039	1,3168	13,2666	1,3091	19,5074	1,2378
Wife education medium	1,2191	0,4883	0,5805	0,6773	1,3190	1,1037	2,1614	0,6268	2,8528	0,8480	1,6621	0,9353	5,9344	1,0800
Wife education high	10,3086	0,8023	5,0088	0,9938	7,0080	1,3816	5,5003	0,7487	9,2758	1,4078	4,3107	1,4672	13,1513	1,3207
Men age 31-40	2,4608	0,7769	2,7579	1,0640	1,2627	1,4339	4,1171	0,8935	4,6517	1,2070	1,6200	1,2546	6,4257	1,0878
Men age 41-50	6,7171	0,9547	4,8753	1,3136	3,3759	1,8409	7,6690	1,0653	7,9134	1,5190	5,3033	1,5194	9,7259	1,2949
Men age 51-55	7,3613	1,1964	8,7050	1,7048	7,5793	2,2484	6,7616	1,2899	7,5175	1,8604	6,4135	1,8202	8,2578	1,6680
Wife age 31-40	2,4554	0,6997	2,2031	0,9069	5,3719	1,2798	1,7718	0,7785	1,8417	1,0806	2,1452	1,0703	3,0275	0,9643
Wife age 41-50	7,0521	0,8844	6,3182	1,2249	11,9467	1,6813	3,5049	0,9790	6,1541	1,4447	4,2921	1,4002	8,0177	1,2287
Wife age 51-55	6,1681	1,2707	4,7479	1,8591	7,8977	2,3508	4,0829	1,3664	4,6795	1,9922	1,8433	2,0245	10,0488	1,8774
One child	0,1726	0,5382	0,8555	0,8412	-0,6513	0,9880	-1,8567	0,6259	-1,2601	0,9293	-4,9215	0,8832	0,3590	0,8232
Two children	0,0447	0,5523	0,4671	0,8258	-1,1423	1,0548	-1,7652	0,6598	-3,2988	0,9498	-5,6161	1,0284	-2,0655	0,8417
3 or more children	-0,4757	0,7526	0,6876	1,0392	-1,6493	1,3708	-3,2205	0,8153	-3,7969	1,2695	-4,2300	1,3850	-1,4644	1,0249
R^2	0,4078		0,5199		0,5952		0,3435		0,5059		0,3872		0,4226	
Men hours elasticity	0.27		0.57		0.43		0.41		0.45		0.36		0.43	
Wife hours elasticity	0.19		0.14		0.22		0.21		0.20		0.15		0.23	

Note, all variables except working hours are dummy variables taking the value one if the individual or household belongs to the group, otherwise zero.

Table A13a. Marginal effects: changes in household disposable income as female working hours change. Percentage changes in income compared to households where males work and females do not work.

	Finland 91 Variation in net disposable income	**Netherlands 91** Variation in net disposable income	**Belgium 92** Variation in net disposable income
Female 0	0,0	0,0	0,0
Female 1-34	19,6	15,4	24,3
Female 35 >	23,8	24,9	25,7

	Sweden 92 Variation in net disposable income	**United Kingdom 91** Variation in net disposable income	**Germany 94** Variation in net disposable income
Female 0	0,0	0,0	0,0
Female 1-34	15,9	7,5	24,8
Female 35 >	27,2	31,7	18,2

	USA 91 Variation in net disposable income
Female 0	0,0
Female 1-34	11,3
Female 35 >	30,4

Note: as an illustration of the interpretation of the entries, take 30.4 in the bottom right hand side of the US table. Thus, a US household where the male works and the female works full time have a disposable income 30.4% above a household where the males works and the spouse works zero hours.

Table A 13b. Marginal effects: changes in household disposable income as female working hours change. Percentage changes in income compared to households where males work and have the lowest education and females do not work.

	Finland 91			**Netherlands 91**			**Belgium 92**		
	Male Education			Male Education			Male Education		
Working hours	Low	Medium	High	Low	Medium	High	Low	Medium	High
Female 0	0	2	46	0	-11	15	0	7	32
Female 1-35	13	24	66	-1	6	32	15	24	60
Female 35 >	23	30	72	8	19	30	28	29	55

	Sweden 92			**United Kingdom 91**			**Germany 94**		
	Male Education			Male Education			Male Education		
Working hours	Low	Medium	High	Low	Medium	High	Low	Medium	High
Female 0	0	4	40	0	8	54	0	10	65
Female 1-35	15	26	43	10	22	67	10	32	137
Female 35 >	29	31	63	39	46	81	32	37	67

	USA 91		
	Male Education		
Working hours	Low	Medium	High
Female 0	0	48	124
Female 1-35	25	65	128
Female 35 >	55	97	165

Note: as an illustration of the interpretation of the entries, take 165 in the bottom right hand side of the US table. Thus, a US household where the male have the highest education and the male works and the female works full time have a disposable income 165% above a household where the male works and the spouse works zero hours and the male have the lowest education.

Table A14: Distribution of household (married or cohabitants) by working time patterns (%). Ranking within parenthesis

Country	Male working full time, women not working	Male working full time Female part-time	Both full time
Belgium	34,8 (2)	25,3 (5)	24,7 (6)
Finland	7,0 (6)	9,2 (7)	77,4 (1)
Germany	29,7 (3)	25,0 (4)	37,2 (4)
Netherlands	44,0 (1)	32,9 (2)	10,5 (7)
Sweden	4,8 (7)	40,8 (1)	48,3 (3)
United Kingdom	22,3 (4)	34,5 (3)	27,6 (5)
United States	21,5 (5)	19,1 (6)	51,9 (2)

Source: LIS and own calculation.

Table A15. Regression results of Disposable income on working hours, education, age and children.

	Finland 91		Nether-lands 91		Belgium 92		Sweden 92		United Kingdom 91		Germany 94		USA 91	
	Estimate	**Std**	**Estimate**	**Std**	**Estimate**	**Std**	**Estimate**	**Std**	**Estimate**	**Std**	**Estimate**	**Std**	**Estimate**	**Std**
Intercept	8,3886	0,8034	7,9858	1,1470	4,8794	0,9755	9,8449	1,1272	3,9296	1,2095	7,0034	1,0818	-5,7172	1,3994
Men hours	0,2394	0,0312	0,2706	0,0460	0,2598	0,0299	0,2078	0,0431	0,3167	0,0370	0,3359	0,0389	0,4825	0,0484
Men hours^2/1000	-1,9740	0,4942	-0,5365	0,8132	-1,6387	0,4156	-1,0055	0,6073	-1,6481	0,5322	-2,1569	0,5389	-2,6273	0,6668
Wife hours	0,2551	0,0334	0,2141	0,0446	0,2794	0,0381	0,2354	0,0446	0,2438	0,0392	0,3512	0,0380	0,3026	0,0409
Wife hours^2/1000	-2,3126	0,7155	0,9483	1,2102	-2,0868	0,8561	-1,9517	0,8388	-0,1820	0,7955	-5,2850	0,8262	-0,7675	0,8484
Men education medium	2,3560	0,2735	-0,4191	0,5185	1,9193	0,6204	1,2355	0,4259	4,4292	0,6383	1,2582	0,6143	5,9709	0,7877
Men education high	8,7217	0,4462	4,6994	0,6455	6,1637	0,7641	5,5112	0,5112	9,5249	1,0036	8,4071	0,7916	14,4931	0,9374
Wife education medium	0,6499	0,2845	0,3547	0,5068	0,1423	0,6188	1,5195	0,4772	2,2975	0,6463	0,9189	0,5671	4,5953	0,8179
Wife education high	5,3748	0,4674	3,2374	0,7435	2,7163	0,7747	4,0892	0,5700	7,0134	1,0729	2,9138	0,8873	10,3776	1,0002
Men age 31-40	1,2800	0,4526	1,6678	0,7960	0,8532	0,8040	1,3748	0,6803	3,0845	0,9199	0,3946	0,7578	4,9947	0,8238
Men age 41-50	3,1115	0,5561	3,4790	0,9828	2,9013	1,0322	2,8519	0,8111	6,5085	1,1577	2,4132	0,9236	8,4083	0,9806
Men age 51-55	3,8554	0,6970	6,3506	1,2755	5,8033	1,2607	2,9091	0,9821	6,4076	1,4179	4,1509	1,1005	7,8117	1,2632
Wife age 31-40	1,3584	0,4076	1,4351	0,6785	2,4802	0,7175	0,8453	0,5928	1,8794	0,8235	1,4835	0,6456	2,1698	0,7302
Wife age 41-50	3,9236	0,5152	4,7413	0,9164	6,5591	0,9427	1,5002	0,7454	4,7041	1,1010	3,6754	0,8487	6,1645	0,9305
Wife age 51-55	3,5934	0,7402	3,3107	1,3909	4,2892	1,3181	2,1632	1,0404	4,6606	1,5184	2,3799	1,2242	9,0836	1,4218
One child	1,7377	0,3135	0,2530	0,6294	1,0779	0,5539	0,0283	0,4766	-0,6204	0,7083	-0,9413	0,5385	0,8268	0,6234
Two children	2,6543	0,3217	0,4040	0,6178	2,4450	0,5914	1,6385	0,5024	-1,6475	0,7238	-1,0173	0,6288	-0,2206	0,6375
3 or more children	4,7681	0,4384	1,8393	0,7775	6,3053	0,7686	3,7166	0,6208	-0,9382	0,9675	1,6950	0,8415	1,1082	0,7761
R^2	0,3403		0,3601		0,4718		0,1734		0,3502		0,3149		0,3716	
Men hours elasticity	0.12		0,31		0,19		0,17		0,24		0,24		0,28	
Wife hours elasticity	0,11		0,10		0,14		0,12		0,15		0,10		0,18	

Note, all variables except working hours are dummy variables taking the value one if the individual or household belongs to the group, otherwise zero.

Table A16. Regression results of Disposable income on working hours, education, age and children.
The sample is restricted to households where the males work full time.

	Finland 91		**Nether-lands 91**		**Belgium 92**		**Sweden 92**		**United Kingdom 91**		**Germany 94**		**USA 91**	
	Estimate	**Std**	**Estimate**	**Std**	**Estimate**	**Std**	**Estimate**	**Std**	**Estimate**	**Std**	**Estimate**	**Std**	**Estimate**	**Std**
Intercept	13,4548	4,7716	22,0770	8,9357	0,1000	4,0138	3,5438	5,9767	12,2311	4,4645	-1,9586	4,6473	-16,7759	6,3956
Men hours	0,0366	0,1976	-0,3196	0,3692	0,4276	0,1477	0,4434	0,2347	-0,0425	0,1612	0,6982	0,1821	0,9205	0,2507
Men hours^2/1000	-0,0026	1,9862	5,3675	3,6472	-3,0085	1,2886	-3,2323	2,2099	1,4393	1,4587	-5,4478	1,7103	-7,0337	2,3946
Wife hours	0,2444	0,0354	0,2078	0,0469	0,2704	0,0392	0,2616	0,0501	0,2756	0,0423	0,3132	0,0394	0,3143	0,0422
Wife hours^2/1000	-2,0439	0,7573	1,3438	1,2625	-1,9548	0,8686	-2,2746	0,9285	-0,9552	0,8536	-4,8121	0,8489	-0,9840	0,8737
Men education medium	2,3159	0,2845	-0,8755	0,5633	1,8597	0,7221	1,1062	0,4516	4,7808	0,6969	1,4516	0,6542	6,7240	0,8380
Men education high	8,8581	0,4594	4,2176	0,7005	5,8104	0,8734	5,5592	0,5349	10,3670	1,0790	8,7819	0,8391	15,4050	0,9810
Wife education medium	0,7042	0,2950	0,0400	0,5458	0,7032	0,7099	1,5659	0,5068	2,9321	0,6995	0,7671	0,5918	4,8970	0,8683
Wife education high	5,4449	0,4847	3,2425	0,8091	3,5971	0,8805	4,2902	0,5987	7,5068	1,1424	3,1372	0,9432	10,2981	1,0482
Men age 31-40	1,1983	0,4635	1,7838	0,8446	0,9423	0,8597	1,6360	0,7260	3,6901	0,9747	0,5864	0,7832	4,8650	0,8485
Men age 41-50	3,2004	0,5724	3,6842	1,0463	2,9439	1,1176	2,9853	0,8581	7,2286	1,2485	2,9427	0,9655	8,5500	1,0187
Men age 51-55	3,7389	0,7282	6,6329	1,3801	5,9025	1,4279	2,9564	1,0384	6,3940	1,5711	4,7526	1,1487	7,5937	1,3265
Wife age 31-40	1,3574	0,4164	1,7206	0,7223	2,2276	0,7685	0,5863	0,6387	1,8118	0,8775	1,5049	0,6699	2,1666	0,7539
Wife age 41-50	3,7380	0,5293	5,1153	0,9901	6,3551	1,0187	1,3664	0,7905	5,3487	1,1978	3,1041	0,8874	6,0549	0,9674
Wife age 51-55	3,4714	0,7729	3,0527	1,5502	3,9102	1,4783	2,1649	1,1054	5,7605	1,7016	1,6038	1,2696	9,3200	1,4884
One child	1,6491	0,3258	0,1900	0,6831	1,3085	0,5992	0,0340	0,5001	-0,7629	0,7603	-1,0785	0,5596	0,4800	0,6476
Two children	2,4661	0,3331	0,3964	0,6697	2,2580	0,6315	1,4420	0,5275	-1,6908	0,7860	-1,4265	0,6532	-0,5827	0,6598
3 or more children	4,6326	0,4535	1,9821	0,8344	5,8204	0,8441	3,6362	0,6597	-1,7139	1,0950	0,3948	0,9096	0,7307	0,8050
R^2	0,3166		0,3326		0,3926		0,1463		0,2834		0,2752		0,3376	
Wife hours elasticity	0.11		0.11		0.13		0.12		0.16		0.08		0.18	

Note, all variables except working hours are dummy variables taking the value one if the individual or household belongs to the group, otherwise zero.

Figure A1: Income distribution

Figure 1. Household Income distribution in Finland 1991

Head of household 25-55 years of age

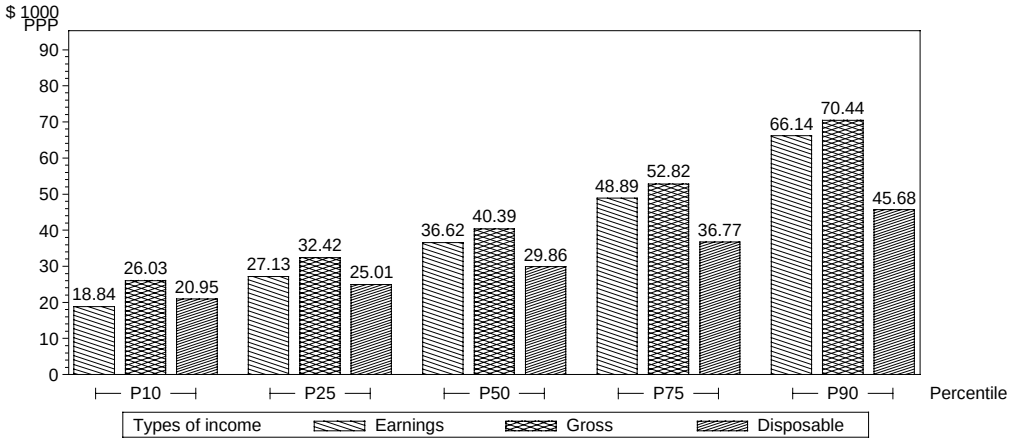


Figure 2. Household Income distribution in the Netherlands 1991

Head of household 25-55 years of age

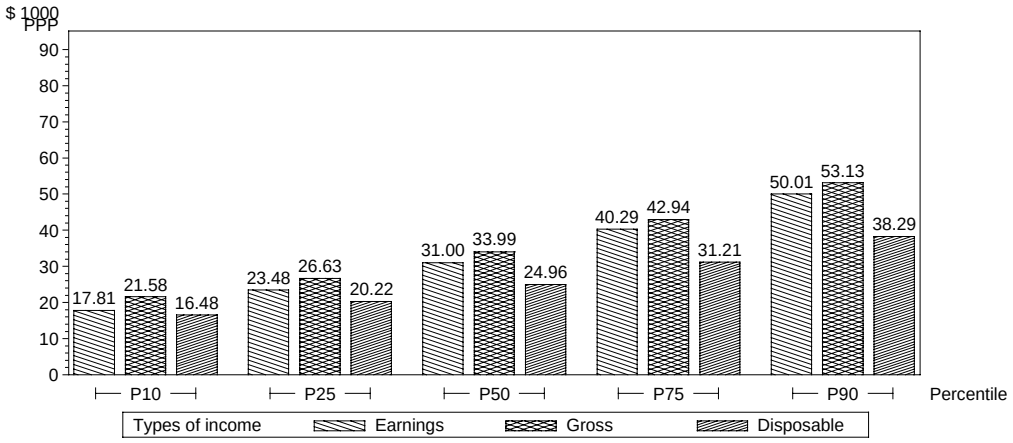


Figure 3. Household Income distribution in Belgium 1992

Head of household 25-55 years of age

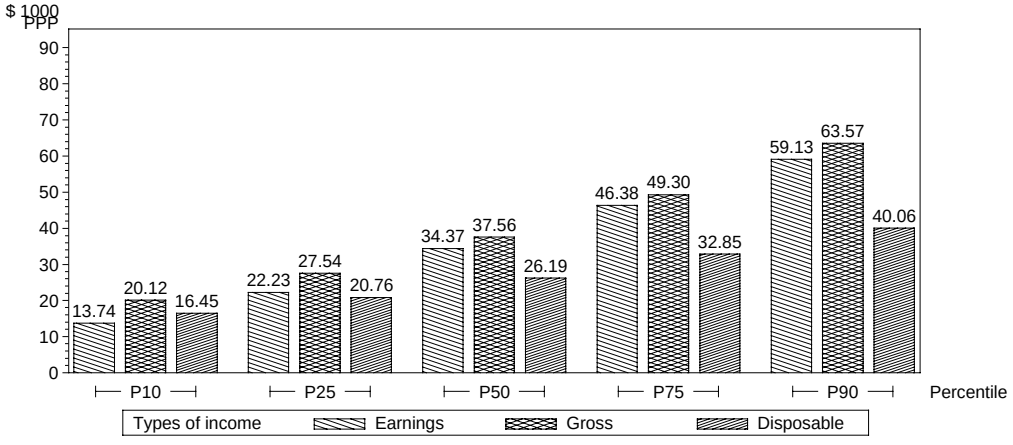


Figure 4. Household Income distribution in Sweden 1992

Head of household 25-55 years of age

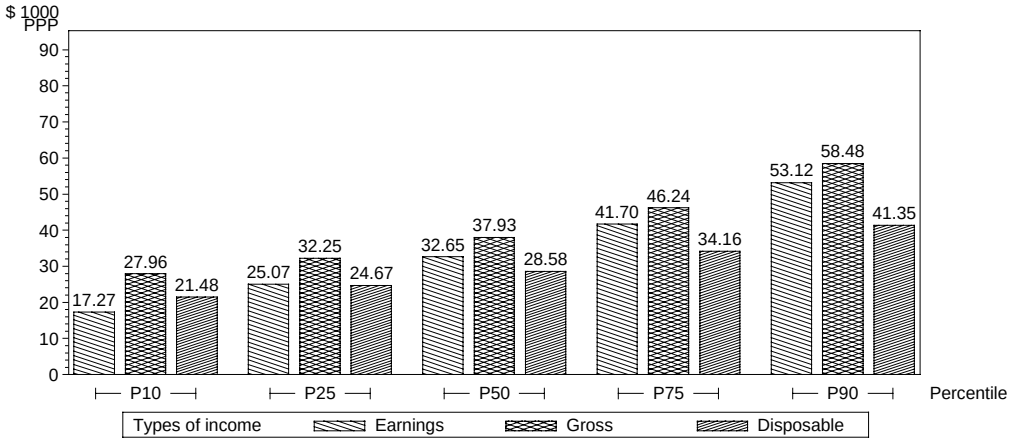


Figure 5. Household Income distribution in United Kingdom 1991

Head of household 25-55 years of age

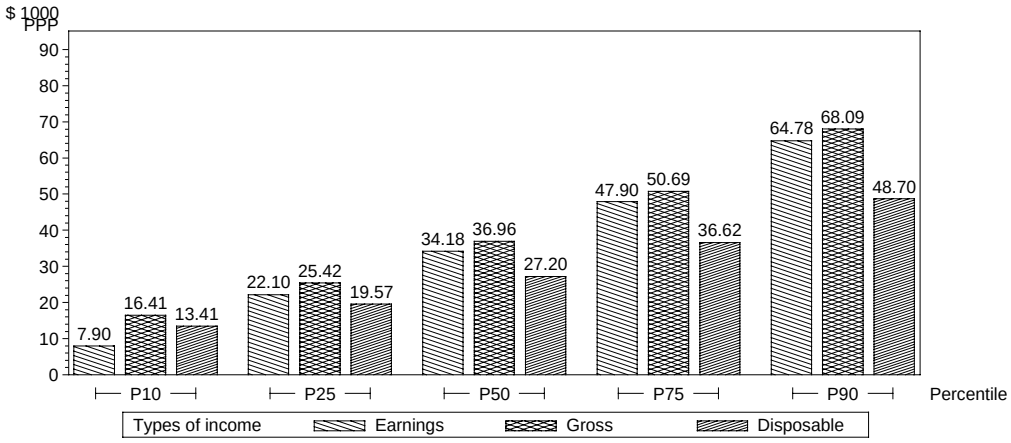


Figure 6. Household Income distribution in Germany 1994

Head of household 25-55 years of age

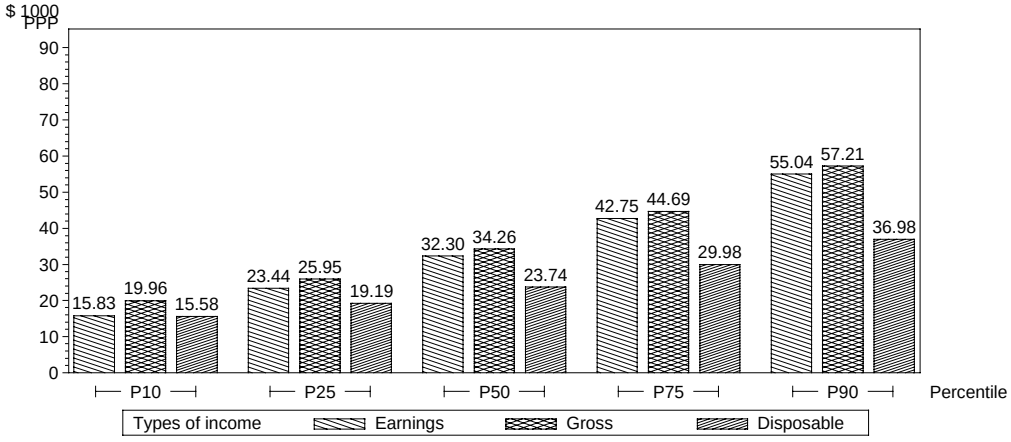


Figure 7. Household Income distribution in USA 1991

Head of household 25-55 years of age

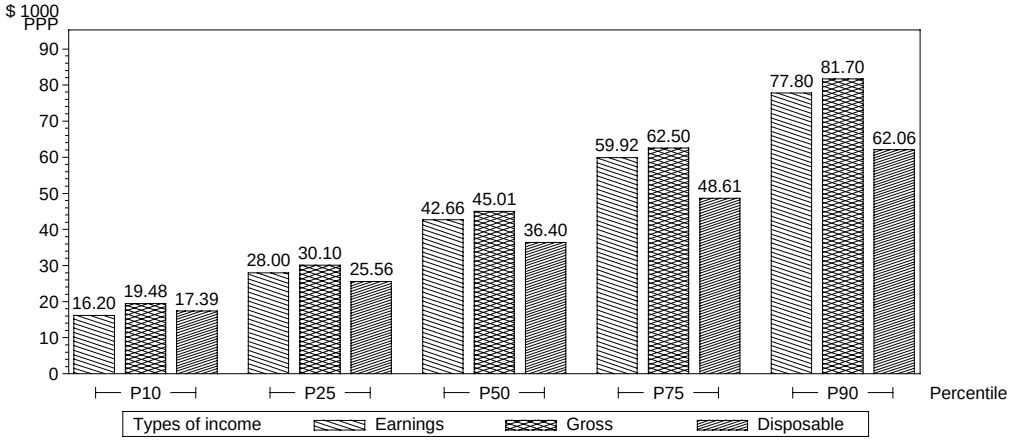
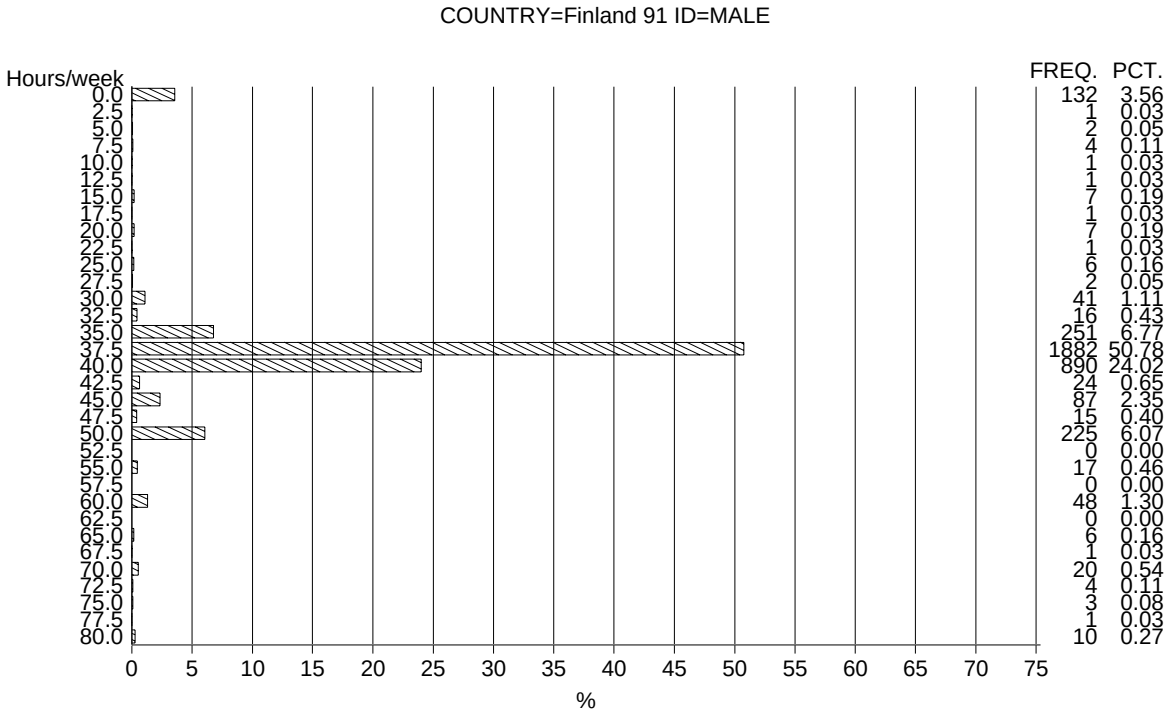
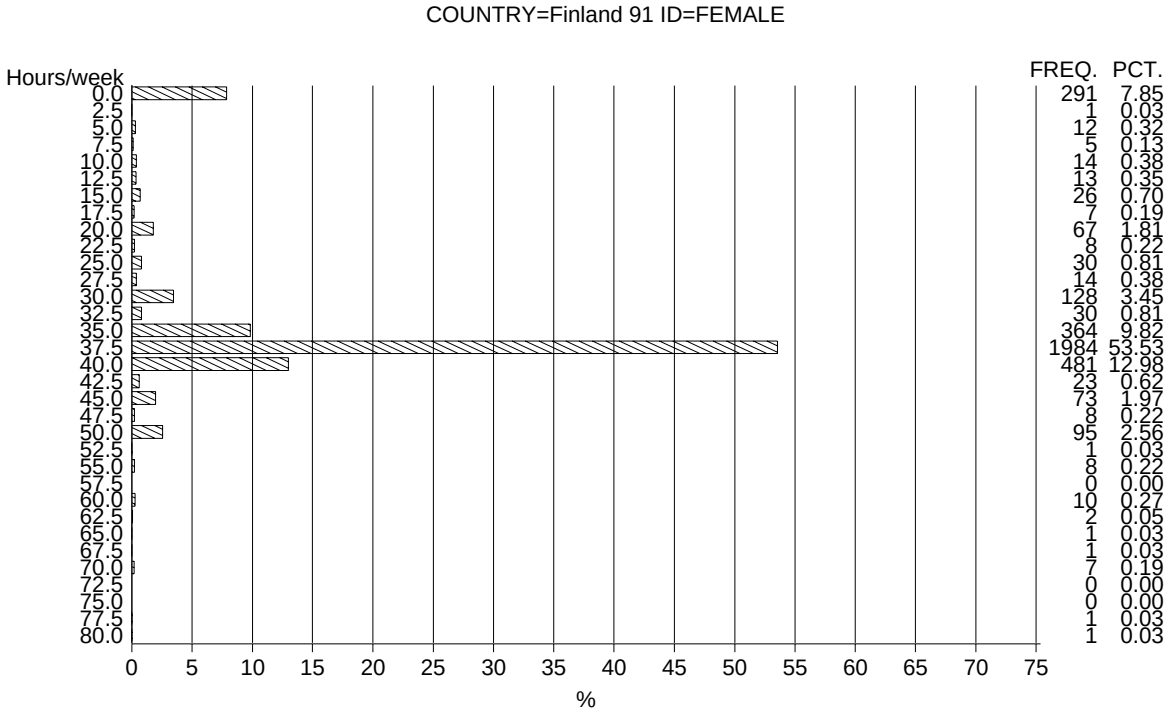


Figure A2: Gender working time distribution





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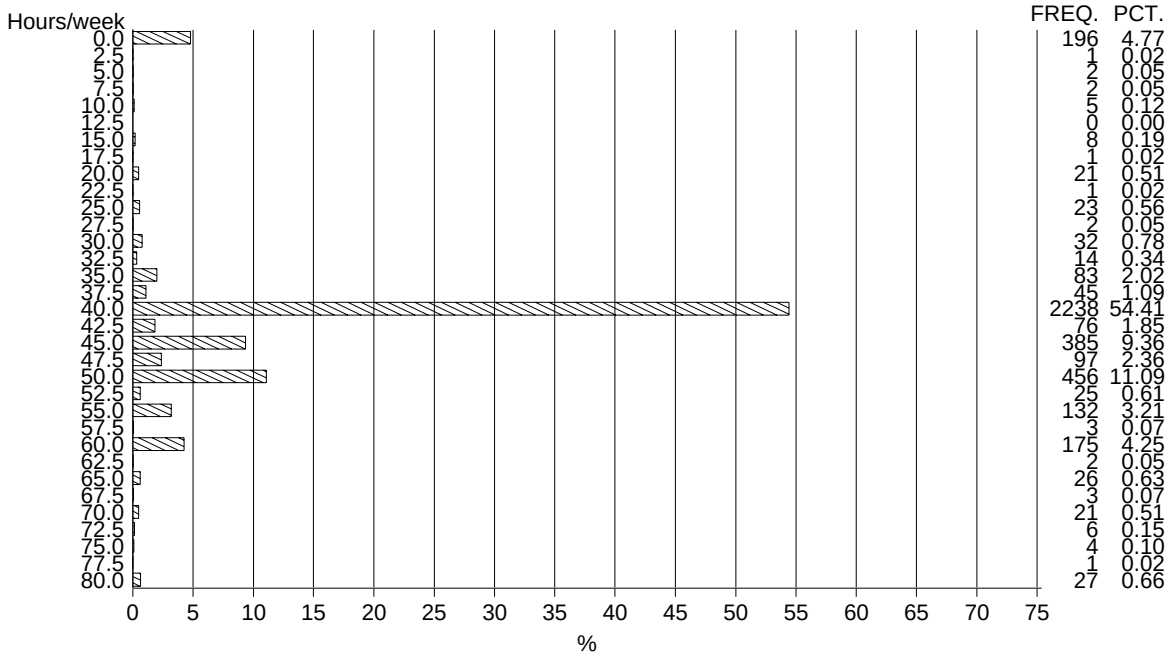

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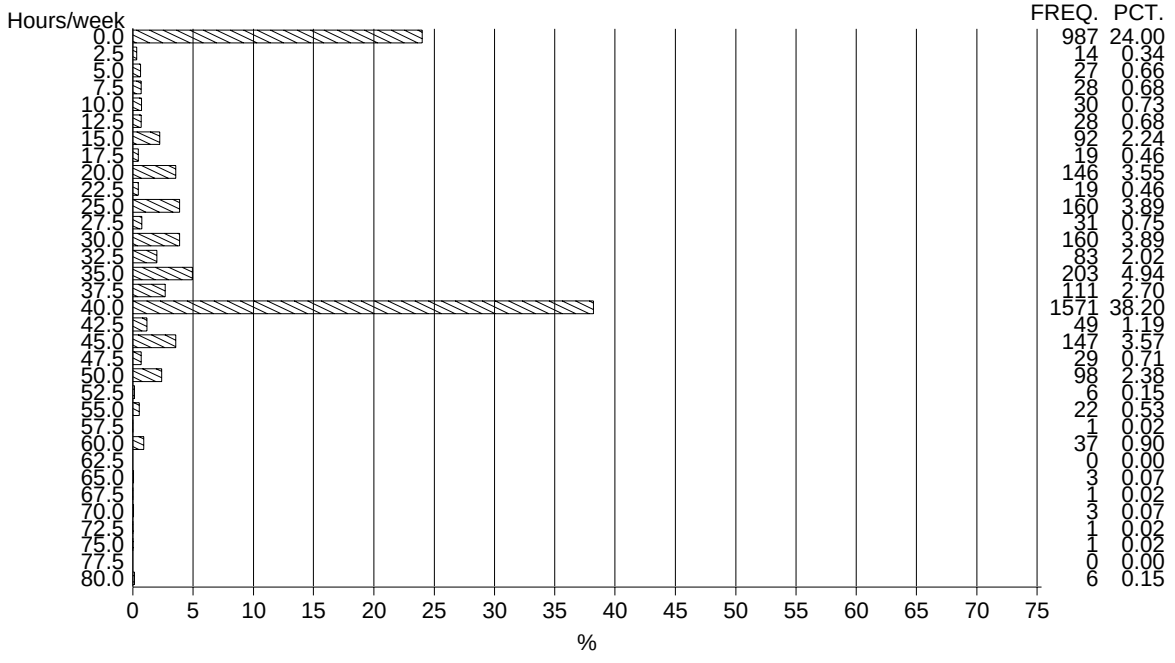

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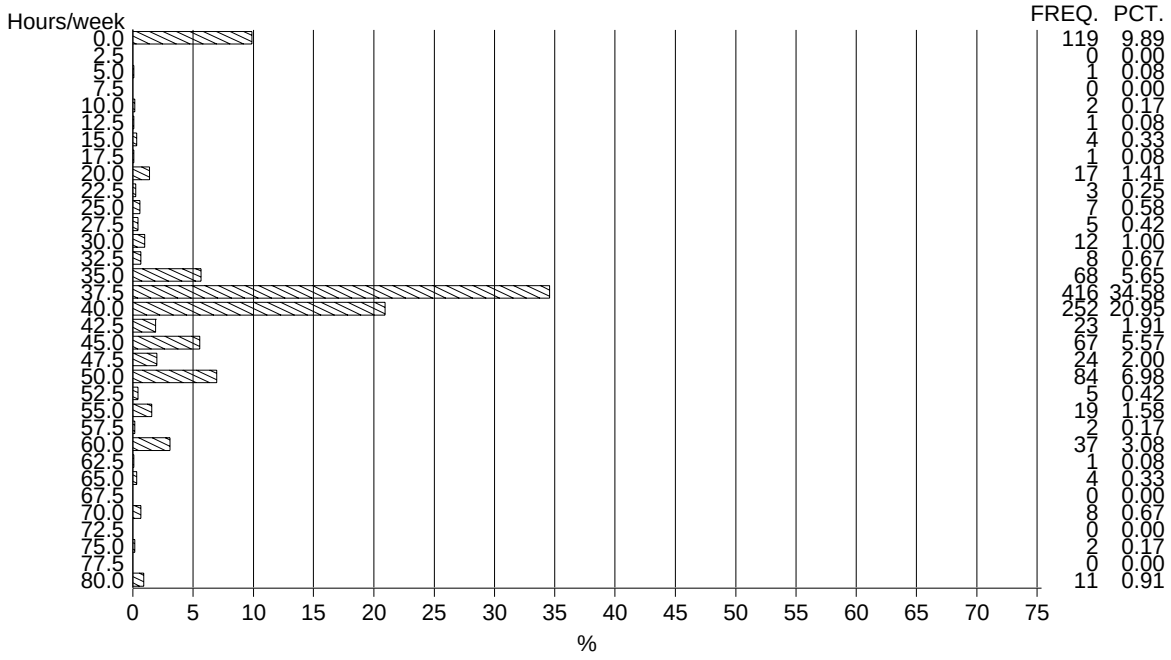

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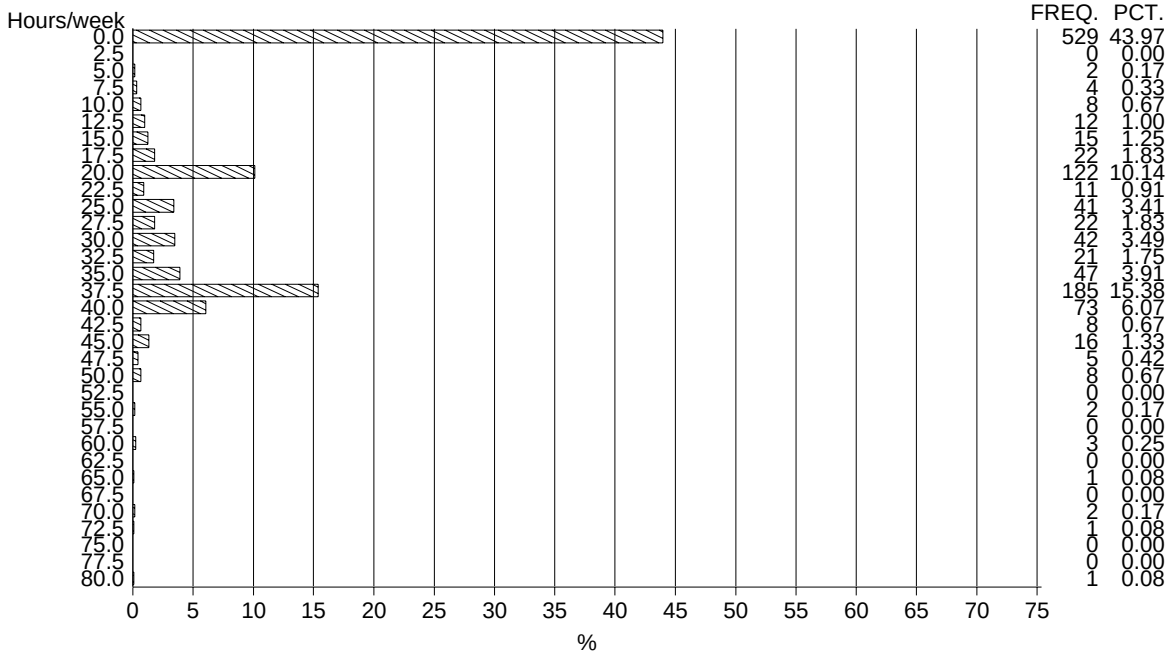

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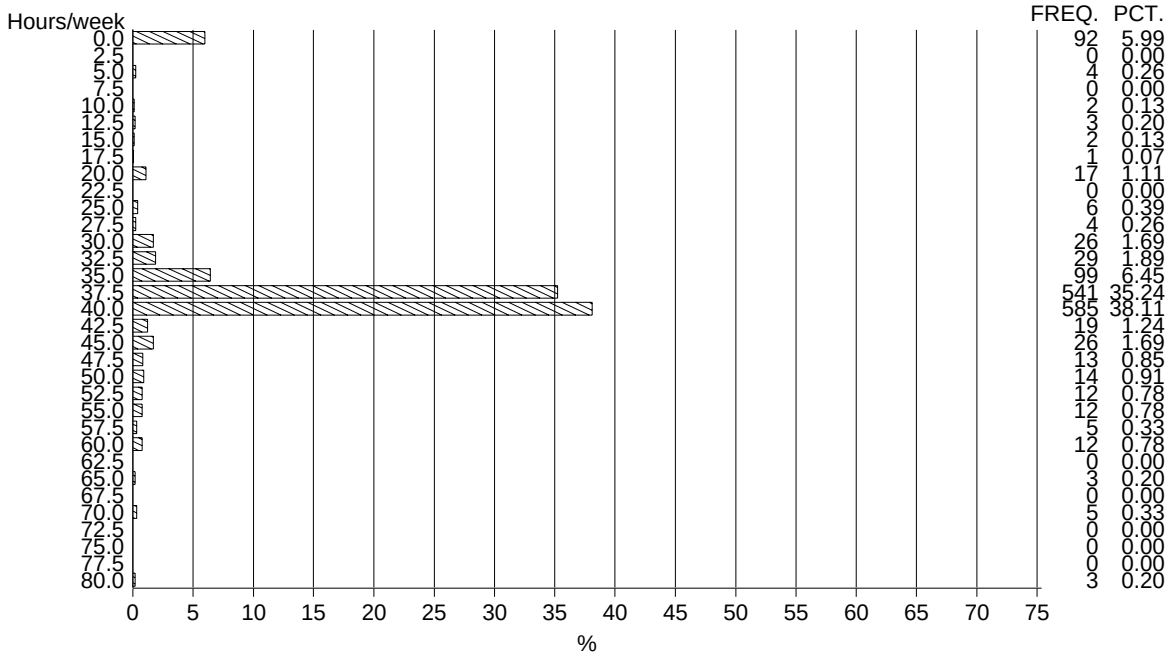

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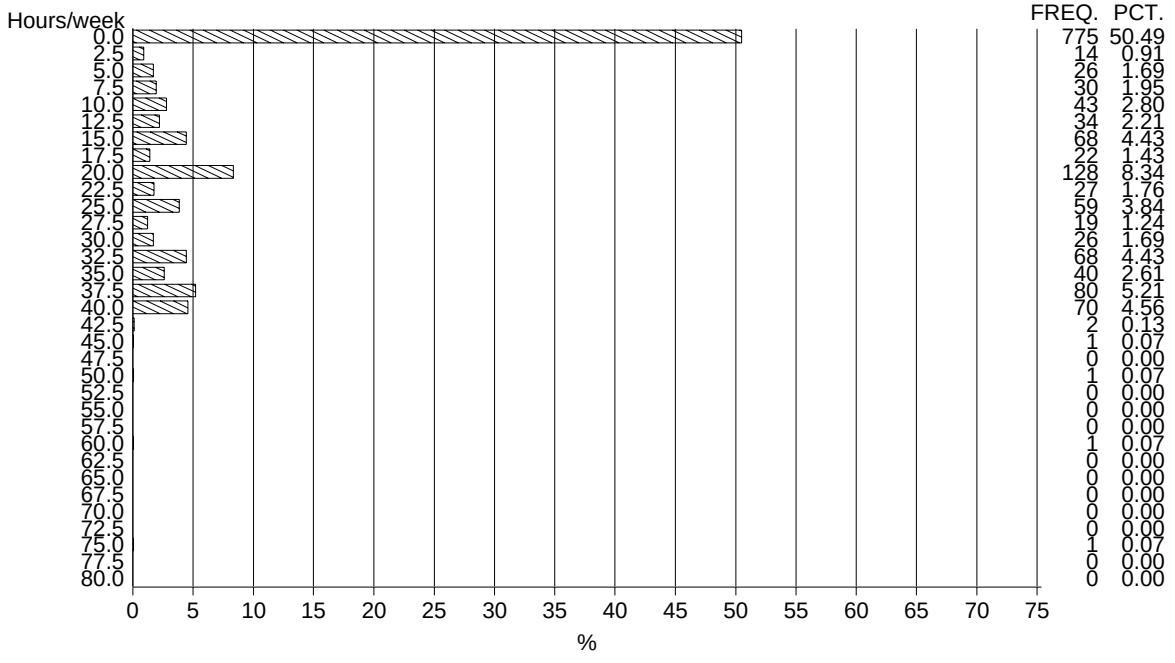

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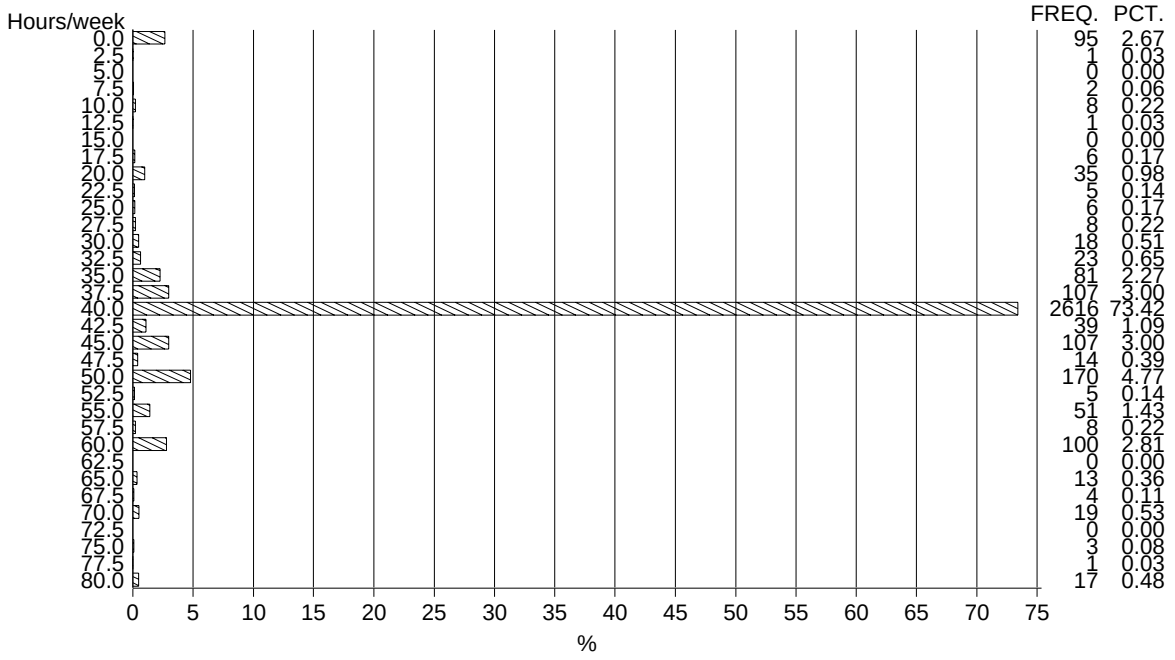

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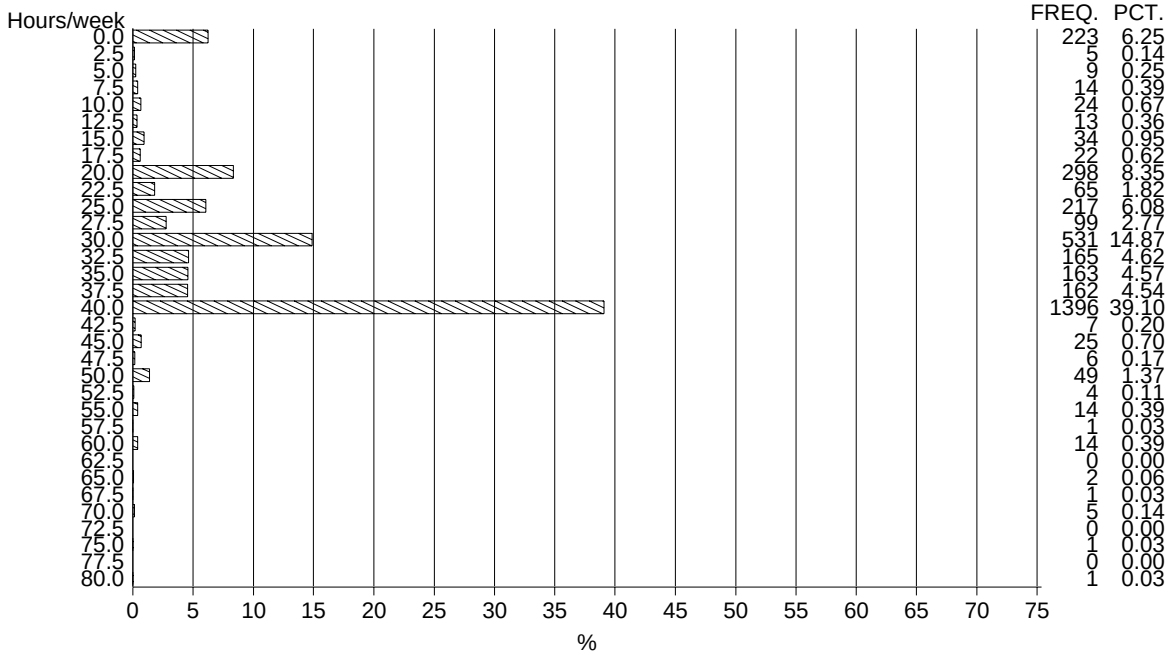

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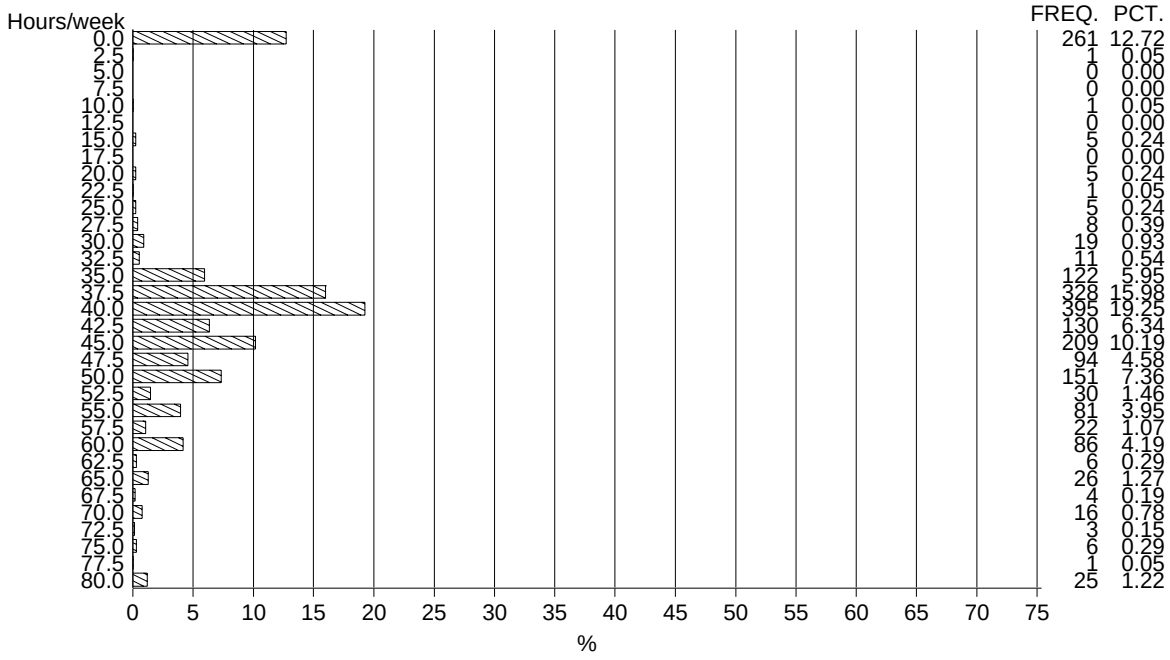

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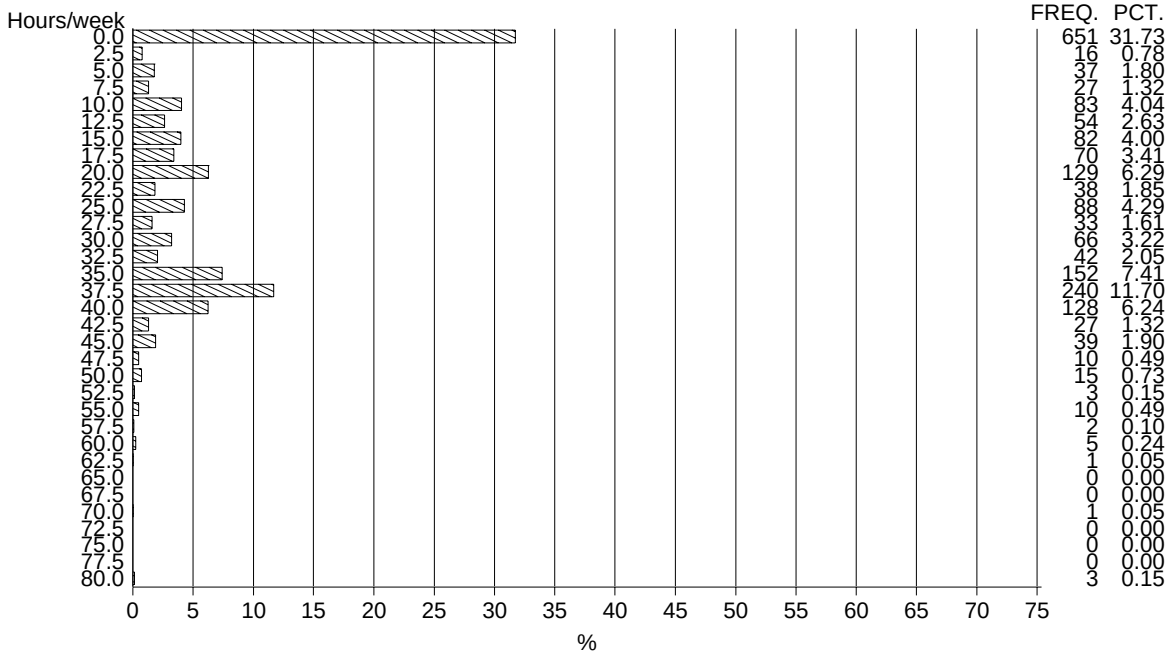

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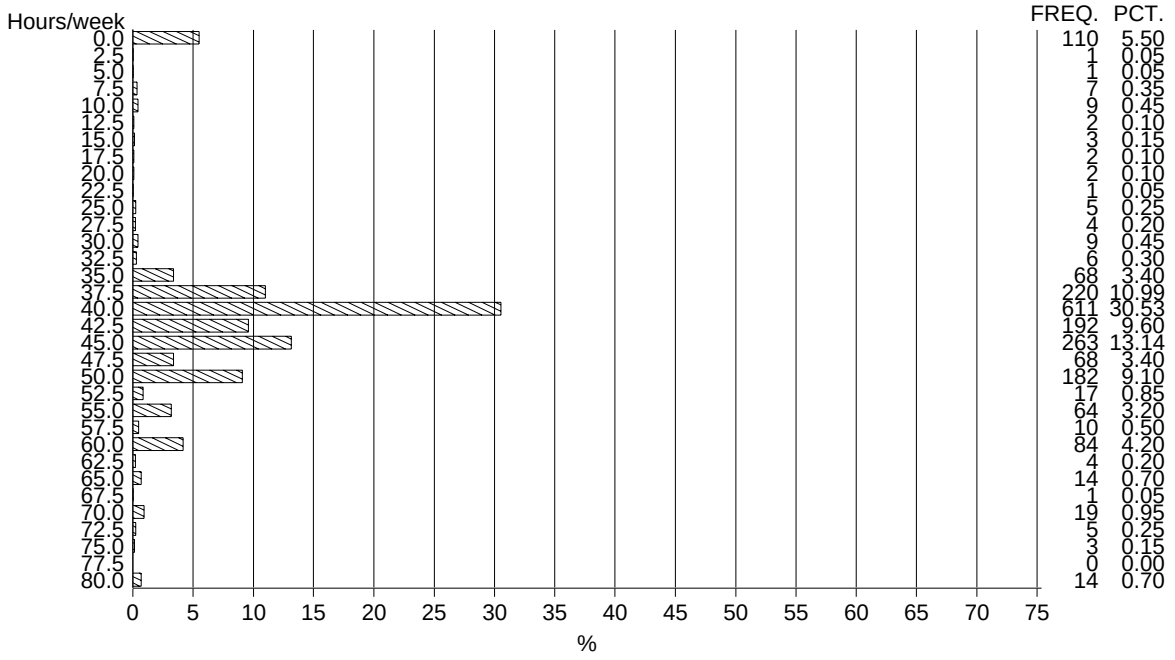

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