

# Earnings Distributions and Dimensions of Inequality

An Analysis Based on the European  
Union Structure of Earnings Survey (SES)

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## An Analysis Based on the European Union Structure of Earnings Survey (SES)

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# Abstract

This study provides an in-depth evaluation of earnings differences within and across countries and their evolution over time using three different waves of the Structure of Earnings Survey (SES) – for 2002, 2006 and 2010. Earnings inequalities for the EU stayed roughly constant at a Gini coefficient around 0.3 with, however, large and persistent differences being observed across countries. The crisis had no significant impact on changes in earnings inequalities of those people remaining employed. The report highlights the impacts of individual, job and firm characteristics on earnings differences applying Mincer regressions and provides information to which extent these determinants contribute to the observed earnings inequalities using a Shapley value decomposition approach: Differences in earnings by occupation and education are the two most important determinants of wage inequality contributing with about 25% and 12%, respectively, followed by industry (with about 10%), enterprise size (about 6%), job duration (6%), age (5%) and gender (3.5%).

Keywords: earnings inequalities, Mincer regressions, Shapley decomposition

JEL classification: C69, D31, J31



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## Executive summary

High levels of employment, productivity and social cohesion are highly ranked goals of the Europe 2020 strategy. Hence, to assist policy-makers in achieving smart, sustainable and inclusive growth in the EU, a thorough understanding of earnings differences within a country but also across countries and its evolution over time is necessary.

This study uses three different waves of the Structure of Earnings Survey (SES) – for 2002, 2006 and 2010 – and addresses issues related to recent wage developments in EU countries. Firstly, it highlights determinants of earnings differences and their relative impact over time, and secondly, it shows to which extent these determinants contribute to an overall measure of inequality, the Gini index. Three broader categories of determinants are considered: (i) individual worker characteristics (sex, age and education), (ii) job characteristics (experience, contract type, full-time/part-time work, and occupations) and (iii) firm characteristics (size, industry, public versus private control, and collective pay agreements).

Methodologically, so-called Mincer regressions are used to shed light on the contributions of earnings differences to overall inequality. The most important results of these regressions can be summarised as follows:

**Individual characteristics:** For gender, substantial wage gaps emerge between 5% and 15% even when controlling for other factors such as education, age, etc. However, over time, both unconditional and conditional gender wage gaps declined in the majority of countries. Similarly, substantial age premia are found which are, however, lower in CEECs than in the remaining EU Member States, irrespective of the age group considered. Moreover, between 2002 and 2010, the contributions of age-related wage differences declined in the majority of countries. Results also point to an interesting ranking of average returns to education (relative to the group with only primary education) in the sample of EU countries in 2010, ranging from 2% for lower secondary education, 9% for upper and post-secondary education, 19% for short-cycle tertiary education, 33% for Bachelor and Master (or equivalent) to 51% for Doctoral education. This ranking is replicated in the majority of countries. Moreover, between 2002 and 2010, returns to education increased in most countries, irrespective of the level of education considered. These changes were stronger among higher levels of education and most pronounced in the highest level of educational attainment.

**Job characteristics:** The analysis also finds non-negligible wage premia by length of service in the enterprise. In particular, relative to employees who have been with the enterprise for less than a year, employees with 1-4 years of employment in the same firm earn an average 6% wage premium, which rises to 11% for employees with between 5 and 14 years with the enterprise and reaches 18% for employees with more than 15 years with the enterprise. As for changes in conditional premia over time, a rather heterogeneous picture emerges, however. Moreover, wage gaps also emerge by type of contract. As such, relative to employees with indefinite contract, employees with a contract that is either temporary or has a fixed duration earn on average 4.7% less, though non-negligible cross-country differences emerge. Non-negligible wage gaps are also found for part-time employees. Relative to full-time employees, part-time employees tend to face wage penalties of as much as 15%. These wage disadvantages tend to be most pronounced in the Baltics, almost non-existent in Scandinavian countries and even (slightly) in favour of part-time employees in a number of other countries. Moreover, earnings

differences across occupations contribute very strongly to the overall Gini index. Results for conditional average wage premia by occupation (relative to elementary occupations) point to an interesting ordering, from as low as 3% for skilled agricultural, forestry and fishery workers, to 11% for service and sales occupations, 12% for plant and machine operators and assemblers, 15% for craft and related workers, 19% for clerical support, 35% for technicians, 50% for professionals and as much as 73% for managers.

**Firm characteristic:** Moreover, with almost 10% on average, differences between NACE sectors also contribute substantially to overall inequality, though some non-negligible differences exist across countries, ranging between 5% and around 15%. In addition, results point to substantial size-related wage gaps. Relative to small firms, large firms pay up to 42% higher wages while medium-sized firms pay up to 35% higher wages. However, size-wage premia seem to be highest among CEECs and lowest among the remaining EU countries. Over time, wage premia paid by medium-sized firms increased in a large number of countries while those paid by large firms deteriorated in the majority of countries. However, results also demonstrate that differences in firm size classes contribute relatively little to inequality. Furthermore, a rather heterogeneous picture emerges in terms of ownership-related wage differences. In particular, in countries such as Italy, Belgium, Croatia, Poland or Portugal (among others) publicly controlled firms pay more than privately owned ones, while in others such as Estonia, Finland, Bulgaria, Sweden or Slovakia (among others) publicly owned firms pay less generously than privately owned firms. Between 2002 and 2010, the wage gap between privately and publicly controlled enterprises declined in the majority of countries. Finally, the conditional effects of collective wage agreement patterns are rather mixed. The contribution to inequality of differences between the wages of employees covered by different types of collective wage agreements is also very small.

**Determinants of earnings inequality:** Furthermore, the study addresses the extent to which these characteristics explain overall earnings inequality as measured by the Gini index. Two major conclusions can be drawn: Firstly, average earnings inequalities as measured by the Gini index stayed roughly constant at around 0.3. However, in terms of levels, large differences emerge with the Gini ranking from about 0.2 (in the Scandinavian countries) to more than 0.4 (e.g. in Romania and Turkey). Moreover, despite cross-country differences in trends, there is no indication that the crisis had any significant impact on changes in earnings inequalities. In this respect it is important to note that this study looks at earnings, i.e. concerns incomes of people employed, and not overall inequality (which is directly affected by changes in the number of unemployed persons) or household incomes.

Secondly, the contribution to inequality differs across the characteristics considered: individual characteristics contribute about 20% to inequality, job characteristics about 35% and firm characteristics about 15%, whereas about 30% of the Gini index cannot be explained by the determinants investigated. This pattern remains relatively stable over time. With respect to particular determinants, occupation and education are the two most important factors with about 25% and 12%, respectively, followed by industry (with about 10%), enterprise size (about 6%), job duration (6%), age (5%) and gender (3.5%). The latter shows a tendency to become less important though. Again non-negligible cross-country differences exist: Wage pay gaps driven by experience contribute relatively strongly in the South European countries but also in Germany and Luxembourg; the type of contract (i.e. whether permanent or fixed duration) contributes strongly in Germany, Poland and the Netherlands; full-time versus part-time work contributes more strongly in Germany, Latvia, Hungary, the Netherlands, Belgium, and Lithuania. Age is relatively important in explaining earnings inequalities in the Netherlands, Norway, Belgium and Greece. Whether firms are public or private controlled is very important in Cyprus, Italy, Spain, Finland and Sweden, whereas the collective pay agreement coverage contributes more strongly in Cyprus, Portugal and Germany.

# 1 Introduction

An important feature of a labour market is the earnings people receive for doing their work. These earnings reflect, on the one hand, labour demand decisions by firms and, on the other hand, labour supply decisions of individuals. The investigation of the structure of earnings observable in an economy and its evolution over time – with a particular view on the effects of the crisis – is therefore important from both a social but also an economic point of view. High levels of employment, productivity and social cohesion are highly ranked goals according to the Europe 2020 strategy. A thorough understanding of earnings differences within a country but also across countries and its evolution over time is therefore necessary to assist policy-makers in achieving these goals for the EU to become a smart, sustainable and inclusive economy.

Differences in earnings across individuals arise for a large number of reasons related to the education and experience levels of individuals, the occupations and industries in which they work, the form and degree of collective bargaining, and firm-specific characteristics related to firm size and ownership control for instance. Differences also arise due to differences that can be ascribed to discrimination. Here we commonly observe differences in wages by gender, race and age that remain after controlling for other differences in individuals. Such differences are also often found when considering wages of part-time and full-time workers.

However, differences in earnings across individuals are far from static but tend to change over time, for the better or worse. Changes may be attributable to successfully implemented policy initiatives but may also be the result of changes in external circumstances. In particular, the recent global financial crisis which hit Europe with full force towards the end of 2008, pushed all European economies (but Poland) into recession, some of them deep, destroyed millions of jobs and sent millions of employees into unemployment. The crisis raised strong concerns among policy-makers and economists alike that a non-negligible erosion of wages could ensue and that consequently, poverty could soar. Arguably, alarmed by the sluggish demand situation they face and concerned about quickly dwindling or slowly recovering profits, many entrepreneurs consider cost reduction their top priority. Hence, as a consequence, employees could experience partly substantial losses in wages. However, by contrast, since wages may be rigid downwards they do not necessarily have to erode, despite the crisis. Such wage rigidities result from either minimum wages, strong trade unions which secure high or higher wages for their members, or efficiency wages (i.e. above-equilibrium) which are intended to lead to higher productivity levels. As a consequence of wage rigidities, however, adjustments in labour markets manifest in terms of changes in hours worked and/or unemployment.

Hence, against this backdrop, the ensuing analysis will investigate prevailing earnings differences across individuals. In particular, it will identify determinants of earnings differences and their potentially changing relative importance over time. As such, it will shed light on the effects of the crisis and how it manifested itself in terms of wage inequality and wage differences across individual characteristics. Additionally, it will show to which extent these individual determinants contribute to inequality, as measured by the Gini index, before as well as during the crisis.

## 2 Literature review

A vast empirical literature exists considering the relationship between a wide variety of explanatory variables and wages. The standard approach in the literature has been to run a so-called Mincer regression (Mincer, 1974), regressing the log of wages on a set of individual characteristics (e.g. age, experience, education, occupation, etc.) and possibly other characteristics (e.g. firm characteristics, degree of collective wage bargaining, sector effects, etc.). An issue of particular concern has been the extent to which certain sections of society are discriminated against. A common observation is that wages tend to differ significantly by gender, race, marital status and so on. A natural question that arises is the extent to which these differences reflect differences in observable characteristics of the different groups and the extent to which the differences remain unexplained and which can be assigned to discrimination. When addressing the extent of discrimination, existing studies again use the Mincer regression approach, but often also look to decompose wage differences into a component that can be explained and a component that remains unexplained, with the Blinder-Oaxaca and Shapley decomposition being two popular methods for doing this. These methods are described in more detail below. In this section we briefly highlight some of the existing literature linking various individual and other characteristics to wages. Numerous surveys of empirical research on wage determinants exist, including Willis (1986), Card (1999), Kunze (2000), Harmon et al. (2003) amongst others.

### *Gender*

Differences in earnings between males and females have been addressed in a number of contributions, beginning with Becker (1957), with Cain (1986) and Altonji and Blank (1999) providing surveys of this vast literature. Recent research (OECD, 2006) suggests that the unconditional pay gap between males and females is 16%, with the gap being around 23% in the United States and between 10% and 25% in EU countries. OECD (2006) further reports that the unconditional gender wage gap has fallen by about a half since the 1960s, but that there has been little progress recently. Studies of the conditional wage gap often proceed by including a gender dummy variable in a Mincer-style wage regression and using the coefficient on the gender dummy as a measure of the percentage difference in wages for males and females after holding other characteristics constant. Following the contributions of Blinder (1973) and Oaxaca (1973) many studies also look to decompose wage differences by gender into an explained and an unexplained effect, with the latter being considered a measure of discrimination. Results from such studies tend to indicate large differences in earnings between males and females, with observable characteristics only accounting for a fraction of these differences. Rather than trying to summarise this large literature, a number of authors (e.g. Stanley and Jarrell, 1998; Jarrell and Stanley, 2004; Weichselbaumer and Winter-Ebmer, 2005, 2007) have conducted a meta-analysis of existing studies to shed light on the extent and the determinants of gender wage differences. Weichselbaumer and Winter-Ebmer for example consider results from 263 papers and 1535 different estimates of the gender wage gap from 63 countries and find that the estimated gender wage gap declined from around 65% in the 1960s to around 30% in the 1990s. This decline was almost entirely due to an equalisation of characteristics however, with females becoming better educated and trained, meaning that the unexplained component of the wage gap remained fairly constant. Despite this, results from the meta-

analysis indicate a slight tendency for the gender wage gap to diminish over time, with the results indicating that the ratio of what women would earn absent of discrimination relative to their actual wages decreased by around 0.17% annually. Kunze (2000), in her survey, also shows that there has been a tendency for the uncorrected gender wage gap to decrease over time across many developed countries. She also shows that the gender wage gap tends to be larger for married than for single women, and for part-time as opposed to full-time workers. Kunze further indicates that the evidence suggests that the wage gap exists from the start of a working career, and that this gap increases over time. She further concludes that the available evidence indicates that the gender wage gap is smaller for more educated individuals however. In a recent paper using data from the 2007 European Union Statistics on Income and Living Conditions (EU-SILC) for 24 EU Member States, Christofides et al. (2010) find that gender wage gaps vary greatly across countries, with the gaps being relatively low in Slovenia, Hungary, Belgium and Portugal, and relatively large in Cyprus, Estonia, Czech Republic and Latvia. In most cases the majority of the wage gaps cannot be explained by observables (similar results are found by Nicodemo, 2009). Using quantile regression, the paper proceeds to examine wage differences at different points on the conditional wage distribution. The results indicate that in most countries, wage gaps tend to be higher at higher quantiles, from which the authors conclude that there exists a glass ceiling. In a smaller number of cases, gender wage gaps are also relatively large at lower quantiles, which the authors term sticky floors.

### *Education*

In addition to its expected impact upon aggregate growth and innovation, human capital accumulation is considered to be one of the most important determinants of an individual's earnings. A vast number of empirical studies have assessed the impact of an individual's education on earnings, with Cohn and Addison (1997), Psacharopoulos (1985, 1994) and Card (1999), amongst others, providing surveys of this literature. A common approach to capture the effect of education on earnings is to include a measure of the number of years of completed schooling of an individual in a Mincer wage regression. Such an approach assumes that each additional year of education has the same proportional impact on wages, with the estimated coefficient providing an estimate of the returns to education. An alternative approach has been to include a separate variable indicating the highest level of education achieved (e.g. no schooling, primary schooling completed, secondary schooling completed, Bachelor's degree, Master's degree, higher degree), which relaxes the assumption of a constant proportional impact. An additional econometric issue that has arisen in this literature is the possibility of endogeneity of the education variable. Both earnings and education are likely to be determined by an individual's unobserved ability, which can lead to biased estimates of the returns to education. To get around this problem a number of studies have used additional statistical methods (e.g. instrumental variables estimation) (see Angrist and Krueger, 1991; Card, 1995). Despite these methodological issues, results tend to suggest that the returns to education are large. The estimated returns to education in the studies considered by Card (1999) in his survey range from around 2.2% to 11.4% (with the majority of estimates lying between 4% and 9%), implying that an additional year of schooling increases wages by 2.2% and 11.4% (holding all other factors constant). Studies for Europe also suggest large returns to education in a European context. In a sample of 15 European countries, Harmon et al. (2001) find that returns range from around 4% in Sweden up to 14% for women in Ireland and 12% for women in the UK. The average effect across countries tends to lie between 6% and 8%, depending on the specification of the model used. Using data for Austria, Germany, Italy, Sweden and the UK from the EU-SILC database, Glocker and Steiner (2011) use augmented Mincerian wage regressions to estimate the

returns to education. Returns to education are found to be highest for the UK (9%) and lowest for Sweden (4%). Middendorf (2008) uses data from the European Community Household Panel on 12 countries to examine the returns to education. Returns to education are found to vary significantly across countries, being relatively large in Ireland and Portugal (10%) and relatively low in the UK, Italy and Germany (4.8-5.5%).

#### *Age and experience*

One aspect of labour market dynamics that has been considered extensively is that on the returns to experience and tenure. Early studies in the 1980s (e.g. Abraham and Farber, 1987; Altonji and Shakotko, 1987; Marshall and Zarkin, 1987) suggested that there were large positive returns to experience, but that the returns to tenure were much smaller. Such an outcome would suggest that job-specific human capital as well as deferred compensation mechanisms were not important empirically. More recent studies paint a different picture however. Topel (1991) uses data from the US Panel Survey of Income Dynamics over the period 1968-1983 and finds that both the returns to experience and the returns to tenure are large and positive. Topel estimates that over 10 years the average returns to tenure are around 2.8%, while the returns to experience are estimated at around 7% per year on average. Altonji and Williams (1997) use a similar dataset but correct for a number of problems with the Topel (1991) approach and find an average return to tenure of 1.1%, somewhat lower than that found by Topel (1991).

In a European context, Dustmann and Meghir (2005) use data for Germany and find non-linear returns to experience. For unskilled workers, the average returns to experience are 9% in the first year, 7% in the second year, 1% in the third year, and insignificant thereafter. For skilled workers the pattern is even closer to linear, with a return of 6% in the first two years and around 4% thereafter. This further implies that there are substantially greater returns to experience for skilled workers in the medium and long term relative to unskilled workers. The returns to tenure are again lower than those for experience, with estimates of around 1% per year for unskilled and 2% per year for skilled workers. Using data for the UK over the period 1978-1997, Myck and Paull (2001) construct a grouped panel dataset that allows them to estimate the returns to experience (both experience and tenure) by group. Results indicate that for men the returns to overall experience are 16% in the first two years of accumulating labour market experience, with the returns dropping to between 5% and 6% for the following four years, after which there is no significant impact. For females the returns are lower in the first two years at 13% and 10%. Splitting the sample by education groups, the authors find that the returns to labour market experience are largest among the least educated, with no significant effect found for the highest skilled workers.

Related to experience is an individual's age. A number of studies have shown that the age-earnings profile tends to be concave (see e.g. Miller, 1955 and 1966 for early studies). Such studies also tend to indicate that the age-earnings profile tends to fan out over time, an outcome that may be largely due to differences in education. Miller (1955) for example plots the age-earnings profile for different education groups and finds that the earnings of more educated workers tend to reach their peak around 10 years later than in the case of less educated workers.

### *Full time/part time*

A further important distinction is between the wages of part-time and full-time workers. As discussed by the OECD (2010; Employment Outlook) part-time employment is increasingly important, particularly as certain groups (e.g. mothers, youth workers and the elderly) take up work. The evidence suggests that such workers suffer from a penalty in terms of their wages, though – as discussed by the OECD (2010) – overall job satisfaction may not suffer due to more family-friendly working hours and better access to health and safety. OECD (1999) conducted a comparison of the wages of part-time and full-time workers in a sample of European countries as well as Australia, Canada and the United States, and found that median hourly earnings of part-time workers were lower than those of full-time workers. This difference was between 90% and 55% of full-time earnings, depending on the country. While much of this difference reflects the fact that part-time workers tend to have lower educational attainment and lower job tenure on average, evidence exists to suggest that in some cases a wage differential remains. In the case of France, Kaukewitsch and Rouault (1998) find that nearly all of the difference in hourly earnings between part-time and full-time workers can be accounted for by differences in characteristics, while for Germany the figure is around 95%. The wage gap is also found to be much smaller in occupations that employ the highest proportion of part-time workers, with some evidence suggesting that wages are lower for part-time workers working less than 20 hours per week than those working more than 20 hours (OECD, 1999). Recently, Matteazzi et al. (2013) have addressed the question whether the overrepresentation of women in part-time employment helps explain the gender wage gap in a sample of 12 European countries, finding that the high prevalence of females in part-time employment explains only a small share of gender wage differences.

### *Enterprise control*

An extensive literature looks to examine whether there are differences in earnings that are related to the ownership control of the enterprise. Of particular interest in recent times has been the issue of whether pay in the public sector is excessive relative to pay in the private sector, with Gregory and Borland (1999) providing a survey of this literature. Results tend to indicate a pay gap that favours public sector workers, with results for the UK (Rees and Shah, 1995), Italy (Comi et al., 2002), Greece (Papapetrou, 2006), Ireland (Foley and O'Callaghan, 2009) and Portugal (Campos and Pereira, 2009) all indicating that workers in the public sector are paid more than those in the private sector. The wage premium for public sector workers is also often found to be higher for females than for males (see Dustman and van Soest, 1997; Comi et al., 2002; Papapetrou, 2006; Campos and Pereira, 2009; Foley and O'Callaghan, 2009; and Chatterji et al., 2011). In a multi-country setting, Giordano et al. (2011) for example consider ten EU countries and find a pay gap favouring public sector workers that is relatively large in Spain, Greece, Ireland, Portugal and Italy and relatively small in Austria, Belgium, France, Germany and Slovenia. They further show that the gap is generally higher for women at the low end of the wage distribution and that there tends to be some correlation between a low public-private sector pay gap and more decentralised wage bargaining, though no significant correlation is observed between the pay gap and union power. More recently Christofides and Michael (2013) provide estimates of the public-private sector gap in 27 European countries using data from the 2008 release of EU-SILC. They show that the unconditional wage gap ranges from essentially zero in Belgium and Norway to 38% in Latvia, with gaps in excess of 30% found in Greece, Luxembourg and Latvia. Based on Mincer regressions, Christofides and Michael further show that the coefficient on the public sector variable is either above zero or insignificant for all 27 countries, with the highest coefficients observed for Hungary, Luxembourg and

Bulgaria and the lowest for Norway and Germany. The public sector wage gap ranges from around 12% for Luxembourg to 3.8% for Norway, indicating substantial differences across countries. Using decomposition methods however, the authors show that a substantial part of the conditional wage gap can be explained by observables. Indeed, in the case of Belgium, Germany and Norway, the personal and job characteristics of public sector employees would justify even higher pay (and hence the unexplained components are negative). A recent study by de Castro et al. (2013) uses data from the Structure of Earnings Survey to examine differences in wages between workers in the public and private sector. The paper uses data from the 2006 and 2010 waves of the SES for all EU 27 countries (except Sweden) and finds that public sector employees are paid more than workers in the private sector. After controlling for standard wage determinants, the paper finds a public sector wage premium of 3.6% averaged across countries. In the majority of countries, the majority of this difference can be accounted for by differences in observable characteristics, with on average less than a third of the difference remaining unexplained. The paper further finds, in contrast to existing evidence, little evidence of a greater wage premium for females employed in the public sector. The wage premium for public sector employees is also found to be largest for workers at lower job positions, with a negative public sector premium found for workers at the highest job positions.

#### *Collective pay agreements*

In EU countries as well as the OECD more widely there has been a shift in the past few decades towards greater decentralisation of wage bargaining, which may have important implications for wage formation and wage dispersion. From a theoretical point of view, increased decentralisation may lead to increased wage dispersion since firm- and individual-specific characteristics are more likely to enter the wage contracts, while under centralised bargaining egalitarian union preferences are easier to accomplish (Dahl et al., 2011). Further arguments suggest that decentralisation may also impact upon wage levels, with firm-level bargaining leading to higher average wages (see Blanchflower et al., 1996; Akerlof and Yellen, 1988; Fitzenberger and Franz, 1999; Calmfors, 1993). Others suggest a potential hump-shaped relationship between the degree of centralisation and wage levels. Calmfors and Drifill (1988) for example argue that unions are likely to internalise externalities and moderate wage demands at the national level, while at the firm level they restrain wage demands because higher wages lead to higher product prices, lower demand and ultimately lower employment. Intermediate levels of centralisation would thus be expected to lead to the highest levels of wages.

A number of cross-country studies (e.g. Rowthorn, 1992; Wallerstein, 1999; OECD, 2004) suggest that centralised wage setting leads to less wage dispersion (see also Card et al., 2004 for a review of the evidence on wages for union and non-unionised workers). Results at the micro-level are more mixed however. Dell'Aringa and Lucifora (1994), using establishment level data for Italy, find that wages are higher in firms where unions are associated with local bargaining as opposed to national bargaining. Firm-level bargaining is found to raise wages more for white-collar than for blue-collar workers. Card and de la Rica (2006) find similar results to Dell'Aringa and Lucifora using matched worker-firm level data from the European Structure of Earnings Survey (ESES). Plasman et al. (2007) also find for Belgium, Denmark and Spain that decentralised bargaining increases average wages. Dahl et al. (2011) use longitudinal data and find for Denmark that wages are higher in the case of firm-level bargaining and that the return to skills is higher under a more decentralised wage bargaining system. A number of studies for Germany also tend to suggest that wages are higher under firm-level as opposed to sector-level

wage bargaining (see Fitzenberger et al., 2008). In the case of the Netherlands, Hartog et al. (2002) find few differences in wage levels according to the degree of centralisation of wage bargaining.

### *Contract type*

Interest in the impact of contract type on wages, employment and working conditions has been raised in recent years. In particular, it has been noted that the use of temporary contracts has been increasing, especially in continental Europe, a trend that has been attributed to the relatively strict employment protection laws for workers on permanent contracts in these countries, which makes the use of temporary contracts attractive (see e.g. Hasebe, 2011). Goux et al. (2001), for example, using French data, find that it is less costly to adjust temporary workers as opposed to permanent worker, with the costs of firing permanent workers also found to be higher than those associated with hiring them.

A number of recent papers address issues related to the prevalence of temporary contracts (examples including Blanchard and Landier, 2002; Dolado et al., 2002; Holmlund and Storrie, 2002). A number of these studies concentrate on issues related to the relationship between contract type and wages, with the general conclusion being that workers on permanent contracts are paid more than those on temporary contracts. Booth et al. (2002), using data from the UK, show that workers on temporary contracts are paid less than those on permanent contracts, with levels of job satisfaction and work-related training also being lower for workers on temporary contracts. Hagen (2002) reports data for Germany and finds a wage differential in favour of workers on permanent contracts of between 6% and 10% if selection on observables is controlled for, but rises to more than 20% once selection on both observables and unobservables is controlled for. Brown and Sessions (2003) use data from the 1997 British Social Attitudes Survey and find hourly wages of permanent workers are around 13% higher than those of workers on temporary contracts. While some of this difference can be attributed to differences in observable characteristics, around 70% of the difference is unexplained and may be attributable to discrimination. Davia and Hernanz (2004) however, using data for Spain, find that wage differences between workers on temporary and permanent contracts can be largely explained by differences in job and individual characteristics, i.e. by observables.

A related literature examines the effect of temporary contracts on wages throughout a person's career, examining whether experience with temporary contracts acts as a stepping stone to improved long-term labour market performance or whether such experience leads to exclusion from permanent positions. The paper of Booth et al. (2002), for example, finds that for women temporary contracts can be a stepping stone to permanent work, with wages able to catch up with those who start in permanent jobs.

## 3 Data and methods

### 3.1 THE STRUCTURE OF EARNINGS SURVEY DATA

This study uses data from the Structure of Earnings Survey (SES) to highlight the importance of some of the above mentioned factors on recent wage developments in EU countries. Using the different waves of the SES for 2002, 2006 and 2010, the study also considers developments over time in the strength of the relationships between those factors, wages and overall inequality. The SES is conducted every four years in the Member States of the European Union and provides comparable information on the relationship between the level of earnings, individual characteristics of employees (gender, age, educational level), job characteristics (occupation, length of services in the enterprise, employment contract type, etc.) and characteristics of their employer (economic activity, size of the enterprise, existence and type of pay agreement, geographical location, etc.). The SES data on earnings comprises for each employee in the sample average gross hourly earnings, gross monthly earnings in the reference month and gross annual earnings in the reference year, respectively. Moreover, detailed information on irregular payments (e.g. annual bonuses and allowances, earnings related to overtime and special payments for shift work) and on working periods (e.g. actual hours paid during the reference month, overtime hours paid in the reference month, annual days of holiday leave, etc.) is provided. Currently, the SES is conducted in the 28 Member States of the European Union as well as the candidate countries and countries of the European Free Trade Association (EFTA). Restricted access to CD-ROM version of the SES micro-dataset is available for up to 24 countries for the 2002, 2006 and 2010 SES releases (BE, BG, CY, CZ, DE (since 2006), EE, ES, FI, FR, EL, HR (since 2010), HU, IT, LT, LU, LV, NL, PL, PT, RO, SE, SK, UK, NO). A much more detailed description of the data together with data issues is provided in the Appendix.

To provide an overview of the sample and compositions, Tables 3.1.1 to 3.1.3 present the (weighted) sample shares according to the respective characteristics considered in the study. In doing so it differentiates between individual characteristics, job characteristics and firm characteristics. Shares for the years 2002 and 2006 are reported in the Appendix.

**Table 3.1.1 / Sample shares (weighted), 2010, individual characteristics**

		BE	BG	CY	CZ	DE	EE	ES	FI	FR	EL	HR	HU	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
Gender	Male	56.4	48.3	52.6	54.6	54.0	44.8	53.2	45.7	52.7	52.7	50.5	50.7	56.7	46.1	64.7	42.5	51.7	52.0	50.9	50.3	52.4	48.6	49.4	50.9
	Female	43.6	51.7	47.4	45.4	46.0	55.2	46.8	54.3	47.3	47.3	49.5	49.3	43.3	53.9	35.3	57.5	48.3	48.0	49.1	49.7	47.6	51.4	50.6	49.1
Age	14-19	0.9	0.5	0.4	0.6	3.0	0.5	0.3	0.8	0.4	0.2	0.4	0.1	0.3	0.2	0.9	0.5	5.3	3.8	0.2	1.2	0.2	1.5	0.4	3.9
	20-29	18.8	17.0	22.4	19.4	18.9	17.6	16.9	15.3	15.7	14.8	17.3	16.1	11.5	16.4	20.2	17.7	22.6	19.3	19.5	19.0	15.3	16.8	16.7	20.5
	30-39	26.4	25.7	27.8	28.3	20.2	23.0	33.6	23.1	26.7	33.3	27.3	29.9	28.1	23.2	32.0	23.2	21.8	23.6	29.3	31.7	28.8	22.9	26.2	23.0
	40-49	30.2	25.2	24.4	24.5	29.6	24.3	26.9	27.3	29.0	31.5	28.2	26.1	32.9	28.2	30.9	26.5	25.0	24.6	25.9	27.0	31.7	26.5	26.1	26.5
	50-59	21.3	24.1	19.4	22.1	22.2	23.4	17.5	26.4	24.0	18.0	22.6	24.3	23.8	24.4	14.8	24.0	20.0	19.9	22.7	17.5	21.7	22.9	26.2	19.4
	60+	2.4	7.4	5.7	5.1	6.1	11.1	4.6	7.1	4.2	2.2	4.1	3.6	3.4	7.5	1.3	8.2	5.3	8.8	2.4	3.6	2.2	9.4	4.3	6.7
Education	Primary	6.3	1.1	7.2	0.5		0.4	17.4	11.8	7.5	6.5	1.5	0.6	6.0	0.1	9.5	0.5	5.4	8.5	5.2	31.7	0.4	2.1		0.1
	Lower secondary	18.7	6.2	6.5	8.0	19.2	6.7	27.5		12.5	9.8	9.9	13.7	33.2	3.6	15.1	5.6	21.6	18.6	0.1	22.5	6.3	7.9	6.9	11.4
	Upper and post-secondary	41.5	60.5	51.4	72.7	66.6	56.7	21.5	43.1	43.8	41.8	58.3	61.2	44.4	45.9	47.0	53.9	43.7	40.8	60.5	20.9	63.9	42.6	67.9	40.2
	Short-cycle secondary	13.7	24.8	23.6	15.7	14.1	24.9	24.3	27.8	20.6	20.7	18.1	24.2	12.8	36.8	15.4	33.9	26.7	2.0	26.2	21.4	24.8	22.2	23.3	33.4
	Bachelor and Master	19.4	6.6	10.6	1.7		10.0	8.7	15.7	14.7	15.3	10.8	0.3	2.3	13.0	12.0	5.4	1.9	29.3	6.8	2.6	3.8	10.9	1.1	13.5
	Doctoral	0.4	0.7	0.7	1.4		1.2	0.5	1.6	1.0	5.9	1.4		1.4	0.7	0.9	0.7	0.6	0.8	1.2	0.8	0.9	14.3	0.8	1.4

Source: SES data; wiiw calculations.

**Table 3.1.2 / Sample shares (weighted), 2010, job characteristics**

		BE	BG	CY	CZ	DE	EE	ES	FI	FR	EL	HR	HU	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
Experience	0-1 years	21.3	35.9	26.3	27.8	23.9	24.1	25.6	22.1	17.5	23.3	19.9	30.6	14.0	26.5	25.4	31.7	0.1	10.0	19.8	28.5	21.7	24.8	23.7	24.5
	1-4 years	21.4	28.5	27.6	24.8	19.8	27.1	23.6	21.4	19.3	20.8	22.8	24.0	22.3	26.8	26.3	25.9	38.8	28.4	25.7	19.0	27.9	22.7	25.9	24.9
	5-14 years	30.8	25.0	28.6	31.3	29.2	34.8	31.5	30.3	33.6	33.4	32.5	29.9	35.5	31.0	32.0	30.4	47.9	49.6	31.6	31.8	32.9	33.7	33.6	32.9
	more than 14 years	26.5	10.6	17.5	16.1	27.1	14.1	19.3	26.3	29.6	22.5	24.8	15.5	28.3	15.8	16.4	12.0	13.2	11.9	22.8	20.7	17.4	18.7	16.7	17.7
Contract type	Indefinite duration	92.3	90.7	97.2	81.4	87.0	93.9	77.5	87.4	90.2	88.6	87.1	94.7	90.7	94.0	90.6	94.5	88.9	95.4	71.7	76.3	97.3		84.0	91.7
	Fixed term	7.5	9.3	2.8	18.6	7.7	6.1	22.5	12.5	7.9	11.2	12.6	5.3	8.0	6.0	8.6	5.5	10.2	4.0	28.3	23.7	2.7		16.0	7.2
	Trainee	0.2	0.0			5.3			0.1	1.8	0.2	0.3		1.3	0.0	0.8	0.0	0.9	0.6						
	N/A																						100.0		1.1
Full-time/Part-time	Full-time	76.4	88.3	94.3	94.4	67.0	84.3	79.7	87.5	80.1	92.0	97.4	87.5	86.1	80.3	84.9	69.1	48.9	67.8	92.8	92.9	97.4	73.7	92.5	71.5
	Part-time	23.6	11.7	5.7	5.6	33.0	15.7	20.3	12.5	19.9	8.0	2.6	12.5	13.9	19.7	15.1	30.9	51.1	32.2	7.2	7.1	2.6	26.3	7.5	28.5
Occupation	Managers	4.1	5.8	3.1	5.0	3.3	9.0	2.4	4.2	8.2	3.8	2.5	8.3	1.5	10.9	5.7	15.5	5.8	7.8	7.8	3.6	5.8	5.6	5.4	10.1
	Professionals	17.5	16.7	14.6	14.2	11.1	19.3	15.8	20.2	15.5	25.6	20.8	14.1	14.3	29.5	15.2	20.3	19.9	21.0	24.6	19.0	21.1	25.2	15.2	24.5
	Technicians	13.6	9.9	12.9	20.3	21.7	17.9	15.1	22.4	19.8	11.3	11.1	18.8	15.3	10.5	15.4	13.7	16.9	15.7	11.2	9.8	10.2	15.1	22.1	13.2
	Clerical support	16.6	9.3	17.2	8.3	16.6	6.2	12.6	8.9	15.8	15.8	13.4	8.6	23.4	4.4	13.8	6.4	11.6	8.9	9.3	12.2	7.4	8.0	7.0	12.1
	Service and sales	12.7	21.3	18.7	13.6	11.8	15.8	21.4	20.1	15.3	18.0	20.9	12.5	11.8	12.4	12.1	14.8	20.7	24.2	10.9	18.5	13.4	22.6	13.1	19.2
	Skilled agricultural		0.2	0.2	0.2	0.4	0.1	0.4	0.3	0.2	0.1	0.3	0.3	0.3	0.1	0.3	0.2	1.2	0.1	0.1	0.4	0.2	0.4	0.2	0.4
	Craft and related trade																								
	workers	11.7	12.4	11.3	15.5	15.0	11.8	11.9	8.9	7.4	7.1	12.2	14.0	14.8	13.7	16.1	9.1	8.9	9.7	15.3	12.9	15.9	8.5	14.2	6.0
Plant and machine operators	11.1	12.3	5.6	15.6	8.2	10.6	8.5	8.0	8.3	8.2	7.4	8.3	10.0	9.4	10.2	9.0	4.6	7.2	11.8	10.4	13.9	7.9	15.4	4.7	
Elementary occupations	12.8	12.2	16.5	7.1	11.9	9.2	12.1	6.9	9.6	10.3	11.3	12.5	8.7	9.0	11.3	10.9	9.9	5.3	9.0	13.2	12.1	6.7	7.5	9.8	

Source: SES data; wiiw calculations.

Table 3.1.3 / Sample shares (weighted), 2010, firm characteristics

		BE	BG	CY	CZ	DE	EE	ES	FI	FR	EL	HR	HU	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK	
NACE	10_14	0.1	1.1	0.2	0.9	0.3	1.0	0.2	0.2	0.1	0.7		0.3		0.2		0.5	0.1	2.4	2.0		1.7	0.2	0.6	0.2	
	15_16	3.1	4.5	4.1	3.4	3.0	2.7	2.7	1.8	2.3	3.8		2.7	2.4	3.8		3.3	1.6	2.3	4.7	3.4	4.3	1.5	2.3	1.6	
	17_19	1.1	6.0	0.4	1.1	0.6	2.6	0.9	0.3	0.6	1.2	3.9	1.5	3.2	2.4		1.7	0.2	0.2	2.0	6.1	5.7	0.2	2.1	0.3	
	20_22	0.9	1.1	1.1	1.5	1.3	2.9	0.8	2.4	0.7	0.6		0.9	1.7	1.9		2.8	0.4	0.9	1.8	1.2	1.3	1.7	1.1	0.5	
	23_25	3.9	2.1	1.0	3.0	2.0	1.4	1.8	1.8	2.3	2.1	2.7	2.5	3.2	1.3	1.9		1.3	0.9	3.1	1.4	2.1	1.5	2.6	1.2	
	26	1.1	1.1	1.0	1.3		0.6	1.0	0.8	0.6	1.0	1.0	0.8	1.5	0.7	1.0		0.3	0.5	1.4	1.6	0.9	0.5	1.1	0.4	
	27_28	3.5	2.9	1.5	4.6	4.3	2.1	2.5	2.4	2.0	1.7	5.1	2.4	4.3	1.0	3.9		1.3	1.6	3.4	2.7	2.7	2.5	3.7	1.3	
	29	1.5	1.3	0.1	2.9	4.5	0.7	0.9	2.5	1.0	0.4	1.2	1.4	3.6	0.4	1.0		1.0	0.9	1.5	0.7	1.2	2.0	2.2	0.8	
	30_33	1.8	1.9	0.4	4.4	4.0	2.6	1.1	3.6	2.0	0.8		3.7	2.3	1.3		1.2	1.1	1.5	2.5		2.1	2.2	4.3	1.3	
	34_35	2.4	0.7	0.1	4.0	3.3	0.8	1.6	0.8	2.0	0.2		1.6	2.5	0.2			0.5	1.2	2.3	1.2	3.7	2.2	3.3	1.3	
	36_37	1.3	2.0	1.0	2.7	1.3	2.0	1.4	0.9	1.4	0.9	1.6	1.9	3.5	2.7	0.3	1.8	2.3	0.9	3.1	1.8	2.6	1.0	2.2	0.8	
	40_41	1.1	2.2	0.9	1.1	1.0	1.5	0.6	0.9	1.1	1.8		2.0	1.0	2.0		2.0	0.4	0.8	2.3		3.0	0.8	2.1	0.9	
	45	5.6	7.0	11.6	6.8	4.6	6.5	8.4	5.0	5.2	4.9	11.3	5.6	5.2	7.4	12.8	6.0	4.7	7.9	5.7	8.2	7.6	5.1	5.5	3.6	
	50_51	7.3	8.3	9.3	6.6	8.4	6.7	7.7	4.9	6.0	11.6	8.6	7.6	5.3	8.5	6.2	7.2	7.3	6.9	7.0	6.9	6.9	5.3	7.1	5.5	
	52	7.0	10.3	10.3	7.1	6.4	8.4	10.0	6.5	6.3	9.5	11.3	8.2	6.3	9.2	6.4	11.6	9.4	10.0	7.5	9.3	5.9	5.3	7.7	9.6	
	55	2.2	5.0	10.5	3.4	2.8	2.9	7.4	3.0	3.1	8.3	5.7	3.1	3.9	2.7	4.0	3.3	4.3	3.8	1.7	5.2	2.1	2.5	2.2	5.1	
	60_62	6.2	5.4	4.6	5.7	4.8	6.1	4.6	3.7	6.0	4.0	5.3	5.5	3.6	7.1	10.7	8.5	3.9	5.3	4.7	4.3	5.2	4.0	6.2	3.2	
	63_64					1.3									4.6											
	65_67	6.0	6.0	9.1	4.1	5.4	4.0	5.8	3.6	6.2	6.2	3.9	4.2	4.2	3.2	21.3	4.3	5.4	4.1	5.3	6.2	5.3	3.4	4.0	6.8	
	70_74	17.4	10.0	9.8	11.7	15.0	13.7	14.7	15.0	15.5	11.8	7.0	12.4	14.4	10.3	17.4	12.4	18.9	15.5	9.0	13.9	9.1	14.6	12.2	16.0	
75		5.1	10.1	7.6		7.6	8.0	8.5	12.1	1.2	6.3	13.0		7.6		8.5	7.1		6.3		7.8	4.1	8.4	5.2		
80	6.6	7.4	6.6	6.7	7.8	12.1	5.1	8.6	5.9	16.4	13.1	9.4	11.3	13.8	1.1	13.5	7.0	9.0	13.5	12.4	9.6	11.0	10.2	16.4		
85	17.6	5.9	3.4	6.9	14.4	7.3	9.4	19.2	15.1	8.7	8.4	7.0	10.4	8.9	10.6	7.5	17.8	20.6	7.6	11.5	7.4	25.9	6.6	14.4		
90_93	2.3	2.8	2.7	2.5	3.4	3.8	3.4	3.7	2.6	2.2	3.7	2.2	1.4	3.1	1.5	3.9	3.7	2.9	1.6	2.0	1.8	2.4	2.5	3.4		
Size class	1-49	17.7	44.9		36.3	23.0	43.4	37.7	17.9	20.3	27.2	31.3	47.9	27.9	39.5		40.9	29.1	32.0	28.5	29.2	18.2	18.8	32.2	19.6	
	50-249	24.4	24.7		23.8	28.1		15.5	16.4	19.0	25.3	36.1	18.3	29.2	29.9		24.3	18.7	19.7	32.4	32.2	25.6	15.9	25.1	12.9	
	>250	57.3	27.9		39.9	48.9		32.0	65.7	60.7	47.5	32.7	33.8	42.7	30.7		34.8	52.1	48.3	39.1	38.6	56.2	65.3	42.7	67.3	
Public/Private	N/A	0.6	2.5	100.0			56.6	14.8						0.2	100.0										0.3	
	Public	10.2	24.9	20.9	24.6	15.1	30.6	18.2	39.4	31.2	27.5	40.7	35.3	24.3	36.4		38.7	32.7	31.8	37.4	19.2	34.5	41.7	29.9	28.5	
Pay agreement	Private	77.3	72.3	79.1	75.4	63.2	65.4	81.8	60.6	68.8	72.5	59.3	64.7	75.7	63.6		61.3	67.3	68.2	62.6	80.8	65.5	58.3	70.1	64.3	
	N/A	12.5	2.9		21.7	4.0										100.0									7.2	
	Enterprise	22.6	21.4	13.3	28.9	7.5	10.6	18.5	0.9	0.8	6.9	28.9	15.2		21.3		29.8			39.3	8.4	69.3		12.1	19.7	
	None		68.3	57.0	62.6	45.0	84.0	9.0	1.3	0.8	1.0	31.9	78.4	0.1	78.6	30.9	66.5		25.9	56.4	21.6	2.6		35.6	52.8	
National	Individual	63.7	10.3	29.7	8.5	47.5	4.0	72.5		76.2	40.0	32.5	3.9		0.1		3.7		41.7		30.2	8.8		52.2	24.4	
	National	13.7					1.3		97.8	9.4	41.2	0.8		99.9					32.3	4.2	28.7	18.6				
	N/A			0.1			0.1			12.8	10.8	5.9	2.5			69.1		100.0			11.1	0.7	100.0		3.0	

Source: SES data; wiiw calculations.

Concerning individual characteristics, the share of males is in most cases slightly larger than 50%, with notable exceptions being some of the Eastern European countries together with Finland and Sweden. With respect to age groups, the most important groups are those aged 20-29, 30-39 and 40-49 which together comprise about roughly 70% of the sample. Shares in the age group 50-59 range between around 20-25% with some exceptions whereas those with age 60+ have generally lower shares ranging from 2% but up to more than 10%. Workers aged 15-19 account for only very small shares of less than 1%. Workers with secondary education comprise the largest shares with respect to educational attainment levels.

As for job characteristics the study differentiates between duration (experience), contract type, full-time/part-time and occupations (ISCO-88 1-digit). Concerning the duration of stay in the firm the distribution is rather balanced with about 20 (but up to 30% in some countries) being employed less than one year (exceptions being Netherlands and Norway with much smaller shares). The share of workers staying 1-4 years is slightly higher on average (about 25%) though again shares vary between about 20 to 30% (a higher value for Netherlands is observed with a share of almost 40%). Shares for workers staying between 5-14 years are again somewhat higher on average with about 30%, though again accounting for much larger proportions in Netherlands and Norway with shares being almost up to 50%. Finally, the remaining share of workers with experience more than 14 years makes about 15 to 20% in most countries. With respect to contract type, the majority of workers report indefinite duration contracts which range from less than 80% (e.g. Spain, Netherlands, Poland, Portugal) to about 95% (e.g. Hungary, Romania). Fixed-term contracts are accordingly lower. The share of part-time workers shows quite a large range from more than 50% in the Netherlands (which however is quite outstanding) to less than 10%. Rather low shares are reported for Croatia and Romania with around 2%.

Concerning firm characteristics, the study considers size class of firms, public versus private ownership and pay agreement schemes (apart from the sectoral dimension). With respect to the first, the highest shares on average are found for larger firms (more than 250 employees). However, there are quite important country differences; this also applies for the other two size categories. Further, shares are also generally higher for private-owned firms with shares ranging from around 60% (e.g. Poland, Lithuania, Croatia, Sweden) up to around 80% (e.g. Portugal, Cyprus). Finally, concerning the characteristics with respect to pay agreement, large differences across countries are observed.

### 3.2 A SNAPSHOT ON METHODS USED

To study the determinants of earnings inequalities, the next section shows some descriptive statistics concerning mean and median income levels for the total sample and the respective subgroups. Further, this section also shows some commonly used indicators of inequality (e.g. the Gini coefficient, percentile ratios, etc.). That information reveals unconditional pay gaps. For analysing differences in the earnings structure of a particular dimension conditional on all other dimensions, earnings regressions (commonly referred to as Mincer regressions) need to be employed. These are then further used to calculate the contribution of each of the dimensions to the overall inequality as measured by the Gini coefficient. Here we provide a non-technical discussion of these methods; technical details are discussed in the appendix.

#### *Mincer regressions*

The primary objective of this task is to determine the quantitative impact of the indicators (e.g. age, gender, education, firm size, etc.) on the structure of earnings. Though a lot of information is provided by the descriptive analysis, these econometric results shed further light on the relative strength and importance of the various dimensions. Furthermore, the econometric analysis allows one to consider

conditional correlations between wages and the set of indicators, which is not possible in the descriptive analysis.

For each SES wave, regression models were estimated at the level of the Member State. The starting point is the estimation of a so-called 'Mincer equation' (Mincer, 1958), which is the baseline specification in estimating earnings. In the initial specification, the log of gross hourly earnings of a worker  $i$  at time  $t$  is regressed on a number of indicators using OLS with robust standard errors. As in the descriptive analysis, weights in the dataset have been used in order to make the sample representative for the whole working population. The basic equation to be estimated is of the following form:

$$\ln w_{it} = \mathbf{b}'_{it}\boldsymbol{\beta} + \mathbf{a}'_{j(i,t)}\boldsymbol{\delta} + \varepsilon_{it}$$

where  $w_{it}$  denotes the log of gross hourly earnings (including bonuses) of a worker  $i$  at time  $t$ ,  $\mathbf{b}'_{it}$  is a vector of individual characteristics, and  $\mathbf{a}'_{j(i,t)}$  denotes firm-specific variables.  $\boldsymbol{\beta}$  and  $\boldsymbol{\delta}$  are parameters to be estimated. Vector  $\mathbf{b}'_{it}$  contains information on the following individual characteristics: age (based on groups defined above), education (based on ISCED), occupation (based on ISCO 1-digit), employment contract type, gender, full-time/part-time and length of the service in the enterprise. The firm-specific variables used in  $\mathbf{a}'_{j(i,t)}$  include firm size, industry affiliation, regional location, information on economic and financial control and type of collective pay agreement covering at least 50% of the employees in the local unit. For all variables, subgroups identical to the ones described above were generated for each indicator. These subgroups are represented by dummies in the OLS estimation.

#### *Blinder-Oaxaca decomposition*

The Blinder-Oaxaca decomposition (Blinder, 1973; Oaxaca, 1973) has been extensively used in studies of wages to consider differences in wages by different groups (usually by gender or race). The method involves decomposing differences in mean log wages from wage regressions into an explained and an unexplained component. The explained component can be accounted for by observable differences in group characteristics, such as education and work experience, while the unexplained component cannot be explained by such observable characteristics. In much of the literature, the unexplained component has been used as a measure of discrimination, though this component also includes the effects of differences in unobserved predictors of wages.

#### *Shapley value approach*

Recently, the literature on inequality analysis has provided various decomposition methods which are based on regression results like the Shapley value approach as introduced by Shorrocks (1999) but also others (see Fields and Yoo, 2000; Morduch and Sicular, 2002; Fields, 2003; Wan, 2004; Gunatilaka and Chotikapanich, 2006; Molini and Wan, 2008) for such applications; see also Cowell and Fiorio (2009) for a critical review. The most important advantage of the Shapley value approach is that it takes the potential correlation amongst regressors into account and that it allows assessing the importance of a multitude of explanatories in shaping the situation of inequality. When having estimated a wage regression the average contribution of each characteristics to the overall Gini coefficient is calculated by first calculating the predicted values when including all combinations of one, two, etc. explanatory variables based on the coefficients of the complete specification. The marginal contribution of each characteristic is then calculated by building the sequence of differences of all combinations of elimination rounds. Shorrocks (1999) shows that averaging these marginal contributions of each variable over all rounds results in the total marginal effect of each variable which is then expressed relative to the Gini coefficient.

## 4 Descriptive results on earnings structures and inequality

### 4.1 MEAN AND MEDIAN EARNINGS

In this section we start reporting some general statistics on earnings and earning structures which are studied in much more depth in the next sections. Table 4.1.1 presents the mean and median income levels for all countries. Mean income levels (measured as hourly wages adjusted for PPPs) in 2010 range from around 5 euro (Romania, Latvia, Lithuania) to more than 15 euro in Ireland, Italy, Luxembourg, Netherlands, Finland and Norway. Mean hourly wages have been generally increasing since 2002; only in Ireland a drop in hourly wages in 2010 as compared to 2006 can be observed. This is similarly true when considering the median income levels which are generally lower indicating that the distribution of income levels is skewed to the right. However the ratio of the mean to median income was relatively stable on average though changes across countries are heterogeneous. The ratio was decreasing (suggesting less income inequality) in about half of the countries and increasing (suggesting more inequality) otherwise. Changes overall inequality are however dealt with in more detail in Section 4.3.

**Table 4.1.1 / Mean and median income levels, 2002 – 2010**

	Mean			Median		
	2002	2006	2010	2002	2006	2010
Luxembourg	16.1	17.9	18.3	12.9	13.9	14.2
Norway	14.6	16.8	18.2	12.8	14.8	16.3
Belgium	19.2	17.5	17.8	16.7	14.8	15.4
Germany		17.8	17.6		15.7	15.2
Netherlands	17.3	15.5	17.6	15.6	13.4	15.6
United Kingdom	15.8	18.3	17.3	11.9	13.8	12.9
France	16.0	16.8	16.5	12.5	14.3	13.9
Italy	10.9	14.3	16.0	9.2	11.5	13.0
Finland	12.0	13.7	15.6	10.8	12.1	13.7
Sweden	12.4	13.3	14.4	10.7	11.6	12.7
Greece	11.1	12.2	13.7	8.7	9.8	11.4
Spain	12.3	12.6	13.4	9.4	10.0	10.9
Cyprus	9.5	12.0	13.3	8.0	9.5	10.0
Portugal	7.2	10.0	10.6	5.0	6.7	6.9
Poland	6.3	7.5	10.0	4.8	5.7	7.7
Croatia			9.3			7.2
Czech Republic	6.5	7.8	7.9	5.6	6.6	6.7
Hungary	4.8	6.7	7.7	3.7	5.1	5.7
Slovak Republic	5.7	6.2	7.5	4.6	4.9	6.1
Estonia	4.2	5.8	7.0	3.2	4.7	5.8
Lithuania	4.1	5.5	5.9	3.1	4.2	4.6
Latvia	3.3	5.0	5.7	2.0	3.5	4.2
Romania	3.1	4.0	5.3	2.3	2.9	3.8
Bulgaria	2.4	2.8	4.5	2.0	1.9	3.1

Note: Hourly wages, PPP adjusted; Ranked according to mean in 2010.

Source: SES data; wiiw calculations.

## 4.2 UNCONDITIONAL EARNING STRUCTURES

Hidden behind these mean income levels there are significant differences of earnings across groups of workers. As already done above, the data can be differentiated by several dimensions which are distinguished between individual characteristics, job characteristics and firm characteristics. Tables 4.2.1 to 4.2.3 present the mean earnings per hour worked relative to a reference group (which is then also used in the econometrics part reported in Section 5)<sup>1</sup>. It is important to note that in this exercise the earnings present unconditional means, i.e. does not take into account that earnings might differ across groups of the workforce, e.g. male-female, because differences in educational attainment levels across these groups which is taken into account in the econometrics when estimating earnings regressions. Nonetheless, such an unconditional consideration of wage gaps is informative as it shows actual wage gaps e.g. taking into account that some persons do not get into particular jobs (e.g. females with the same formal level of education are less likely to become managers).

Starting first with the individual characteristics as indicated in Table 4.2.1 one finds that on average females earn about 10-20% less than male on average. In some countries the wage gaps are even higher with e.g. 25% in Germany, Estonia and the UK. A relatively small gap is found for Croatia (with basically no wage gap) and Poland. With respect to age one finds a clear wage ranking as such that older workers earn higher wages with however relatively large cross-country differences observed with respect to the overall magnitudes. For example, in some countries the ratio goes up to more than 3 (for workers aged 50-59) whereas in some countries it remains less than 2. This is similarly the case with respect to educational attainment levels.

Second, there is a considerable wage gap between those having an indefinite duration contract as compared to those with a fixed duration contract with the latter earning about 20-30% less though again there exist considerable cross-country differences. Similarly, part-time workers earn on average 20-25% less per hour than full-time workers. Here again the range across countries is quite large; e.g. the ratio is 0.66 in Bulgaria and the UK, 0.57 in Cyprus but around 1 or above in Hungary, Poland, and Luxembourg with Croatia even reporting a ratio of above 1). There is also a pronounced wage hierarchy with respect to occupations which tends to be relatively similar across countries though wage differences are more pronounced for the Eastern European countries together with Italy and Germany.

Finally, third, firm characteristics also play an important role for wage differences. Surprisingly, hourly earnings in most industries are lower than in the reference group comprising the mining industries which might be explained by hard working conditions, job qualifications needed and unionisation. In some cases wages are higher in another energy related industry (NACE Rev. 1 40-41). Relatively lower gaps are also observed for financial and business services sectors (NACE Rev. 1 65-67 and 70-74). However, again countries are quite heterogeneous in that respect.

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<sup>1</sup> The unconditional gaps are reported only if the respective reference group is available. Underlying data on mean income levels are reported in the Appendix Tables.

**Table 4.2.1 / Structure of earnings: Individual characteristics, reference group = 1, 2010**

		BE	BG	CY	CZ	DE	EE	ES	FI	FR	EL	HR	HU	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
Gender	Male	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	Female	0.89	0.87	0.83	0.80	0.75	0.76	0.84	0.79	0.83	0.84	1.01	0.88	0.92	0.90	0.91	0.88	0.82	0.82	0.94	0.86	0.92	0.83	0.80	0.73
Age	14-19	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	20-29	1.38	1.55	1.54	1.49	2.25	1.66	1.20	1.28	2.32	1.22	1.67	1.43	1.18	1.59	2.11	1.71	2.13	1.46	1.53	1.31	1.71	1.22	1.46	1.77
	30-39	1.72	1.84	2.29	1.89	3.47	2.02	1.55	1.65	2.96	1.61	2.09	1.80	1.51	1.84	2.95	1.98	3.22	1.91	2.12	1.83	2.00	1.52	1.79	2.63
	40-49	1.93	1.85	2.60	1.87	3.84	1.81	1.70	1.74	3.24	1.95	2.09	1.77	1.78	1.70	3.43	1.77	3.54	2.08	2.17	2.17	1.99	1.64	1.68	2.70
	50-59	2.11	1.80	2.89	1.80	3.86	1.59	1.87	1.70	3.46	2.26	2.12	1.78	2.06	1.70	3.50	1.66	3.65	2.06	1.99	2.44	2.12	1.59	1.62	2.57
	60+	2.24	1.63	2.45	1.95	3.73	1.44	2.18	1.71	4.49	2.60	2.75	2.20	2.58	1.78	4.30	1.75	3.50	1.97	2.46	2.41	2.50	1.56	1.76	2.17
Education	Primary	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00
	Lower secondary	1.06	1.07	1.03	1.02		1.20	1.03		1.11	0.98	1.04	0.98	1.05	1.26	1.05	0.86	1.07	0.94	0.88	1.16	1.05	1.05		1.31
	Upper and post-secondary	1.15	1.23	1.10	1.36		1.43	1.22	1.01	1.18	1.08	1.38	1.35	1.43	1.41	1.40	0.99	1.40	1.15	1.20	1.58	1.42	1.12		1.44
	Short-cycle secondary	2.25	2.59	2.30	2.53		2.46	1.84	1.49	1.85	1.66	2.78	2.80	2.20	2.77	2.59	1.82	2.18	1.70	2.54	3.01	3.18	1.45		2.17
	Bachelor and Master	1.55	1.65	1.56	1.68		1.99	1.38	1.21	1.42	1.22	2.43	1.67	1.79	1.75	2.06	1.31	2.01	1.44	1.91	2.81	2.38	1.18		1.90
	Doctoral	2.87	3.53	3.63	2.23		3.77	2.08	2.13	2.41	2.08	3.80		2.95	4.18	3.10	2.74	3.18	1.85	2.70	4.91	4.25	1.31		2.51

Source: SES data; wiiw calculations

**Table 4.2.2 / Structure of earnings: Job characteristics, reference group = 1, 2010**

		BE	BG	CY	CZ	DE	EE	ES	FI	FR	EL	HR	HU	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
Job duration	0-1 year	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	1-4 years	1.12	1.25	1.16	1.21	1.27	1.10	1.17	1.15	1.10	1.09	1.32	1.31	1.11	1.17	1.28	1.21	3.65	1.10	1.13	1.14	1.17	1.12	1.16	1.19
	5-14 years	1.28	1.44	1.65	1.36	1.61	1.22	1.33	1.26	1.21	1.31	1.39	1.41	1.24	1.34	1.50	1.34	5.72	1.11	1.40	1.32	1.33	1.18	1.28	1.38
	more than 14 years	1.48	1.64	2.25	1.55	1.95	1.29	1.83	1.29	1.42	1.72	1.43	1.60	1.61	1.51	1.85	1.50	5.93	1.23	1.52	1.72	1.58	1.13	1.37	1.51
Contract type	Indefinite duration	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	Fixed term	0.74	0.76	0.88	0.75	0.73	1.05	0.82	0.82	0.80	0.85	0.64	0.78	0.86	1.03	0.62	1.00	0.61	0.87	0.63	0.68	0.89		0.82	0.82
	Trainee	0.45	0.56			0.24			0.62	0.48	0.44	0.74		0.57		0.24	0.46	0.13	0.70						
Full-time/Part-time	Full-time	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	Part-time	0.80	0.66	0.57	0.83	0.76	0.78	0.81	0.84	0.87	0.75	1.16	0.99	0.71	0.80	1.00	0.74	0.77	0.76	1.01	0.85	0.75	0.82	0.84	0.66
Occupation	Managers	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	Professionals	0.69	0.67	0.57	0.63	0.65	0.81	0.67	0.65	0.72	0.71	0.65	0.79	0.62	0.79	0.58	0.96	0.81	0.74	0.74	0.61	0.55	0.66	0.58	0.81
	Technicians	0.53	0.57	0.43	0.52	0.54	0.63	0.52	0.51	0.57	0.55	0.46	0.56	0.41	0.59	0.48	0.80	0.65	0.74	0.49	0.44	0.40	0.64	0.51	0.58
	Clerical support	0.44	0.38	0.27	0.40	0.35	0.49	0.39	0.41	0.42	0.47	0.41	0.45	0.34	0.48	0.38	0.63	0.52	0.53	0.40	0.30	0.33	0.48	0.39	0.40
	Service and sales	0.37	0.26	0.22	0.29	0.29	0.36	0.34	0.37	0.41	0.39	0.30	0.33	0.27	0.37	0.26	0.46	0.41	0.48	0.28	0.21	0.20	0.46	0.30	0.35
	Skilled agricultural		0.25	0.22	0.29	0.28	0.45	0.35	0.34	0.34	0.37	0.28	0.30	0.25	0.34	0.25	0.49	0.39	0.48	0.28	0.18	0.19	0.43	0.26	0.35
	Craft and related trade workers	0.40	0.39	0.28	0.37	0.38	0.52	0.39	0.46	0.44	0.52	0.29	0.39	0.27	0.47	0.27	0.58	0.50	0.57	0.36	0.22	0.31	0.53	0.37	0.46
	Plant and machine operators	0.41	0.37	0.25	0.36	0.36	0.48	0.40	0.47	0.44	0.51	0.32	0.41	0.30	0.49	0.28	0.62	0.47	0.55	0.39	0.21	0.32	0.52	0.36	0.38
Elementary occupations	0.33	0.26	0.21	0.28	0.24	0.32	0.30	0.34	0.35	0.37	0.24	0.28	0.25	0.32	0.23	0.43	0.33	0.45	0.28	0.18	0.19	0.42	0.26	0.30	

Source: SES data; wiiw calculations

Table 4.2.3 / Structure of earnings: Firm characteristics, reference group = 1, 2010

		BE	BG	CY	CZ	DE	EE	ES	FI	FR	EL	HR	HU	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK	
NACE	10_14	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00		1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	
	15_16	0.93	0.55	0.73	0.64	0.64	0.65	0.78	0.92	0.90	0.68		0.76		0.77		0.78	0.51	0.54	0.53		0.40	0.78	0.80	0.50	
	17_19	0.85	0.39	0.51	0.51	0.73	0.51	0.64	0.76	0.88	0.58		0.55		0.60		0.57	0.50	0.51	0.36		0.32	0.76	0.59	0.45	
	20_22	0.90	0.43	0.78	0.60	0.82	0.70	0.82	1.00	0.96	0.64		0.77		0.70		0.74	0.53	0.54	0.49		0.35	0.84	0.85	0.49	
	23_25	1.21	0.63	0.90	0.76	1.23	0.79	1.09	1.04	1.15	0.93		1.24		1.20			0.71	0.70	0.66		0.59	1.00	1.01	0.59	
	26	0.95	0.69	0.97	0.80		0.91	0.90	0.91	0.97	0.80		0.96		0.86			0.55	0.60	0.59		0.55	0.82	1.04	0.54	
	27_28	0.99	0.62	0.81	0.74	0.85	0.80	0.92	0.93	0.98	0.69		0.87		0.84			0.52	0.61	0.57		0.52	0.83	1.03	0.52	
	29	1.00	0.69	0.80	0.77	1.05	0.88	0.96	1.03	1.03	0.58		0.95		0.93			0.59	0.69	0.61		0.52	0.88	0.97	0.61	
	30_33	1.11	0.68	0.81	0.77	1.05	0.79	0.95	1.17	1.09	0.69		0.92		0.98		1.01	0.62	0.68	0.64		0.54	1.01	0.89	0.63	
	34_35	1.00	0.64	0.86	0.87	1.21	0.80	1.13	0.92	1.14	0.75		1.02		0.95			0.57	0.69	0.63		0.59	0.91	0.85	0.67	
	36_37	0.87	0.44	0.83	0.62	0.75	0.66	0.79	0.80	0.88	0.60		0.75		0.71		0.77	0.42	0.56	0.53		0.36	0.82	0.79	0.49	
	40_41	1.51	1.11	1.45	1.19	1.30	0.99	1.30	1.09	1.34	1.04		1.35		1.14		0.99	0.70	0.71	0.81		0.80	0.98	1.29	0.74	
	45	0.88	0.59	0.89	0.71	0.70	0.79	0.78	0.93	0.98	0.66		0.69		0.70		0.80	0.53	0.58	0.56		0.46	0.86	0.85	0.57	
	50_51	1.03	0.63	0.89	0.83	0.82	0.85	0.83	1.01	1.08	0.67		0.91		0.84		0.97	0.52	0.64	0.68		0.58	0.93	1.06	0.58	
	52	0.80	0.42	0.65	0.57	0.58	0.53	0.62	0.71	0.81	0.52		0.68		0.62		0.63	0.32	0.44	0.44		0.40	0.74	0.72	0.36	
	55	0.69	0.39	0.66	0.42	0.44	0.50	0.63	0.66	0.74	0.54		0.60		0.48		0.60	0.28	0.41	0.47		0.32	0.64	0.58	0.30	
	60_62	0.98	0.68	1.26	0.74	0.69	0.80	0.95	0.93	0.93	0.79		0.99		0.76		0.99	0.52	0.61	0.58		0.59	0.79	0.87	0.56	
	63_64					0.68																				
	65_67	1.31	0.79	1.42	1.03	1.16	0.97	1.18	1.13	1.31	1.01		1.56		1.15		1.47	0.69	0.80	0.80		0.80	1.19	1.28	0.96	
	70_74	0.97	0.85	1.09	0.89	0.82	0.82	0.82	0.96	1.09	0.74		1.01		0.93		1.02	0.49	0.66	0.78		0.71	0.89	1.08	0.63	
	75		0.85	1.34	0.87		0.92	1.03	0.95	0.84	0.64		0.99		1.10		1.13	0.65		0.78		0.51	0.85	0.95	0.59	
	80	1.45	0.70	1.94	0.80	0.79	0.71	1.10	0.96	1.07	0.90		0.95		0.98		0.88	0.65	0.59	0.96		0.52	0.73	0.83	0.59	
	85	0.92	0.71	1.03	0.78	0.76	0.80	1.01	0.80	0.85	0.69		0.78		0.87		0.86	0.53	0.56	0.63		0.48	0.74	0.90	0.55	
	90_93	0.91	0.53	0.79	0.63	0.74	0.61	0.72	0.78	0.94	0.61		0.80		0.66		0.73	0.47	0.55	0.55		0.36	0.78	0.79	0.50	
	Size class	1-49	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		50-249	1.11	1.27		1.25	1.13		1.25	1.07	0.97	0.99	0.92	1.28	1.40	1.32	1.34	1.21	1.12	1.18	1.43	1.32	1.06	1.05	1.22	
		>250	1.23	1.75		1.43	1.44		1.39	1.04	1.09	1.14	0.95	1.49	1.41	1.44	1.43	1.29	1.10	1.21	1.58	1.68	1.02	1.12	1.26	
Public/Private	N/A	1.30	1.64				1.22	1.35					1.04												1.30	
	Public	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
	Private	0.69	0.81	0.57	0.89	0.98	0.92	0.75	1.11	1.11	0.79	0.90	0.92	0.66	0.81	0.87	0.85	0.99	0.74	0.57	0.93	1.13	1.04	0.92		
Pay agreement	N/A	0.92	0.64			0.92	1.22																		0.92	
	Enterprise	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
	None		0.79	0.75	0.81	0.80	0.85	1.00	1.15	0.87	1.04	1.16	0.74		0.82		0.91			1.01	0.80	0.74		0.93	1.09	
	Individual	0.89	0.88	1.32	0.80	1.00	0.91	0.76		0.77	0.89	1.00	1.09		0.98		1.13				0.44	1.04		0.94	1.15	
	National	1.15					1.00		0.91	0.85	1.00	1.10								1.25	0.42	1.07				
N/A			1.69			2.11			0.65	1.05	1.10	0.80								0.48	1.35			0.99		

Source: SES data; wiiw calculations

Results also indicate that larger firms pay higher wages on average with the wage of firms with more than 250 employees as compared to those with less than 50 goes up to 50% and even higher in some countries (e.g. Bulgaria and Romania). In other countries these gaps are relatively low as e.g. in Finland, France and Norway. Public owned firms pay on average 20% higher wages than private ones with again large differences across countries are being observed. For example, in Finland, Sweden and France the latter pay about 10% higher wages. Finally, there are also significant wage gaps with respect to pay agreement schemes with enterprise level bargaining resulting in relatively highest wages.

As mentioned above, these unconditional means may hide substantial differences with respect to other characteristics of the workers which are not considered along these single dimensions. The conditional wage gaps are therefore studied in detail in Section 5.

### 4.3 INEQUALITY IN EARNINGS

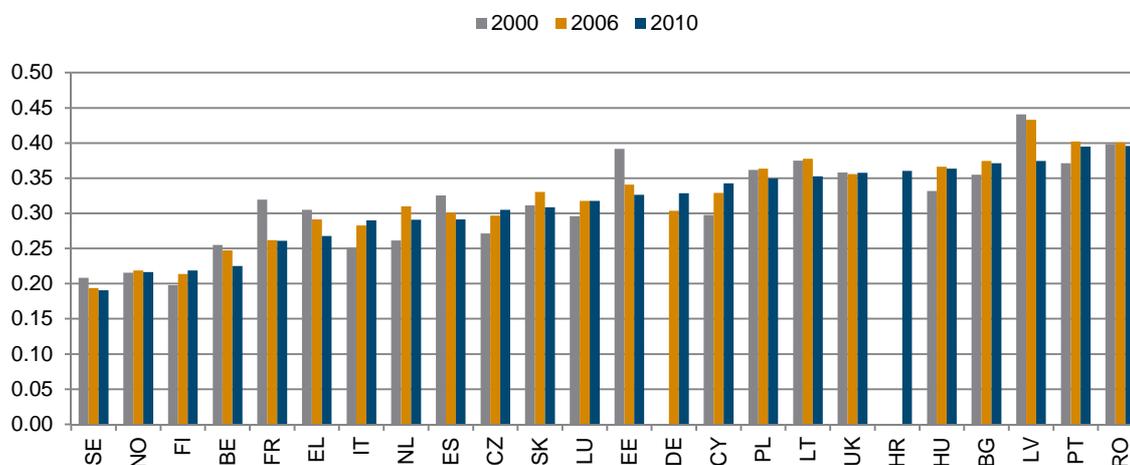
Based on the SES data, an initial analysis highlights similarities and differences in earnings structures between and within Member States, as well as developments over time. For a first assessment of income and earnings differences across the various dimensions, the following standard indicators have been looked at for each country and country group: (i) mean and median, (ii) standard deviation, (iii) percentile distributions (P90/P10, P90/50 and P50/P10), (iv) Gini coefficient, (v) Theil index and (vi) mean logarithmic deviation. These indicators are reported in Table 4.3.1 whereas Figure 4.3.1 presents the evolution of the Gini index by country.

The Gini inequality ranges from 0.2 in countries such as Finland, Sweden and Norway to about 0.4 in Romania, Latvia, Croatia and Turkey. Trends across countries are heterogeneous: inequality is decreasing, for example, in Latvia, Estonia, Lithuania, Spain and Greece whereas increasing in Italy, Luxembourg, the Czech Republic and Cyprus. Thus neither can a common trend be observed across countries, nor can a particular impact of the crisis on inequality in 2010 be detected.

Similar conclusions have to be drawn from the other indicators listed above and reported in the following Tables 4.3.1 to 4.3.3. Though the levels of indicators are (by definition) different, the overall trends are similar. This is also indicated by a high correlation and rank correlation of 0.9 and above across these indicators. Again it holds, that, first, in countries with an increasing Gini one also finds that the other inequality measures tend to increase and, second, that there has been no significant impact of the crisis on these earnings inequalities.

The overall trends in inequality also hold when considering percentile income levels (Table 4.3.2) and the respective ratios (Table 4.3.3). In the latter case the levels are interesting as e.g. the P90/P10 ratio, i.e. income of the 9th percentile relative to the 1st percentile, ranges from about 2 in Sweden (i.e. income in the 9th percentile is two times larger as in the 1st) to almost 5 in Portugal and Romania. Second, the P90/P50 ratio compared to the P50/P90 ratio is larger in almost all cases indicating again that the income distribution is skewed to the right (as already indicated by the fact that the mean income is larger than the median income).

Figure 4.3.1 / Inequality as measured by Gini index



Note: Ranked by Gini coefficient in 2010; Source: SES data; wiiw calculations.

Table 4.3.1 / Inequality measures

	Standard deviation			Theil index			Mean logarithmic deviation		
	2002	2006	2010	2002	2006	2010	2002	2006	2010
Sweden	6.97	7.90	7.59	0.09	0.09	0.08	0.07	0.07	0.06
Finland	5.04	6.33	7.49	0.07	0.08	0.09	0.06	0.07	0.08
Norway	6.98	9.57	10.60	0.09	0.10	0.10	0.08	0.08	0.08
Belgium	11.53	10.10	8.58	0.12	0.12	0.09	0.11	0.10	0.08
France	17.74	11.65	15.87	0.22	0.14	0.15	0.17	0.11	0.11
Greece	7.75	8.62	8.30	0.17	0.16	0.13	0.15	0.14	0.11
Spain	9.61	8.79	8.72	0.20	0.17	0.15	0.17	0.14	0.13
Italy	6.36	8.56	10.83	0.12	0.14	0.16	0.10	0.13	0.14
Netherlands	9.71	14.67	11.23	0.12	0.21	0.15	0.12	0.18	0.15
Czech Republic	5.34	6.85	6.67	0.16	0.19	0.19	0.13	0.15	0.16
Slovak Republic	5.82	6.61	6.57	0.22	0.24	0.20	0.16	0.18	0.16
Luxembourg	10.51	14.08	14.40	0.16	0.19	0.19	0.14	0.16	0.16
Estonia	4.02	4.48	5.35	0.28	0.21	0.19	0.25	0.19	0.17
Cyprus	6.21	8.59	10.18	0.16	0.19	0.21	0.14	0.17	0.19
Germany		12.08	12.89		0.17	0.19		0.16	0.19
Poland	6.32	6.64	8.62	0.25	0.24	0.22	0.21	0.21	0.20
Lithuania	3.74	5.53	4.78	0.26	0.27	0.22	0.23	0.23	0.20
United Kingdom	17.68	20.17	26.15	0.27	0.26	0.27	0.21	0.21	0.21
Hungary	4.42	6.38	7.59	0.23	0.26	0.26	0.18	0.22	0.21
Bulgaria	2.05	3.02	4.41	0.23	0.28	0.27	0.21	0.22	0.22
Latvia	4.02	6.13	5.48	0.38	0.36	0.27	0.32	0.31	0.23
Croatia			34.35			0.41			0.23
Portugal	7.70	11.57	12.71	0.29	0.31	0.30	0.22	0.26	0.25
Romania	3.21	4.08	5.60	0.30	0.30	0.30	0.26	0.26	0.25

Note: Sorted according to Mean logarithmic deviation in 2010; Source: SES data; wiiw calculations.

**Table 4.3.2 / Percentile income levels**

	p10			p50			p90		
	2002	2006	2010	2002	2006	2010	2002	2006	2010
Bulgaria	0.9	1.2	1.9	2.0	1.9	3.1	4.4	5.2	8.0
Romania	1.0	1.3	2.0	2.3	2.9	3.8	5.7	7.5	9.8
Latvia	1.2	1.4	2.3	2.0	3.5	4.2	6.5	9.6	10.4
Lithuania	1.5	1.9	2.3	3.1	4.2	4.6	7.4	9.9	10.7
Estonia	1.3	2.2	2.7	3.2	4.7	5.8	7.8	10.2	12.0
Slovak Republic	2.7	2.8	3.5	4.6	4.9	6.1	9.0	10.0	12.1
Czech Republic	3.3	3.7	3.5	5.6	6.6	6.7	9.8	12.2	12.6
Hungary	2.2	2.5	3.3	3.7	5.1	5.7	8.1	11.9	13.7
Croatia			3.8			7.2			14.4
Poland	2.4	2.7	3.9	4.8	5.7	7.7	12.0	14.3	18.7
Sweden	8.1	9.0	9.7	10.7	11.6	12.7	18.3	18.6	20.0
Portugal	3.1	3.7	4.2	5.0	6.7	6.9	13.0	20.4	21.1
Greece	5.5	6.2	7.3	8.7	9.8	11.4	19.4	20.5	21.8
Spain	5.7	6.2	6.6	9.4	10.0	10.9	21.4	21.7	23.1
Finland	7.7	8.6	9.6	10.8	12.1	13.7	17.6	20.7	23.4
Cyprus	4.4	5.1	5.7	8.0	9.5	10.0	16.2	22.4	25.5
France	7.9	9.1	9.2	12.5	14.3	13.9	26.2	25.9	25.5
Norway	9.2	10.4	11.2	12.8	14.8	16.3	21.9	24.6	26.4
Italy	6.2	7.4	8.3	9.2	11.5	13.0	17.0	24.9	27.1
Belgium	10.3	10.1	10.7	16.7	14.8	15.4	30.2	27.4	27.2
Netherlands	8.8	7.0	8.2	15.6	13.4	15.6	27.2	24.6	28.6
United Kingdom	6.5	7.6	7.2	11.9	13.8	12.9	27.3	31.6	29.6
Germany		7.5	6.8		15.7	15.2		29.5	30.5
Luxembourg	7.7	8.4	8.6	12.9	13.9	14.2	27.8	30.7	31.2

Note: Sorted according to p90 in 2010; Source: SES data; wiiw calculations.

**Table 4.3.3 / Percentile ratios**

	p90/p10			p50/p10			p90/p50		
	2002	2006	2010	2002	2006	2010	2002	2006	2010
Sweden	2.26	2.08	2.06	1.32	1.30	1.31	1.71	1.60	1.58
Norway	2.39	2.36	2.36	1.39	1.42	1.45	1.72	1.66	1.63
Finland	2.29	2.41	2.43	1.41	1.41	1.42	1.63	1.71	1.72
Belgium	2.93	2.70	2.55	1.62	1.46	1.44	1.81	1.85	1.77
France	3.32	2.83	2.77	1.58	1.57	1.51	2.10	1.80	1.83
Netherlands	3.07	3.53	3.47	1.76	1.92	1.89	1.75	1.84	1.84
Czech Republic	2.94	3.29	3.60	1.69	1.78	1.91	1.74	1.85	1.88
Greece	3.51	3.29	2.97	1.58	1.57	1.55	2.22	2.09	1.92
Slovak Republic	3.38	3.60	3.49	1.73	1.76	1.78	1.96	2.05	1.96
Croatia			3.75			1.87			2.01
Germany		3.95	4.48		2.09	2.23		1.89	2.01
Estonia	5.91	4.74	4.37	2.43	2.19	2.11	2.43	2.16	2.07
Italy	2.74	3.37	3.26	1.48	1.55	1.57	1.84	2.17	2.07
Spain	3.75	3.47	3.48	1.65	1.61	1.64	2.27	2.16	2.12
Luxembourg	3.59	3.65	3.65	1.66	1.66	1.66	2.16	2.20	2.20
United Kingdom	4.18	4.13	4.12	1.81	1.80	1.79	2.30	2.29	2.30
Lithuania	5.00	5.16	4.59	2.08	2.15	1.95	2.41	2.40	2.36
Hungary	3.70	4.70	4.17	1.70	1.99	1.74	2.18	2.36	2.40
Poland	5.01	5.31	4.86	2.01	2.11	2.01	2.49	2.52	2.42
Latvia	5.58	6.71	4.50	1.73	2.44	1.81	3.23	2.75	2.49
Cyprus	3.66	4.39	4.49	1.80	1.86	1.77	2.03	2.36	2.53
Romania	5.96	5.99	5.00	2.39	2.33	1.94	2.49	2.57	2.57
Bulgaria	5.08	4.23	4.13	2.33	1.56	1.61	2.18	2.72	2.57
Portugal	4.21	5.51	4.98	1.62	1.80	1.62	2.61	3.06	3.06

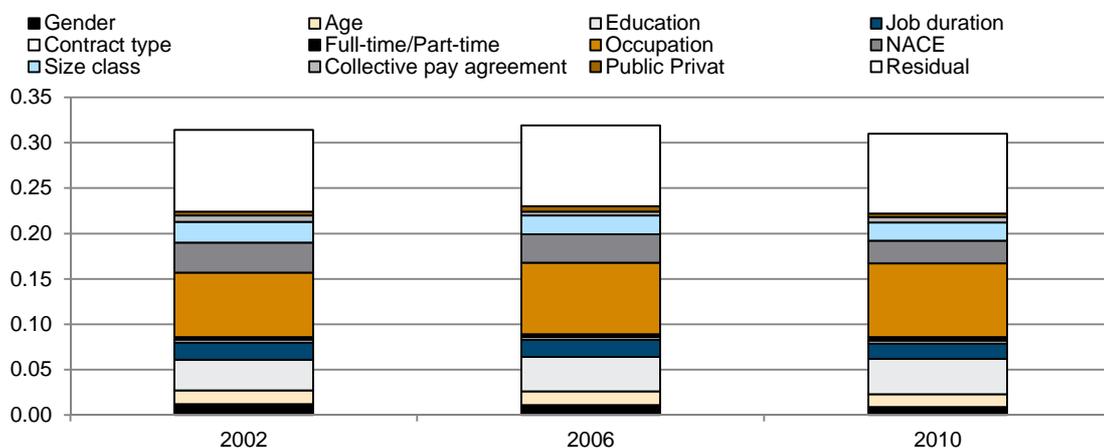
Note: Sorted according to p90/p50 in 2010; Source: SES data; wiiw calculations.

#### 4.4 CONTRIBUTIONS TO INEQUALITY

We start to report results from the Shapley value decomposition which allows us to assess the relative importance of the various characteristics for earning inequalities. As described above, the Shapley value approach allows for the calculation of the contribution of each of the explanatory variables to a respective inequality measure – in our case the Gini index. For individuals, predicted incomes are calculated for all combinations of explanatory variables using the coefficients from the country-level regressions. Drawing on those predicted incomes, Gini coefficients are calculated for all variable combinations. Thus we can detect the effect of the individual variables on changes in the inequality measure.

We begin here with a description of the decomposition results based on the anonymised version of the SES dataset for the years 2002, 2006 and 2010 for the average of all countries (see Figure 4.4.1). For this we calculated the unweighted mean of the contributions of individual variables over all available countries for all three years (excluding Germany and Croatia, where data are missing in 2002 for the former and 2002 and 2006 for the latter). The Shapley value decomposition explains on average 72% of the variation of individual hourly wages including bonuses in all three years, with the remaining residual being unexplained by the set of explanatory variables. As can be seen in Figure 4.4.1, we grouped the variables according to individual characteristics (in shades of blue), job characteristics (in shades of red/yellow) and enterprise/sector characteristics (in shades of green). It should be stated at the outset that a high or low relative importance of an individual variable obviously does not mean that the characteristic is of more or less policy relevance. Although the mean Gini index over all countries available in the anonymised dataset remained stable over the years, the relative importance of individual factors driving inequality changed over time. On average, individual characteristics accounted for 20.4% of the measured wage differences in the three years. As expected, the educational attainment of employees is the most important individual characteristic explaining conditional wage differences and is increasing over time from 10.8% in 2002 to 12.6% in 2010. Differences between age groups account for about 5% of the Gini index, while conditional wage differences between males and females declined somewhat over the 8-year period on average. In 2002, 4.2% of the mean Gini index could be explained by gender differences, while in 2010 this dropped to 2.9%.

**Figure 4.4.1 / Contribution of explanatory variables to Gini index**



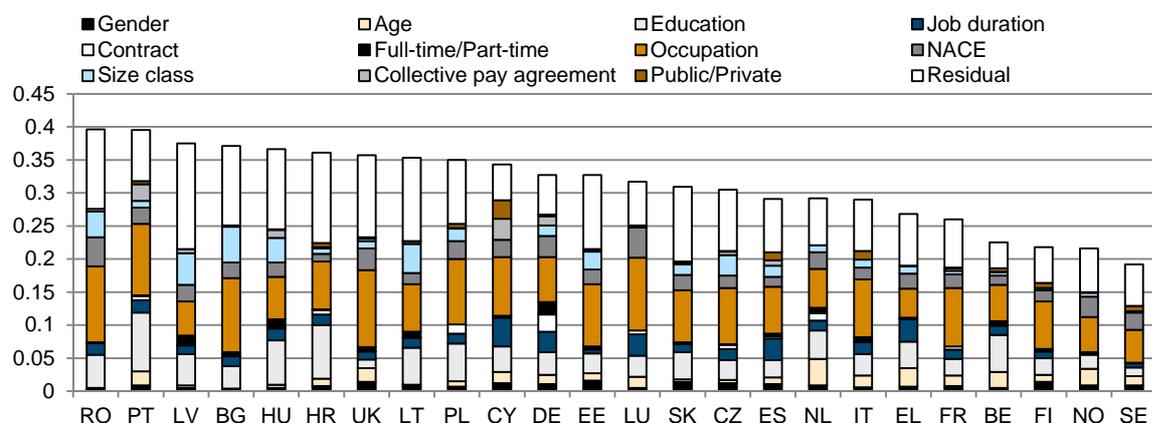
Note: Unweighted mean over available countries in individual years; Source: SES; wiiw calculations.

The most important characteristic in explaining wage inequality is occupation, which explains, on average, about 24.9% of the Gini index. This result was expected as wage structures of firms are in general shaped by differences between occupational categories. The second most important of the group of job characteristics is the length of service of individual employees in the enterprise, which accounts for 5.9% of the total Gini index. Differences between full- and part-time employed and between types of employment contracts (indefinite duration, temporary/fixed duration or apprentice) both account for only about 1% of the average observed inequality. However, the importance of differences between full- and part-time employees, which had declined before the crisis, rose from 0.8% in 2006 to 1.2% in 2010.

Enterprise characteristics account for 20.3% on average of the Gini index in 2002 but their importance declines to 17.4% in 2010. The second most important characteristic is the NACE sector of firms, which accounts for 10.2% of the average Gini index in 2002. However, conditional wage differences between industries fall to 8.2% in 2010. A similar development can be observed in the case of the size classes of enterprises. In 2002 differences between larger and smaller enterprises explain 6.6% of overall wage inequality, while in 2010 this falls to 6.1% on average. Conditional wage differences between public and private companies and between enterprise units that are non-covered or covered by different types of collective pay agreements both account for about 1.6% of total inequality on average in the period analysed.

These general patterns also hold broadly across all countries considered as indicated in Figure 4.4.2 though there are also some distinct differences. For example, education has a much larger contribution to inequality in Portugal and Croatia. Age contributes relatively strongly to inequality in the Netherlands, Belgium and Greece. Job duration is relatively important as an explanatory factor in Cyprus, Germany, Luxembourg, Spain and Greece. Also the size class of firms contributes differently across countries and is relatively important in Latvia, Bulgaria, Lithuania and Hungary. The occupational categories however are in all countries the most important factor to explain overall inequality levels though again the contributions range from less than 20% (as in the case of Latvia and Hungary) to more than 30% (in Luxembourg, France and Finland).

**Figure 4.4.2 / Contributions to Gini index (2010)**



Source: SES; wiiw calculations.

In the next section the contributions of these factors to the overall inequality and their changes over time are discussed in more detail alongside the results of the Mincer regressions.

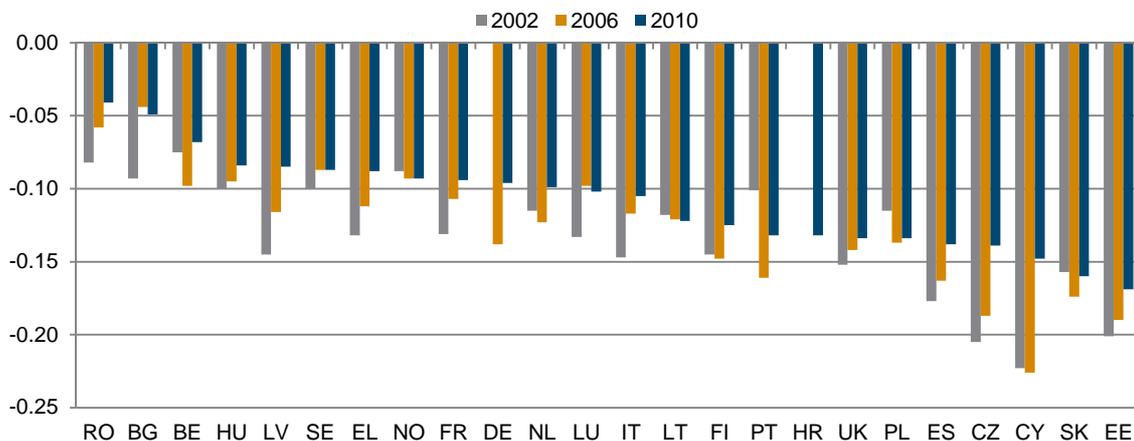
## 5 Analysis of earning structures and inequality

### 5.1 PERSONAL CHARACTERISTICS

#### 5.1.1 GENDER

The issue of gender wage gaps is extensively discussed in the literature. In the media and the public debate, the unadjusted gender wage gap based on gross monthly earnings is often reported, mostly due to a lack of better data. This however provides an inaccurate picture as women in the workforce might differ on average from men in terms of hours worked, choice of job, education level, etc. To control for these effects as accurately as possible, the regression results presented and discussed below are based on gross hourly earnings, with a number of personal, job and firm characteristics as controls taken from the SES dataset. Hence, the reported coefficients should provide more accurate estimates of the wage gap between males and females for individuals with similar characteristics.<sup>2</sup> Unfortunately, there is no information on career breaks available in the dataset. Since women are more likely to take career breaks, which may negatively impact upon their wages, a failure to control for career breaks will bias the estimates of the wage gap slightly upwards.<sup>3</sup> Results are presented in Figure 5.1.1.

**Figure 5.1.1 / Gender wage differences from Mincer regressions (2002-2010)**



Note: The coefficients are taken from the full Mincer regressions estimated separately for each country as reported in Appendix Tables A.1 to A.3. The reference category is male. Countries are ranked according to gender wage gap in 2010. Source: SES; wiiw calculations.

Generally, in 2010, gender wage gaps differed widely across countries, from around 5% in Romania and Bulgaria to more than 15% in Estonia with, however, the majority of gender wage gaps ranging between

<sup>2</sup> This, however, does not address questions such as why female workers are more often part-time employed or are working in different occupations with the same level of qualification.

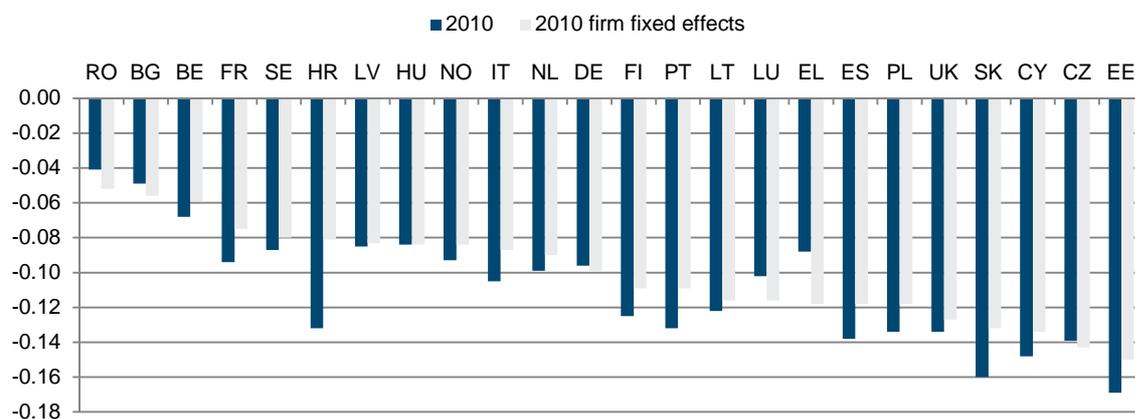
<sup>3</sup> The question is optional in the SES 2002 questionnaire, but hardly any countries provide information. It was dropped in the subsequent SES waves.

7% and 15%. Accordingly, gender wage gaps are lowest in Romania (4.1%), Bulgaria (4.9%) and Belgium (6.8%). In contrast, the highest gaps are found in Estonia (16.9%), Slovakia (16%), Cyprus (14.8%) and the Czech Republic (13.9%). With the exception of Slovakia, the group of high-gap countries had an even more pronounced gender wage gap in 2002.

Moreover, the results show that gender wage gaps have declined over time in all but five countries – namely Lithuania, Norway, Poland, Portugal and Slovakia. Before the crisis, that is, between 2002 and 2006, the unweighted average wage gap across countries declined slightly from 13.2% to 12.8%. During the crisis, the gap decreased further to 10.9%. When looking at the median, the gap was 13.2% in 2002, 12.1% in 2006 and 10.4% in 2010.

A number of robustness checks confirm the continuing existence of gender wage gaps. Figure 5.1.2 shows the findings of such an exercise which takes into account the recent heterogeneous firm literature that stresses wage dispersion between firms to be a within- rather than a between-industry phenomenon (Davis and Haltiwanger, 1991; Faggio et al., 2010; Helpman et al., 2012). Thus, if there are gender differences in the choice of jobs related to firm characteristics other than those already captured (industry, size, collective pay agreement, region), estimation results would be biased. Including firm fixed effects controls for wage differences across firms so that the estimated coefficient for the wage gap can then be interpreted as the average gender wage gap between employees with similar characteristics within a firm. The results demonstrate that in almost all cases, the wage gaps remain significant, albeit at somewhat smaller levels (the exceptions being Romania, Bulgaria, Luxembourg, Greece, and the Czech Republic), which points to the robustness of the overall findings. Another robustness check was conducted with more detailed occupation groups, which did not alter the picture substantially.

**Figure 5.1.2 / Robustness check of the gender wage gap (2010)**



Note: Reference category is male. Countries are ranked according to wage gap including firm fixed effects.

Source: SES; wiiw calculations.

Table 5.1.1 decomposes the gender wage differences into explained and unexplained components using the Blinder-Oaxaca decompositions. All countries report positive and significant wage gaps between males and females in all years, with the exception of Hungary in 2010 where a wage gap in favour of females of 3.8% is found. Considering the results for 2002, we observe that the wage gaps are relatively large for Cyprus and Slovakia, with gaps above 30%, as well as for the United Kingdom, Greece, Estonia, Belgium and the Czech Republic, with wage gaps above 25%. Wage gaps are much smaller in Lithuania and Poland, with wage gaps below 10%, as well as Bulgaria, Hungary, Luxembourg,

Latvia, Romania and Sweden, with wage gaps less than 15%. Considering changes across time, we observe that the wage gap showed a tendency to decline between 2002 and 2010 in many countries. These declines have been relatively large in a number of countries, including Belgium (25.3% to 7.6%), Cyprus (37% to 17%), Greece (25.4% to 3.3%), Portugal (22.1% to 1.3%) and Hungary (12% to -3.8%). In a smaller number of countries, slight increases in the wage gap were observed, with the wage gap rising from 13.5% to 15% in Sweden and from 21.1% to 22.9% in Finland. A much larger rise was observed in Lithuania (6.5% to 15.8%), with a large rise also recorded for Germany between 2006 and 2010 (from 13.9% to 24.2%).

**Table 5.1.1 / Blinder-Oaxaca male-female wage decomposition**

	2002			2006			2010		
	Difference	Explained	Unexplained	Difference	Explained	Unexplained	Difference	Explained	Unexplained
Belgium	0.253***	0.173*** (68.38)	0.080*** (31.62)	0.065***	-0.005*** (-7.69)	0.070*** (107.69)	0.076***	0.025*** (32.89)	0.051*** (67.11)
Bulgaria	0.123***	0.027*** (21.95)	0.096*** (78.05)	0.068***	0.023*** (33.82)	0.045*** (66.18)	0.082***	0.033*** (40.24)	0.049*** (59.76)
Cyprus	0.373***	0.177*** (47.45)	0.197*** (52.82)	0.197***	0.007 (3.55)	0.190*** (96.45)	0.170***	0.034*** (20.00)	0.136*** (80.00)
Czech Republic	0.265***	0.076*** (28.68)	0.189*** (71.32)	0.244***	0.075*** (30.74)	0.168*** (68.85)	0.221***	0.083*** (37.56)	0.138*** (62.44)
Germany				0.139***	0.044*** (31.65)	0.096*** (69.06)	0.242***	0.146*** (60.33)	0.096*** (39.67)
Estonia	0.294***	0.058*** (19.73)	0.237*** (80.61)	0.316***	0.124*** (39.24)	0.192*** (60.76)	0.273***	0.117*** (42.86)	0.156*** (57.14)
Spain	0.230***	0.060*** (26.09)	0.170*** (73.91)	0.218***	0.051*** (23.39)	0.167*** (76.61)	0.216***	0.075*** (34.72)	0.142*** (65.74)
Finland	0.211***	0.068*** (32.23)	0.144*** (68.25)	0.250***	0.103*** (41.20)	0.148*** (59.20)	0.229***	0.111*** (48.47)	0.118*** (51.53)
France	0.228***	0.089*** (39.04)	0.138*** (60.53)	0.222***	0.121*** (54.50)	0.101*** (45.50)	0.180***	0.088*** (48.89)	0.092*** (51.11)
Croatia							0.145***	0.068*** (46.90)	0.077*** (53.10)
Greece	0.254***	0.130*** (51.18)	0.124*** (48.82)	0.167***	0.071*** (42.51)	0.096*** (57.49)	0.033***	-0.072*** (-218.18)	0.104*** (315.15)
Hungary	0.120***	0.064*** (53.33)	0.056*** (46.67)	0.111***	0.026*** (23.42)	0.085*** (76.58)	-0.038***	-0.091*** (239.47)	0.053*** (-139.47)
Italy	0.165***	-0.003 (-1.82)	0.168*** (101.82)	0.093***	-0.033*** (-35.48)	0.127*** (136.56)	0.114***	0.007*** (6.14)	0.107*** (93.86)
Lithuania	0.065***	-0.051*** (-78.46)	0.115*** (176.92)	0.123***	-0.003 (-2.44)	0.126*** (102.44)	0.158***	-0.004 (-2.53)	0.162*** (102.53)
Luxembourg	0.141***	0.01 (7.09)	0.131*** (92.91)	0.087***	0.024*** (27.59)	0.063*** (72.41)	0.047***	-0.025*** (-53.19)	0.072*** (153.19)
Latvia	0.130***	0.013*** (10.00)	0.117*** (90.00)	0.044***	-0.047*** (-106.82)	0.092*** (209.09)	0.095***	-0.011*** (-11.58)	0.106*** (111.58)
Netherlands	0.229***	0.155*** (67.69)	0.074*** (32.31)	0.192***	0.068*** (35.42)	0.124*** (64.58)	0.177***	0.098*** (55.37)	0.079*** (44.63)
Norway	0.215***	0.144*** (66.98)	0.071*** (33.02)	0.164***	0.083*** (50.61)	0.081*** (49.39)	0.152***	0.093*** (61.18)	0.059*** (38.82)
Poland	0.057***	-0.024*** (-42.11)	0.081*** (142.11)	0.035***	-0.073*** (-208.57)	0.108*** (308.57)	0.025***	-0.071*** (-284.00)	0.096*** (384.00)
Portugal	0.221***	0.093*** (42.08)	0.128*** (57.92)	0.027***	-0.107*** (-396.30)	0.134*** (496.30)	0.133***	0.013*** (9.77)	0.121*** (90.98)
Romania	0.129***	0.059*** (45.74)	0.070*** (54.26)	0.021***	-0.031*** (-147.62)	0.052*** (247.62)	0.065***	0.019*** (29.23)	0.046*** (70.77)
Sweden	0.135***	0.045*** (33.33)	0.090*** (66.67)	0.153***	0.091*** (59.48)	0.061*** (39.87)	0.150***	0.081*** (54.00)	0.069*** (46.00)
Slovakia	0.304***	0.148*** (48.68)	0.155*** (50.99)	0.305***	0.117*** (38.36)	0.187*** (61.31)	0.217***	0.031*** (14.29)	0.186*** (85.71)
United Kingdom	0.263***	0.130*** (49.43)	0.133*** (50.57)	0.233***	0.108*** (46.35)	0.125*** (53.65)	0.196***	0.066*** (33.67)	0.130*** (66.33)

Note: t-values in brackets; \*\*\*, \*\*, \* denotes significance at the 1, 5 and 10% level

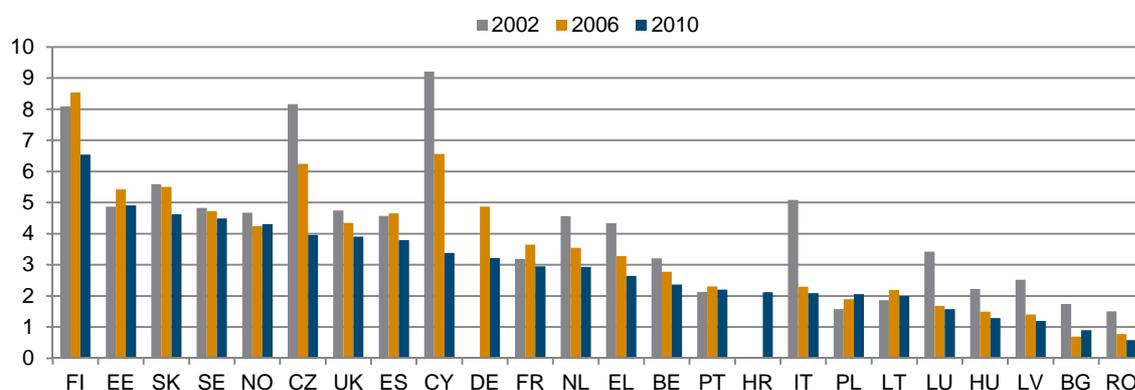
Source: SES; wiiw calculations.

Of more importance than the absolute value of the wage gaps is the extent to which these gaps can or cannot be explained by differences in observable characteristics. The results for 2002 demonstrate that

in the majority of cases the greater part of the wage gap cannot be explained by observables. In particular, in 17 out of 22 countries the unexplained components account for more than 50% of the wage gap, with the unexplained share reaching as much as 70% in 9 out of 22 countries, and even more than 100% in 3 out of 22 countries (Italy, Lithuania and Poland). The unexplained share of the wage gap is found to be relatively low (i.e. below 50%) in Belgium, Greece, Hungary, the Netherlands, and Norway. Considering changes in the share of the unexplained component of wage gaps over time mixed results emerge. In 10 out of 22 cases a decline in the unexplained share of wage gaps is observable between 2002 and 2010, while in 12 cases an increase is observed. Among the countries that showed an increase in the unexplained share over time, four are countries for which the unexplained share was relatively low in 2002. These are Belgium and Greece, which experienced relatively large increases, and the Netherlands and, Norway, for which the change was much smaller. Eight of the 12 countries that experienced an increase in the unexplained share of the wage gap show an increase of more than 20% in the unexplained share (Belgium, Cyprus, Greece, Luxembourg, Latvia, Poland, Portugal and Slovakia), with two of these experiencing a more than 100% increase (Greece and Poland). Of those countries experiencing a decline in the unexplained share of the wage gap, Estonia and Sweden experienced a decline of more than 20 percentage points in the share of the unexplained component, with Lithuania experiencing a decline of more than 100 percentage points. In the case of Hungary, the share of the unexplained component of the wage gap dropped from 47% to -140%.

We further report information on the extent to which gender contributes to overall wage inequality as measured by the Gini index using the Shapley approach (Figure 5.1.3), which depicts the contribution of gender wage differences to the overall Gini index in per cent. It demonstrates that, on average, differences in gender contribute about 3% to overall inequality though important cross country differences are apparent. For instance, in 2010 the contribution of differences between men and women to inequality ranged from more than 6% in Finland and around 4% to 5% in Estonia, Slovakia, Sweden and Norway to less than 1% in Bulgaria and Romania. Moreover, in all countries analysed (except for Lithuania, Poland and Portugal) the contribution of gender to inequality fell between 2002 and 2010. The declines were particularly large in Cyprus (from initially around 9% in 2002 to only 3% in 2010) and the Czech Republic (from initially 8% to 4% in 2010) where in 2002, the contribution of gender had been much above the country average. An equally strong decline is observed for Italy (from 5% in 2002 to 2% in 2010).

**Figure 5.1.3 / Contribution of wage differences between men and women to Gini index (in %)**



Note: Countries are ranked according to contribution to Gini in 2010.

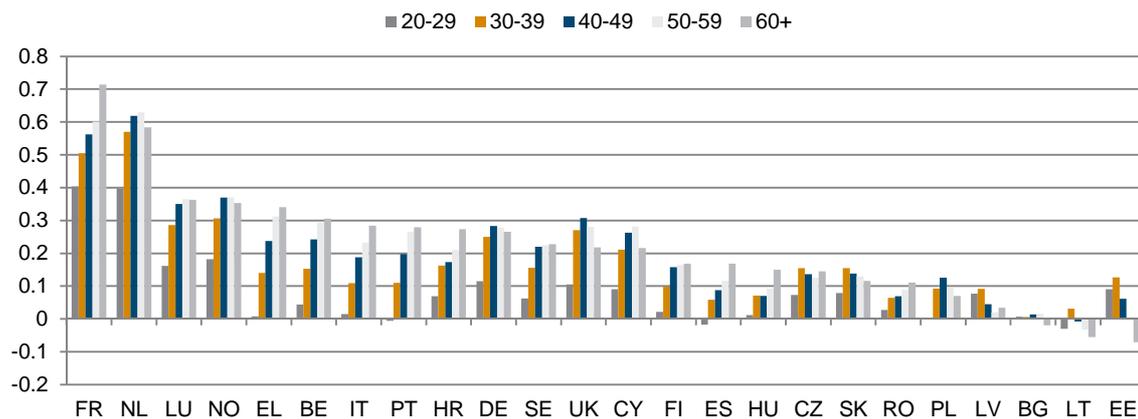
Source: SES; wiiw calculations.

### 5.1.2 AGE

The next dimension considered is age. Generally, due to accumulation of work experience or payment schemes (among other factors), a positive impact of age on earnings is expected. Moreover, this effect is expected to be stronger for younger age cohorts, becoming less pronounced for older cohorts (giving rise to a concave shape of the age-earnings, or experience-earnings, relationship). Coefficients from the Mincer regressions are provided in Figure 5.1.4 for the year 2010 for five different age cohorts with the age group 15 to 19 as reference group.

It turns out that the results for age groups differ considerably between Central and East European countries (CEECs) and the other Member States. In particular, age premia for all age groups (relative to the age group 15 to 19) are considerably lower in CEECs than in the remaining EU Member States. Moreover, among other EU Member States there is a strong tendency of wage premia to increase by age group: for the great majority of EU-15 countries, wage premia usually peak at the age of 60 and above, while in a few countries (e.g. the Netherlands or Norway) wage premia peak at the age of 50 to 59, or in some cases even earlier as in the UK and Germany where wage premia peak between 40 and 49. Among CEECs, Croatia, Hungary, Romania, Cyprus and Bulgaria show a similar pattern of rising wage premia which peak at the age of 60 and above. By contrast, in the Czech Republic, Slovakia or the Baltics wage premia peak earlier and are highest for employees aged 30 to 39 (or 40 to 49 in the case of Poland). Moreover, in Estonia, employees aged 50+ are even paid less than employees in the age group 15 to 19. This situation is even more pronounced in Lithuania where only employees at the age of 30 to 39 receive higher wages than those aged 15 to 19. All other age groups receive lower wages than those aged 15 to 19.<sup>4</sup> Hence, one can see that employees that entered the workforce after the fall of the iron curtain are paid significantly more in many CEECs, conditional on other characteristics.

**Figure 5.1.4 / Regression results for age groups (2010)**



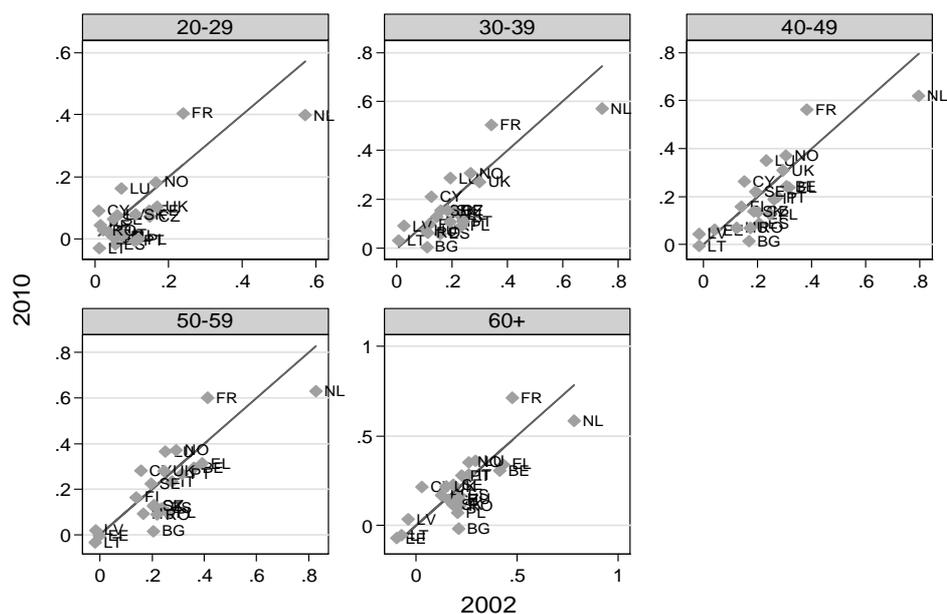
Note: The coefficients are taken from the full Mincer regressions estimated separately for each country as reported in Appendix Table A.1. Reference group is age 15-19. Countries are ranked according to age group 60+.

Source: SES; wiiw calculations.

<sup>4</sup> It should be noted that no formal tests of significance concerning differences across coefficients are made, thus these comparisons have to be interpreted with care. Generally however – given the large number of observations and small standard errors – one would expect that in many cases coefficients would be significantly different.

Using the more detailed SES data at the Eurostat SAFE Centre, the analysis was also conducted with more detailed age groups for a smaller set of countries in order to more thoroughly analyse people close to retirement age. The results show that in 14 out of 22 countries, people aged 60 to 64 earn more than those aged 50 to 54. This is lower for employees aged between 55 and 59 years (in 11 countries) and those aged 65 plus (in 8 countries). This means that those who remain in the workforce until 64 and do not retire at the age of 60 are most likely positively selected. This selection effect seems to be stronger than the negative effects of age on productivity.

**Figure 5.1.5 / Changes in age profile between 2002 and 2010 for different age groups**



Note: The coefficients are taken from the full Mincer regressions estimated separately for each country as reported in Appendix Tables A.1 and A.3. The reference category is age 15-19.

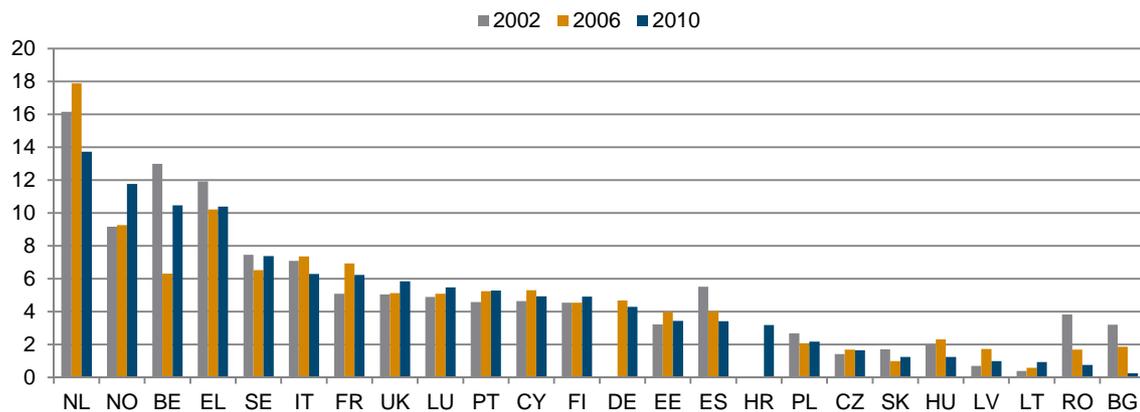
Source: SES; wiiw calculations.

In addition to prevailing age-related wage premia in 2010, changes in wage premia across time – between 2002 and 2010 – are analysed. Generally, Figure 5.1.5 points to some commonalities in changes in age-related wage premia across cohorts: firstly, with the exception of the oldest cohort (60+), wage premia due to age deteriorated between 2002 and 2010 in the majority of countries; secondly, the ranking of winners and losers remained fairly stable; and thirdly, irrespective of the age cohort considered, France and the Netherlands are the most important outliers. From a cohort-specific perspective, Figure 5.1.5 shows that for the age cohort of 20-29 the wage premia increased the most in France (by almost 17 percentage points, pp), followed by Luxembourg and Cyprus (with almost 1 pp) and Belgium (with 0.3 pp). In contrast, the loss in wage premia was most dramatic in the Netherlands (by 17 pp), Poland and Portugal (by around 12 pp) and the Czech Republic (by 8 pp). Very similar patterns emerge for the age cohort 30-39: wage premia again increased the most in France, Cyprus and Luxembourg (by between 16 and 9 pp) and deteriorated the most in the Netherlands, Poland and Portugal (by between 17 and 13 pp). Similarly, in the age cohort 40-49, wage premia again increased the most in France, Cyprus and Luxembourg (by between 18 and 11 pp) but deteriorated the most in the Netherlands, Bulgaria and Poland (by between 18 and 12 pp). This is very similar to observed changes in the age cohort 50-59. Again, between 2002 and 2010, wage premia improved the most in France,

Cyprus and Luxembourg (by between 19 and 11 pp) but deteriorated the most in the Netherlands, Bulgaria and Poland (by between 20 and 16 pp). Finally, a somewhat different picture emerges for changes in wage premia between 2002 and 2010 for the oldest age cohort 60+. Increases in wage premia were most pronounced in France, Cyprus and Norway (by between 24 and 9 pp) while losses in wage premia were strongest in Bulgaria, the Netherlands and Poland (by between 23 and 14 pp).

Again the contribution of age-related wage differences to the overall wage inequality as measured by the Gini index is considered.<sup>5</sup> Figure 5.1.6 highlights that, in line with the results from the Mincer regressions, the decomposition analysis again reveals that wage inequality due to age differences is well below average in all CEECs. In 2010, the contribution of age to inequality was relatively high in the Netherlands (14%), Norway (12%), Belgium (10%) and Greece (10%). In other countries, its contribution to inequality is around 5% on average with slightly higher values for Sweden, Italy and France and lower ones for Estonia and Spain. Between 2002 and 2010, the contributions of wage differences due to age declined particularly in the Netherlands, Belgium, Greece, Spain, Romania and Portugal and increased significantly in Norway and France.

**Figure 5.1.6 / Contribution of age differences to Gini index (in %)**



Note: Countries are ranked according to contribution to Gini in 2010.

Source: SES; wiiw calculations.

### 5.1.3 EDUCATION

In what follows, the education dimension is analysed, by discussing the returns to education. Generally, the average returns to education (relative to the group with only primary education) in the sample of EU countries in 2010, after controlling for other characteristics, are as follows – in ascending order: 2% for lower secondary education, 9% for upper and post-secondary education, 19% for short-cycle tertiary education, 33% for Bachelor and Master (or equivalent) and, finally, 51% for Doctoral (or equivalent) education.<sup>6</sup> Figure 5.1.7 highlights that this ranking of returns to education is replicated in the majority of

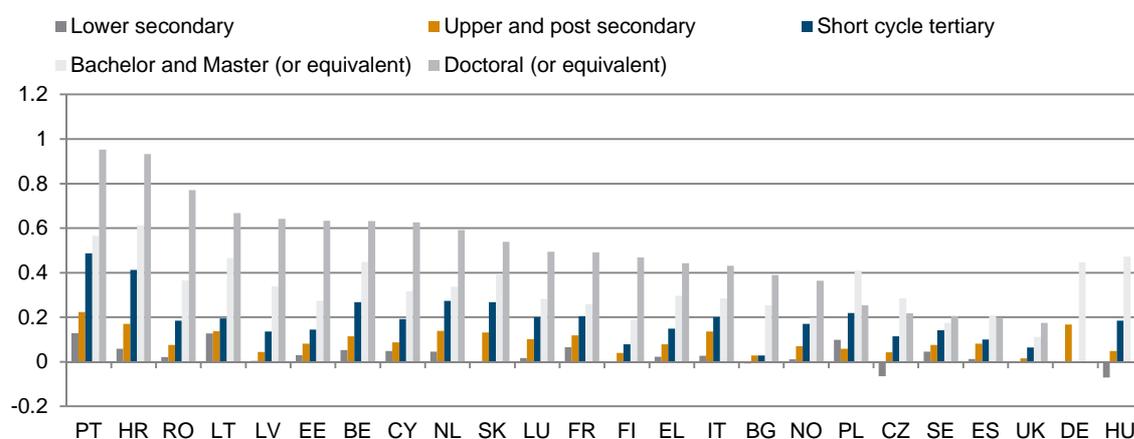
<sup>5</sup> The Blinder-Oaxaca decomposition is not considered in this case because there are not two clear groups when considering the age-wage premium.

<sup>6</sup> These are unweighted averages across countries. Coefficients not statistically significant at the 5% level were set to zero.

countries. The only exceptions are Poland and the Czech Republic, where the returns to a Bachelor or Master's degree are higher than the returns to Doctoral degrees.

The lowest returns to education are found in Anglo-Saxon and Scandinavian countries, where employees with a doctoral degree receive a premium of only around 20%. By contrast, employees with a doctoral degree receive the highest wage premia in Portugal and Croatia where they earn, on average, almost twice as much as employees with primary education only.

**Figure 5.1.7 / Regression results for education groups (2010)**



Note: The coefficients are taken from the full Mincer regressions estimated separately for each country as reported in Appendix Table A.1. The reference group is primary educated (ISCED 0-1). Countries are ranked according to educational group 'Doctoral (or equivalent)'.

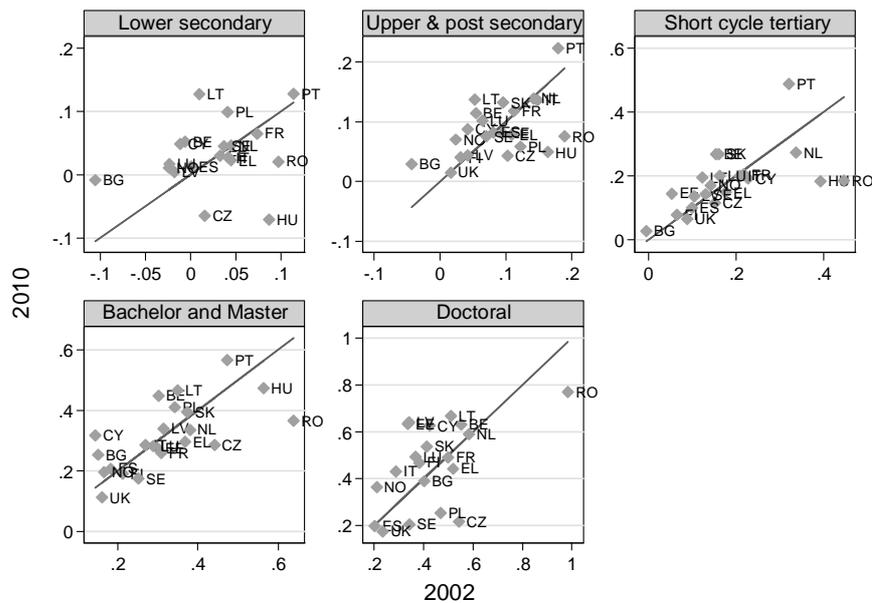
For Germany different educational categories are reported (see Table 3.1.3).

Source: SES; wiiw calculations.

Changes in the returns to education between 2002 and 2010 are depicted in Figure 5.1.8. Generally, the figure highlights that between 2002 and 2010, the returns to education increased in the majority of countries, irrespective of the level of education considered. However, changes were stronger among higher levels of education and most pronounced in the highest level of educational attainment. In addition, it demonstrates that changes in the returns to education were most diverse and pronounced among CEECs. Moreover, from the perspective of the individual level of education, different patterns emerge, both in terms of ranking as well as the extent of change. Specifically, returns to lower secondary education increased the most in Lithuania (by around 12 pp), followed by Bulgaria and Cyprus by around 10 and 6 pp, respectively. In contrast, returns to lower secondary education deteriorated the most in Hungary (by 16 pp), followed by the Czech Republic and Romania at around 8 pp. Returns to upper and post-secondary education increased the most in Lithuania (by 8 pp), followed by Bulgaria (by around 10 pp) and Belgium (by around 6 pp). In contrast, returns to upper and post-secondary education dropped the most in Hungary and Romania (by around 11 pp) and Poland (by around 6 pp). Returns to short-cycle tertiary education improved the most in Portugal, Belgium and Slovakia (by between 17 and 10 pp) but deteriorated the most in Romania, Hungary and the Netherlands (by between 26 and 6 pp). Between 2002 and 2010, returns to Bachelors or Masters increased the most in Cyprus, Belgium and Lithuania (by between 17 and 12 pp) but dropped the most in Romania, the Czech Republic and Hungary (by between 27 and 9 pp). Finally, returns to the highest level of education, i.e. doctor's degree, improved the most in the Baltics (Latvia and Lithuania by around

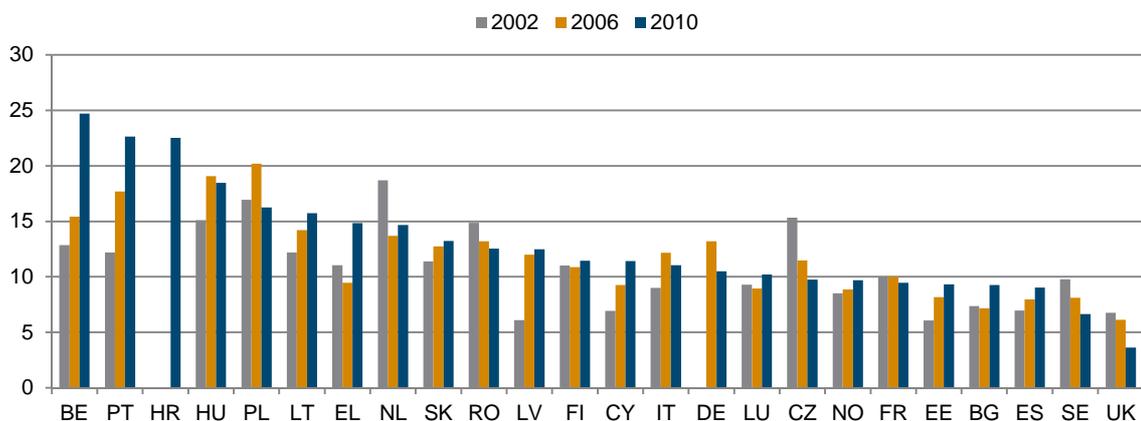
30 pp), and followed by Cyprus (by around 20 pp). A deterioration in the returns to doctoral education were equally dramatic and most pronounced in the Czech Republic (by around 33 pp), followed by Poland and Romania (by around 22 pp).

**Figure 5.1.8 / Changes in returns to education between 2002 and 2010**



Note: The coefficients are taken from the full Mincer regressions estimated separately for each country as reported in Appendix Tables A.1 and A.3. The reference group is primary education (ISCED 0-1). Source: SES; wiiw calculations.

**Figure 5.1.9 / Contribution of differences between educational attainment levels to Gini index**



Note: Countries are ranked according to contribution to Gini in 2010. Source: SES; wiiw calculations.

In Figure 5.1.9 the contributions of differences in educational attainment to overall wage inequality are depicted.<sup>7</sup> The figure highlights that differences in educational attainment explain a non-negligible share of overall inequality. Moreover, it points at substantial differences across countries. In particular, in the United Kingdom education explains less than 5% of inequality in 2010. Additionally, relatively low contributions of education are also found in Norway and Sweden. This is in contrast to Belgium, Portugal, Croatia, Hungary, Poland, Lithuania, Greece and the Netherlands where education accounts for about 20% of the Gini index. With respect to developments over time, in 15 of the 22 countries for which data are available for all three years education explained an increasing share of inequality. Particularly strong increases of the contribution of educational wage differences to the Gini index are found in Belgium, Portugal, and Greece. On the contrary, differences in educational attainment explained an ever decreasing share of inequality in the Czech Republic, Germany, France, Romania, Sweden and the UK.

## 5.2 JOB CHARACTERISTICS

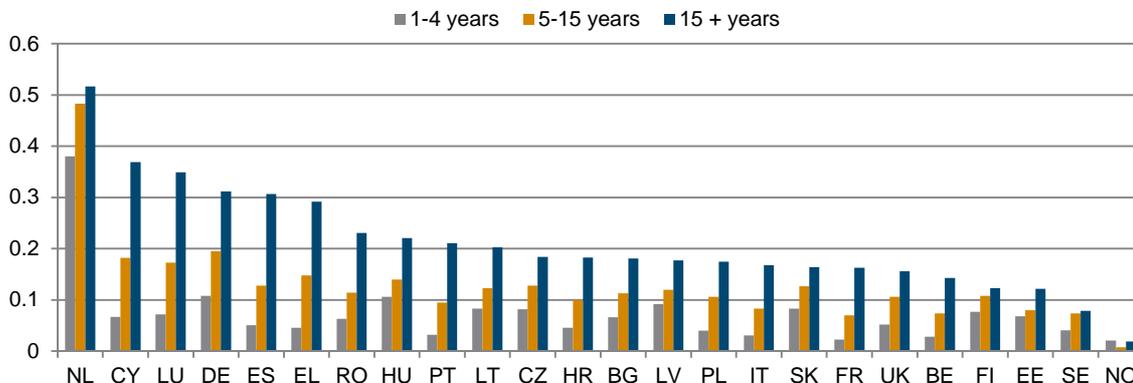
### 5.2.1 LENGTH OF SERVICE IN ENTERPRISE (EXPERIENCE)

The length of service in an enterprise is another important determinant of gross hourly wages. Employees that have been employed for a longer period of time within an enterprise are expected to earn more than comparable employees in terms of age, education, etc. with less experience in the enterprise. One advantage of experienced employees is that they have a great deal of firm specific knowledge – regarding organisational processes, they know who to talk to in case of problems and they are experienced in handling the daily challenges of their specific job in the enterprise. New employees still have to learn how the land lies. In addition, employees acquire non-firm-specific knowledge in the fields they are working in. This is especially true for higher skilled employees and research personnel, where tacit knowledge plays a major role (Moen, 2005). Once they have acquired additional knowledge, they might be tempted to set up or join a rival. In order to minimise knowledge outflows and possible knowledge transfers to competitors, employers thus pay a wage premium in order to keep employees from leaving the enterprise. Again, this wage premium is expected to be higher for higher skilled personnel.

Figure 5.2.1 shows wage premia of employees by length of service in the enterprise (relative to those, who have been with the enterprise for less than a year) in 2010. The median wage premium across countries for 1-4 years of employment in the same firm is 6%. For 5-14 years, the median effect rises to 11% and for more than 15 years it is 18%. However, there are a number of notable outliers. In particular, the premium at less than 10% is much lower in Scandinavian countries. Moreover, Cyprus, Luxembourg, Germany, Spain and Greece exhibit rather high premia: here employees who have been employed for more than 15 years in the same enterprise earn around 30% more than similar employees who have been with the enterprise for less than a year. In the Netherlands, the premia seem to be very high for all three groups, but this is in fact due to the small number of observations for employees with less than one year of service in the enterprise.

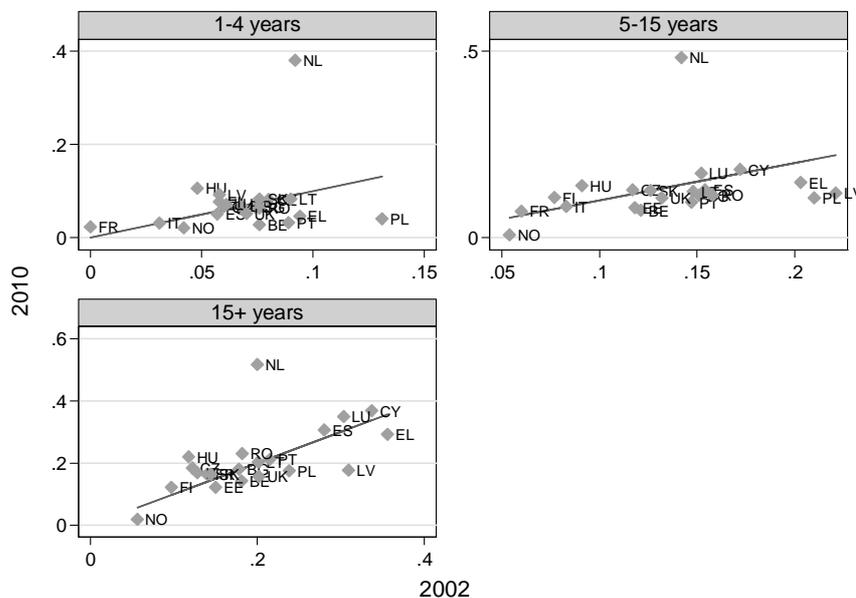
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<sup>7</sup> Once again, given the multiple education groups the Blinder-Oaxaca decomposition is not reported.

**Figure 5.2.1 / Wage premia depending on length of service in enterprise (2010)**

Note: The coefficients are taken from the full Mincer regressions estimated separately for each country as reported in Appendix Table A.1. The reference group is the group of employees with less than a year of service with a firm. Countries are ranked according to group 15+.

Source: SES; wiiw calculations.

**Figure 5.2.2 / Changes in premia for different lengths of service between 2002 and 2010**

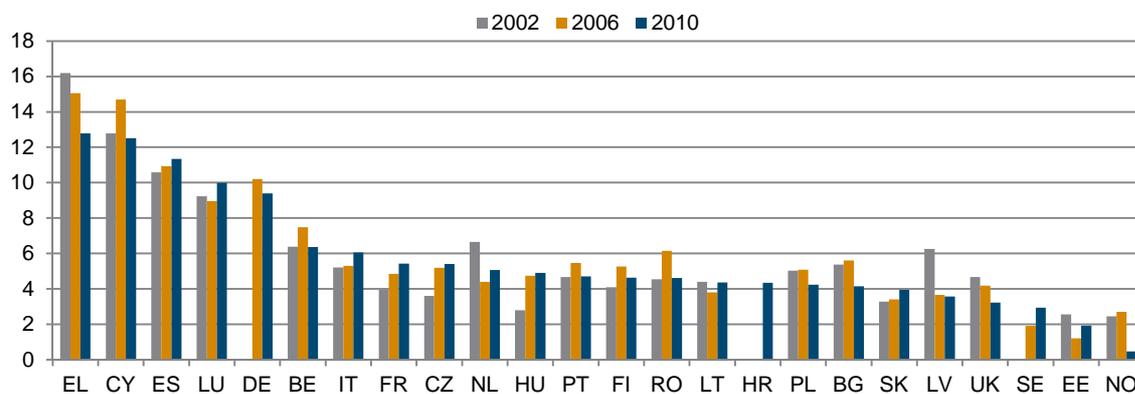
Note: The coefficients are taken from the full Mincer regressions estimated separately for each country as reported in Appendix Tables A.1 and A.3. The reference group is the group of employees with less than a year of service with a firm. Source: SES; wiiw calculations.

Figure 5.2.2 depicts changes in service-time-related premia between 2002 and 2010 to shed light on how premia have changed over time. Generally, it points to a quite diverse and heterogeneous picture. Irrespective of length of service considered, premia improved in about half of all countries. However, the average improvement in premia was most pronounced in the group of employees with the longest service in an enterprise. As for premia for employees with between 1 and 4 years of service, improvements were strongest in the Netherlands (by around 29 pp), followed by Hungary (by 6 pp) and Latvia (by 3 pp). In contrast, losses in premia were most pronounced in Poland (by 9 pp), as well as

Portugal and Belgium (by between 6 and 5 pp). Similarly, between 2002 and 2010, premia for employees with between 5 and 15 years of service in an enterprise increased the most in the Netherlands (by around 34 pp), followed by Hungary (by 5 pp) and Finland (by 3 pp). On the contrary, losses in premia were strongest in Poland and Latvia (at around 10 pp) and Greece (by around 6 pp). Finally, as for premia for employees with more than 15 years of service in an enterprise, improvements in premia were most pronounced in the Netherlands (by around 32 pp), Hungary (by 10 pp) and the Czech Republic (by 6 pp). Similar to premia for employees with between 5 and 15 years of service in an enterprise, premia for employees with more than 15 years of service increased the most in the Netherlands (by 32 pp), followed by Hungary and the Czech Republic (by between 10 and 6 pp). Similarly, premia deteriorated the most in Latvia (by 13 pp), as well as Greece and Poland (by around 6 pp).

As for its contribution to inequality, averaged across all countries length of service in the enterprise contributes about 6% to the Gini index. Here however, a wide dispersion across countries becomes apparent (see Figure 5.2.3). Especially in the Mediterranean countries (i.e. Cyprus, Spain and Greece) wage differences are strongly influenced by this factor. Although there is a substantial fall in the premium of job duration in Greece, the wage difference due to age and job duration combined still amount to 22% of the Gini in 2010. Above average contributions of the characteristic length of service can be observed for Germany and Luxembourg. Substantial below average contributions are found for the Scandinavian countries, Norway and Sweden, and Estonia.

**Figure 5.2.3 / Contribution of differences between lengths of service in enterprise to Gini index**



Note: Countries are ranked according to contribution to Gini in 2010.

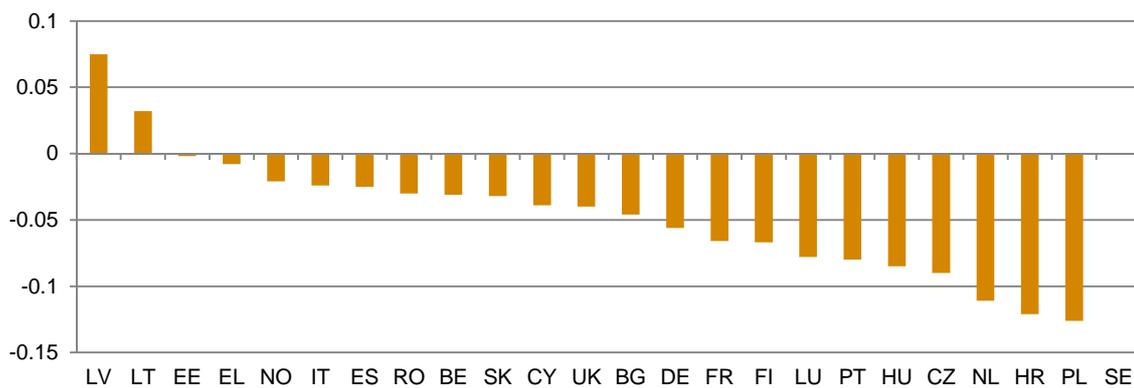
Source: SES; wiiw calculations.

## 5.2.2 CONTRACT TYPE

In this subsection the effect of contract type on wages is considered. Results from the Mincer regressions (Figure 5.2.4) indicate that employees with a contract that is temporary or has a fixed duration earn on average 4.7% less than those with a contract of indefinite duration. While this wage difference between the two types of contract did not change during the crisis, the number of temporary contracts increased significantly in most countries. In 2010, the biggest difference between contract types could be found in Poland, Croatia, the Netherlands and the Czech Republic, where employees

with temporary or fixed contracts earned between 9 to 13% less than those with indefinite contracts. In contrast, people employed with a temporary or fixed contract in the Baltics earn more than people employed with contracts of indefinite duration. More specifically, while in Latvia, employees on fixed or temporary contracts earned around 7% more than those on indefinite contracts, in Lithuania, they earned around 4% more.<sup>8</sup>

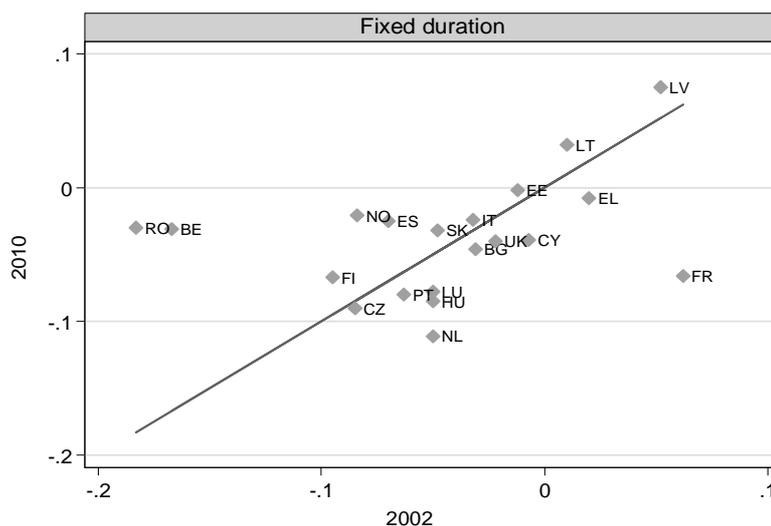
**Figure 5.2.4 / Conditional wage differentials between temporary/fixed duration and indefinite duration contracts (2010)**



Note: The coefficients are taken from the full Mincer regressions estimated separately for each country as reported in Appendix Table A.1. Reference group is indefinite duration contracts.

Source: SES; wiiw calculations.

**Figure 5.2.5 / Change in premia between 2002 and 2010 for contracts with fixed duration**



Note: The coefficients are taken from the full Mincer regressions estimated separately for each country as reported in Appendix Tables A.1 and A.3. The reference group is indefinite duration contract.

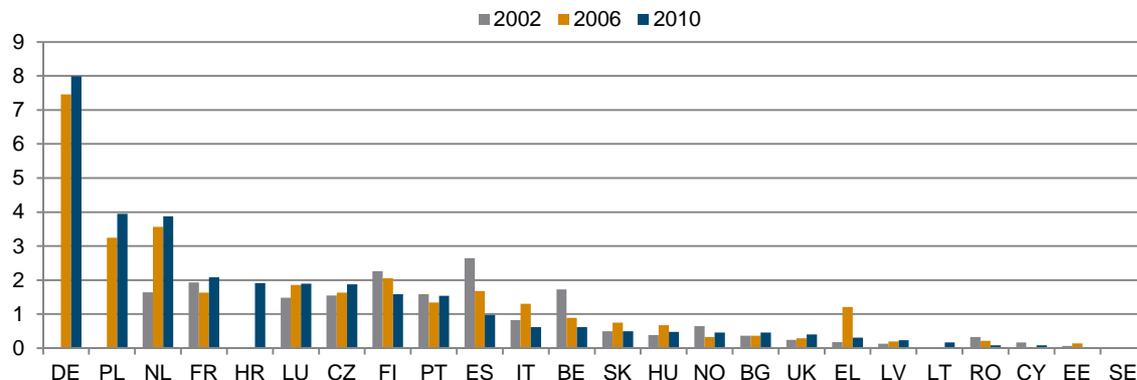
Source: SES; wiiw calculations.

<sup>8</sup> The results for trainees are reported in the regression results in the Appendix tables.

As for the change in the wage differential between 2002 and 2010 for contracts with fixed duration, Figure 5.2.5 points at a rather heterogeneous picture. It shows that wage differentials for fixed contracts improved in 10 out of 19 cases. More specifically, wage differentials for fixed contracts increased the most in Romania and Belgium (with improvements of more than 10 pp), followed by Spain and Norway (with improvements of between 6 and 5 pp). By contrast, wage premia for fixed contracts deteriorated the most in France (by almost 13 pp), the Netherlands (by 6 pp) and Hungary (by around 4 pp).

Figure 5.2.6 depicts the contribution of differences in contract type to inequality for the years 2002, 2006 and 2010. It highlights that, generally across all years, differences in contract type explain very little of overall inequality. The component explained by differences in contract type varies from around 8% in Germany to below 1% in countries such as Slovakia, Hungary, Norway, Bulgaria, the UK and Latvia. In those cases where contract type contributes a relatively large share to inequality, this is due, among other reasons, to the high share of apprentice contracts in total employment compared to other EU countries. Above average contributions of around 4% are also found in the Netherlands and Poland, while contributions of around 2% are observed in France, Croatia (in 2010), Luxembourg, the Czech Republic, Finland, Portugal and Spain. As for changes in the contribution between 2002 and 2010, Figure 5.2.6 points at a declining trend in Finland, Spain, Belgium, Italy or Norway but an increasing trend in the Netherlands, Luxembourg, the Czech Republic, Bulgaria or Latvia.

**Figure 5.2.6 / Contribution of differences between types of contracts to Gini index**



Note: Countries are ranked according to contribution to Gini in 2010.

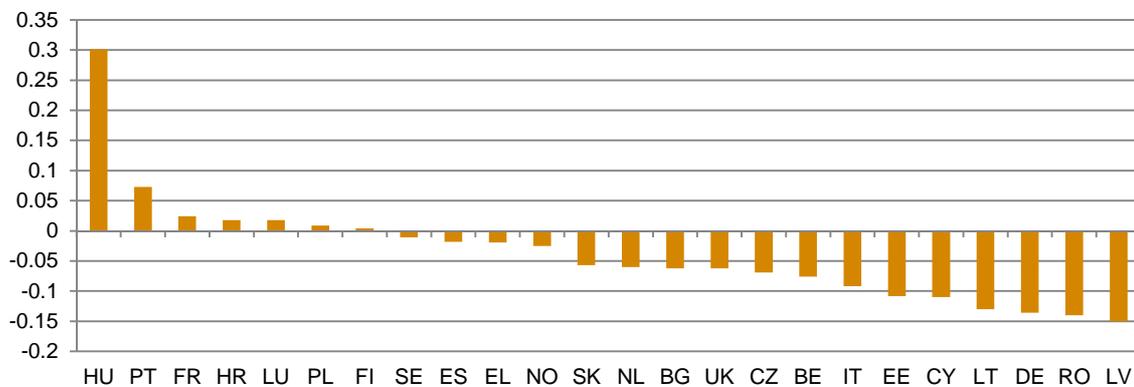
Source: SES; wiiw calculations.

### 5.2.3 FULL-TIME/PART-TIME

In this section we take a look at the extent of wage differences between part-time and full-time employees. Results from the Mincer regressions- with full-time employees as reference group - are reported in Figure 5.2.7. Geographically, we can see that for Scandinavian countries, there is almost no difference in wages between part-time and full-time employees, with the wage gap being most pronounced in the Baltics. Overall, the wage differences vary substantially across countries, as does the extent to which part time employment exists. While in the Netherlands, 51% of the labour force works part-time, only 3-6% of employees work part-time in Romania, Croatia, Cyprus and the Czech Republic. Other countries with rather high rates of part-time employment at around 30% are Germany, Norway, Latvia and the United Kingdom. One hypothesis would be that the more common it is to work part-time,

the smaller the wage gap. However, there is no clear correlation between the frequency of people working part-time and the wage difference between part-time and full-time employees. While countries such as Norway and the Netherlands have a rather small wage gap, countries with high shares of part-time employment such as Germany and Latvia exhibit two of the largest wage gaps. One major driver of this gap would appear to be the sectoral structure of part-time employment, with countries with high shares of part-time employment in education (such as Croatia and Poland), health services (Sweden and Belgium) and public administration (France and Slovakia) exhibiting a smaller gap. These, mostly publicly controlled, sectors show lower differentiation between full-time and part-time employment for many countries.

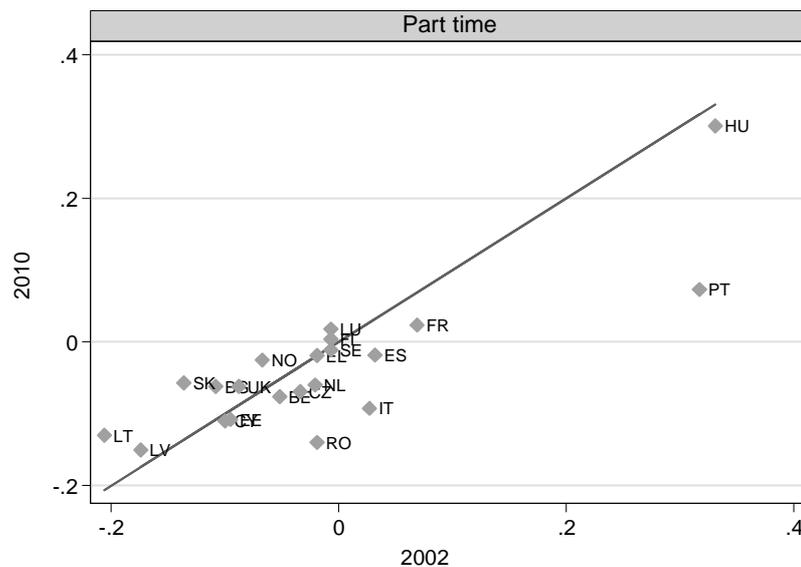
**Figure 5.2.7 / Part-time results (2010)**



Note: The coefficients are taken from the full Mincer regressions estimated separately for each country as reported in Appendix Table A.1. Reference group is full-time work.

Source: SES; wiiw calculations.

**Figure 5.2.8 / Change in premia between 2002 and 2010, part-time results**



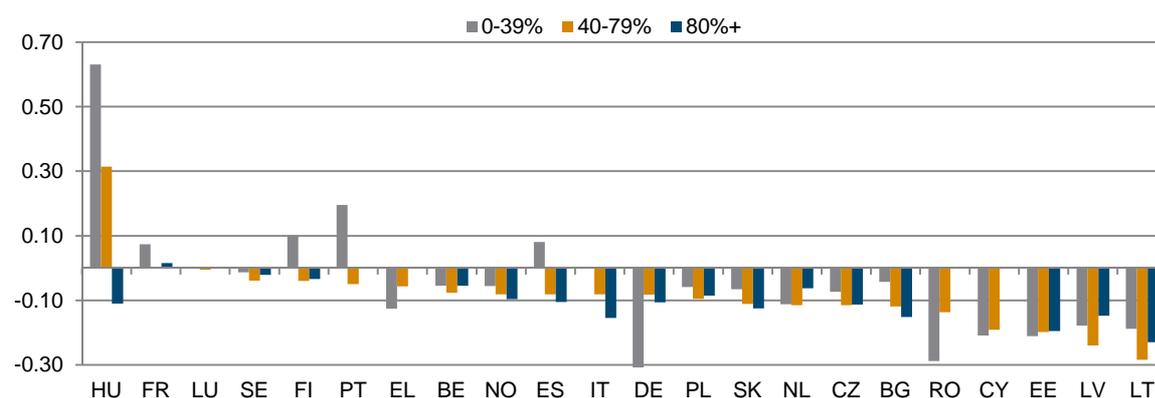
Note: The coefficients are taken from the full Mincer regressions estimated separately for each country as reported in Appendix Tables A.1 and A.3. The reference group is full-time work.

Source: SES; wiiw calculations.

Changes in the wage gaps between part-time and full-time workers between 2002 and 2010 are depicted in Figure 5.2.8. This figure indicates that around half of all countries experienced a reduction in the part-time/full-time wage gap. Moreover, it shows that relative to the cases where increases in wage gaps were observed, the observed reductions in part-time wage gaps were, on average, more pronounced. In particular, with a decline of almost 24 pp, reductions in part-time/full-time wage gaps were most dramatic in Portugal, followed by Romania and Italy with declines of around 10 pp. In contrast, increases in wage gaps were relatively moderate and reached around 8 pp in Slovakia and Lithuania and around 5 pp in Bulgaria and Norway.

More detailed results on different part-time categories in 2010 (relative to full-time employment) which were used in the analysis can be found in Figure 5.2.9. It is obvious that the part-time group working 0 to 39% of the full-time equivalent is not the group with the strongest earnings disadvantage. In fact, the group working almost full-time (80%+) has the highest median wage gap. One explanation for this could be an involuntary cut in working hours during the crisis, but surprisingly, this group was already discriminated against the most before the crisis. Moreover, Figure 5.2.9 also points at differences across countries. For instance, the wage gap of the part-time group working 0 to 39% of the full-time equivalent was most pronounced in Germany and Romania (amounting to around 30%). In contrast, the wage gap of the part-time group working 40 to 79% of the full-time equivalent was highest in Lithuania and Latvia while for the part-time group working more than 79% of the full-time equivalent it was highest in Lithuania and Estonia. However, this is not a uniform picture. The part-time group working 0 to 39% of the full-time equivalent even receives a positive premium in some countries such as Hungary, Portugal, Finland, Spain and France. Similarly, positive premia are also observed for the part-time group working 40 to 79% of the full-time equivalent in Hungary or for the part-time group working more than 79% of the full-time equivalent in France.

**Figure 5.2.9 / More detailed part-time results (2010)**



Note: The coefficients are taken from the full Mincer regressions estimated separately for each country as reported in Appendix tables A.4. Reference group is full-time work. Coefficients not significant at a 5% level are set to 0.  
Source: SES; wiiw calculations.

Results from the Blinder-Oaxaca decomposition, when considering wage differences between part-time and full-time workers, are reported in Table 5.2.1. We find when looking at the year 2002 that in the majority of cases there is a positive and significant wage gap, indicating that full-time employees have average wages significantly larger than part-time employees. The two exceptions are Hungary and

Portugal, where the results indicate a wage gap that favours part-time workers, with part-time wages being 25% higher in Hungary and 4% higher in Portugal. The positive wage gaps when found tend to be relatively small, lying in the range of 15 to 35%. Larger wage gaps are found in the cases of Cyprus (60%), Greece (39%), Latvia (39%), Slovakia (42%) and the United Kingdom (42%). The results also indicate that the vast majority of these positive wage gaps are explained by observables. In 12 of 21 cases the unexplained share of the total wage gap lies between 0 and 30%, with the share actually being negative in 5 cases. Only in four cases do we observe unexplained shares larger than 30%, with the shares being 49% in the case of Latvia and 53% in the case of Lithuania. The other two countries with large unexplained shares are Portugal and Hungary, where excessively large unexplained shares of 787 and 141% respectively, are offset by similarly large negative shares on the explained component.

**Table 5.2.1 / Blinder-Oaxaca part-time/full-time decomposition**

	2002			2006			2010		
	Difference	Explained	Unexplained	Difference	Explained	Unexplained	Difference	Explained	Unexplained
Belgium	0.247***	0.216*** (87.45)	0.031*** (12.55)	-0.048***	0.010*** (-20.83)	-0.057*** (118.8)	0.211***	0.133*** (63.03)	0.078*** (36.97)
Bulgaria	0.324***	0.284*** (87.65)	0.040*** (12.35)	0.315***	0.308*** (97.78)	0.007* (2.22)	0.375***	0.309*** (82.40)	0.067*** (17.87)
Cyprus	0.606***	0.473*** (78.05)	0.133*** (21.95)	0.576***	0.492*** (85.42)	0.084*** (14.58)	0.677***	0.551*** (81.39)	0.126*** (18.61)
Czech Republic	0.190***	0.155*** (81.58)	0.035*** (18.42)	0.291***	0.240*** (82.47)	0.051*** (17.53)	0.233***	0.144*** (61.80)	0.089*** (38.20)
Germany				0.008***	0.022*** (275.0)	-0.014*** (-175.0)	0.284***	0.121*** (42.61)	0.163*** (57.39)
Estonia	0.339***	0.268*** (79.06)	0.071*** (20.94)	0.330***	0.208*** (63.03)	0.122*** (36.97)	0.232***	0.141*** (60.78)	0.090*** (38.79)
Spain	0.231***	0.246*** (106.49)	-0.015*** (-6.49)	0.227***	0.214*** (94.27)	0.013*** (5.73)	0.301***	0.284*** (94.35)	0.017*** (5.65)
Finland	0.283***	0.306*** (108.13)	-0.023*** (-8.13)	0.206***	0.220*** (106.80)	-0.015*** (-7.28)	0.192***	0.200*** (104.17)	-0.007*** (-3.65)
France	0.223***	0.283*** (126.91)	-0.060*** (-26.91)	0.167***	0.169*** (101.20)	-0.003 (-1.80)	0.150***	0.166*** (110.67)	-0.016*** (-10.67)
Croatia							-0.095***	-0.094*** (98.95)	-0.002 (2.11)
Greece	0.388***	0.364*** (93.81)	0.024*** (6.19)	0.150***	0.233*** (155.33)	-0.083*** (-55.33)	0.263***	0.245*** (93.16)	0.018*** (6.84)
Hungary	-0.251***	0.103*** (-41.04)	-0.354*** (141.04)	-0.111***	0.247*** (-222.52)	-0.358*** (322.52)	-0.065***	0.261*** (-401.54)	-0.326*** (501.54)
Italy	0.080***	0.108*** (135.0)	-0.028*** (-35.0)	0.204***	0.173*** (84.80)	0.030*** (14.71)	0.315***	0.207*** (65.71)	0.108*** (34.29)
Lithuania	0.320***	0.149*** (46.56)	0.171*** (53.44)	0.271***	0.150*** (55.35)	0.121*** (44.65)	0.311***	0.156*** (50.16)	0.155*** (49.84)
Luxembourg	0.165***	0.157*** (95.15)	0.008 (4.85)	0.061***	0.097*** (159.02)	-0.036*** (-59.02)	0.006	0.017* (283.33)	-0.011 (-183.33)
Latvia	0.385***	0.197*** (51.17)	0.188*** (48.83)	0.056***	0.038*** (67.86)	0.017*** (30.36)	0.243***	0.119*** (48.97)	0.124*** (51.03)
Netherlands	0.257***	0.247*** (96.11)	0.010** (3.89)	0.291***	0.324*** (111.34)	-0.033*** (-11.34)	0.266***	0.253*** (95.11)	0.013*** (4.89)
Norway	0.339***	0.303*** (89.38)	0.036*** (10.62)	0.230***	0.233*** (101.30)	-0.003*** (-1.30)	0.216***	0.248*** (114.81)	-0.033*** (-15.28)
Portugal	-0.041***	0.282*** (-687.8)	-0.323*** (787.7)	-0.115***	0.040*** (-34.78)	-0.155*** (134.78)	0.194***	0.233*** (120.10)	-0.039*** (-20.10)
Romania	0.138***	0.111*** (80.43)	0.027 (19.57)	0.175***	0.047*** (26.86)	0.128*** (73.14)	0.234***	0.071*** (30.34)	0.162*** (69.23)
Sweden	0.163***	0.170*** (104.29)	-0.007*** (-4.29)	0.160***	0.163*** (101.88)	-0.003*** (-1.88)	0.167***	0.172*** (102.99)	-0.005*** (-2.99)
Slovakia	0.418***	0.296*** (70.81)	0.122*** (29.19)	0.325***	0.235*** (72.31)	0.090*** (27.69)	0.253***	0.176*** (69.57)	0.077*** (30.43)
United Kingdom	0.420***	0.329*** (78.33)	0.091*** (21.67)	0.384***	0.339*** (88.28)	0.045*** (11.72)	0.375***	0.322*** (85.87)	0.053*** (14.13)

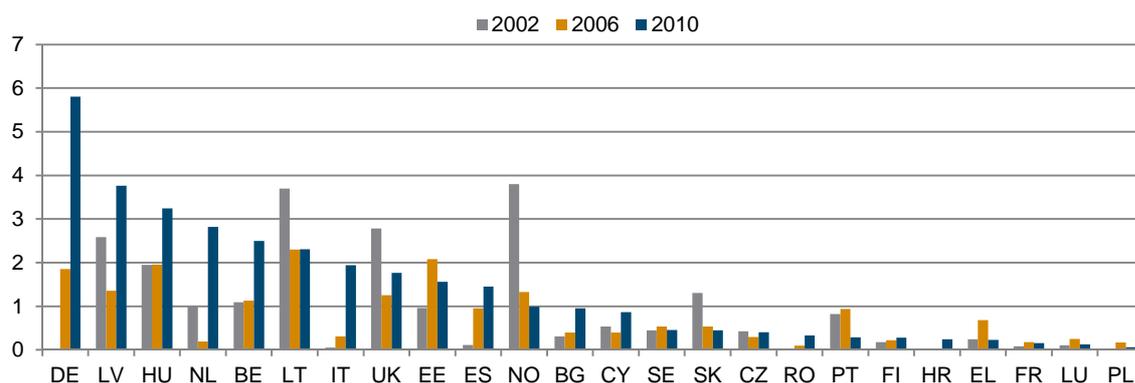
Note: t-values in brackets; \*\*\*, \*\*, \* denote significance at the 1, 5 and 10% level.

Source: SES; wiiw calculations.

Considering the Blinder-Oaxaca results over time, we find mixed results when comparing the wage gaps between part-time and full-time workers in 2002 and 2010. In ten cases we find that the wage gap increased, while in 11 cases we observe that the wage gap declined. The changes in the wage gap tend to be small in many cases. When considering those countries with an increase in the wage gap, we find relatively large increases in Portugal (22 percentage points) and Italy (23 pp). The biggest declines in the wage gap are found for Luxembourg and Slovakia (16 pp), with the wage gap in Luxembourg becoming insignificant. Only in the case of Hungary (and Croatia, for which data are available in 2010) do we now find a negative wage gap, with the wage gap in Portugal changing from -25% in 2002 to 7% in 2010. As with 2002 however, the vast majority of the wage gap can usually be explained by observables. Only in 3 out of 23 countries do we find that unexplained factors can explain more than 50% of the share of the observed wage gap (Germany, Hungary and Latvia), with negative shares observed in 6 cases.

The contribution to inequality of differences in contract type is depicted in Figure 5.2.10. It suggests a highly heterogeneous picture: in 2010, a non-negligible contribution to inequality is found in Germany (with almost 6%), Latvia and Hungary (with between 3% and 4%), and the Netherlands, Belgium and Lithuania (with between 3% and 2%). Differences in type of contract explain less than 2% in the remaining countries and almost nothing in Romania, Portugal, Finland, Croatia, Greece, France, Luxembourg or Poland. Figure 5.2.10 also highlights that between 2002 and 2010, the contribution of differences in type of contract to inequality increased in 9 out of 20 countries. The rise was most pronounced in Germany (from around 2% in 2006 to almost 6% in 2010), the Netherlands, Belgium, Spain or Hungary and Latvia. In contrast, the contribution of differences in type of contract to inequality decreased most substantially in Norway (from initially 4% in 2002 to 1% in 2010), Lithuania and the UK.

**Figure 5.2.10 / Contribution of differences between full- and part-time employees to Gini index (in %)**



Note: Countries are ranked according to contribution to Gini index in 2010.

Source: SES; wiiw calculations.

#### 5.2.4 OCCUPATIONS

In the past several years, there has been much discussion regarding wages, and in particular the bonuses of managers. In the regression analysis, occupations are captured according to the International Standard Classification of Occupations (ISCO) at the one digit level. Conditional wage

premia by occupation were calculated relative to elementary occupations (e.g. cleaners, construction labourers, unskilled agricultural, forestry and fishery workers, etc). In 2010, the ordering of average wage premia by occupation are as follows – from lowest to highest: 3% for skilled agricultural, forestry and fishery workers, 11% for service and sales, 12% for plant and machine operators and assemblers, 15% for craft and related workers, 19% for clerical support, 35% for technicians, 50% for professionals (which include scientists, engineers, health professionals, teachers and university professors as well as business, legal and IT professionals) and 73% for managers.<sup>9</sup>

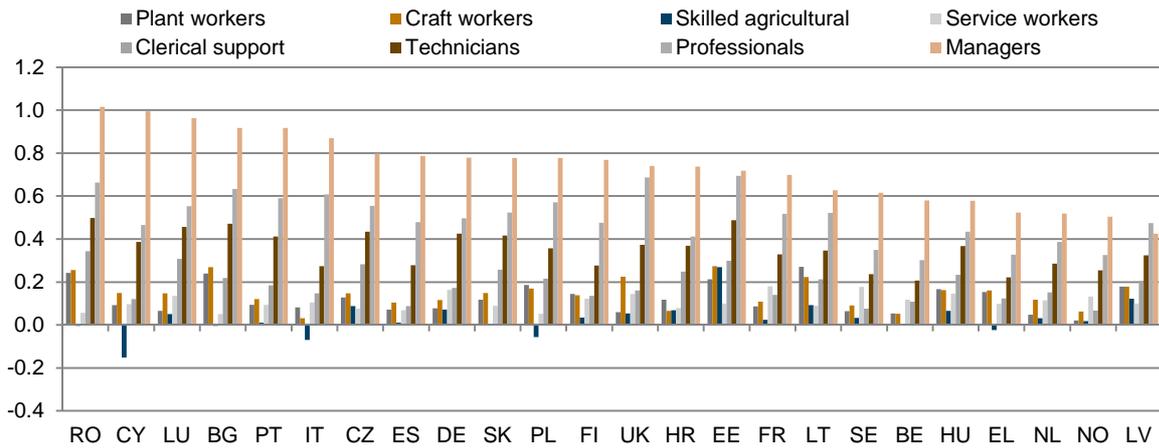
Apparently, the two occupations with the highest wage premia conditional on education, age and other characteristics are managers and professionals. In particular, managers earn the highest premia in Romania (102%), Cyprus (99%), Luxembourg (96%), Bulgaria (92%) and Portugal (92%), with relatively low premia to managers found in Greece, the Netherlands, Norway (around 50%) and in Latvia (around 40%). The group of professionals earn the highest premia in the UK (69%), followed by Romania (66%), Bulgaria (63%), Italy (61%) and Portugal (59%).

While Figure 5.2.11 depicts wage premia by occupation in 2010, changes in occupational premia between 2002 and 2010 are shown in Figure 5.2.12. This figure demonstrates that irrespective of occupation, about half of all countries included in the sample experienced a decline in occupational premia. On average, wage premia deteriorated by around 1 percentage point for plant and machine operators and assemblers, professionals and skilled agricultural, forestry and fishery workers but increased for craft and related workers, workers in service and sales or clerical work. The average increase was strongest for managers, at around 3 percentage points. As for individual occupational premia, Figure 5.2.12 demonstrates that with between 5 and 6 percentage points increases, wage premia for plant workers improved the most in Italy, Hungary and Latvia and deteriorated the most in Slovakia, Portugal and Poland (by between 6 and 7 pp). Wage premia for craft and related workers improved the most in Hungary, Latvia, Estonia and the Netherlands (by between 5 and 8 pp). In contrast, the premium deteriorated the most in Lithuania (by 6 pp), followed by Spain, Portugal and Norway (by around 4 pp). With increases of over 20 percentage points, wage premia for skilled agricultural, forestry and fishery workers improved the most in Latvia and Estonia, followed by Greece (by around 10 pp). By contrast, skilled agricultural, forestry and fishery workers experienced the strongest losses in their wage premia in Cyprus, Finland and Italy (by between 15 and 17 pp). Between 2002 and 2010, wage premia for workers in service and sales improved the most in the Netherlands and Romania (by around 10 pp), followed by Slovakia and Hungary (7 pp). In contrast, with losses of around 10 pp, wage premia deteriorated the most in Lithuania, followed by Spain (by around 5 pp), along with Portugal and the Czech Republic (by between 2 and 3 pp). With improvements of between 9 and 12 pp, wage premia for clerical workers increased the most in Slovakia, Hungary and Romania – while clerical workers experienced the strongest losses in terms of wage premia in Portugal, Spain and Lithuania (of between 3 and 6 pp). Wage premia for technicians improved the most in the Netherlands, Belgium, Bulgaria and Hungary (by between 10 and 6 pp) but deteriorated most dramatically in Portugal (by 15 pp), followed by Spain, Lithuania, the UK and Sweden (by around 8 pp). With an increase of almost 27 percentage points, wage premia for professionals improved the most in Romania, followed by the Czech Republic and the Netherlands (by around 13 pp). Similarly spectacular was the loss (of 36 pp) in wage premia for professionals in Italy. Relatively more moderate losses in wage premia were observable for Sweden and Portugal (by 14 pp), Spain and France (by around 12 pp). Finally, the extent of both

<sup>9</sup> These are unweighted averages across countries.

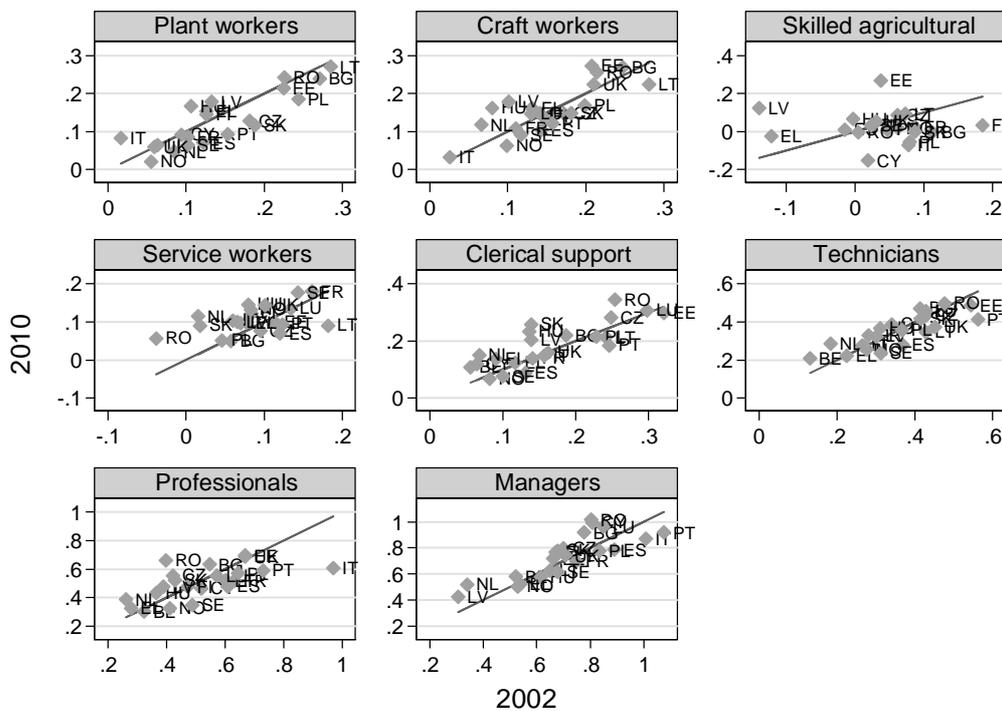
losses and improvements in wage premia are similarly diverse and spectacular for managers. Their wage premia increased the most in Romania (by 21 pp), followed by Cyprus (by 19 pp) and the Netherlands (by 18 pp). In contrast, losses in wage premia were most pronounced in the Mediterranean countries of Portugal, Italy and Spain, where premia declined by between 10 and 16 pp.

**Figure 5.2.11 / Regression results for occupation groups (2010)**



Note: The coefficients are taken from the full Mincer regressions estimated separately for each country as reported in Appendix Table A.1. The reference group is elementary occupations. Countries are ranked according to Managers. Source: SES; wiiw calculations.

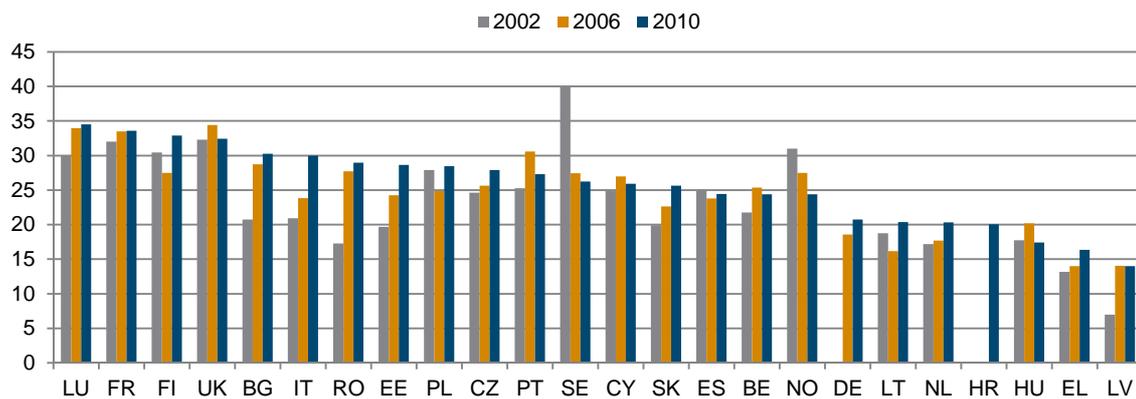
**Figure 5.2.12 / Change in premia between 2002 and 2010, by occupation**



Note: The coefficients are taken from the full Mincer regressions estimated separately for each country as reported in Appendix Tables A.1 and A.3. The reference group is elementary occupations. Source: SES; wiiw calculations.

Figure 5.2.13 shows the contribution of differences between occupations to inequality. As expected, accounting for up to 35% of inequality (not including the 2002-outlier for Sweden), occupation is the single most important variable explaining wage differentials between employees. In 2010, with very few exceptions, the contribution of occupations to inequality ranged between 20% and 35%. In particular, explaining between 30% and 35%, the contribution of occupation was largest in Luxembourg, France, Finland, the UK and Bulgaria. In contrast, at less than 20%, the contribution of occupation was lowest in Hungary, Greece and Latvia. As for changes in the contribution of occupation to inequality between 2002 and 2006, Figure 5.2.13 demonstrates, that with the exception of Sweden (for which the contribution of occupation to inequality almost halved between 2002 and 2010), Norway (for which the contribution to inequality dropped slightly by around 7 pp) and Spain or Hungary (for which almost negligible reductions are observable), the contribution of occupation to inequality increased between 2002 and 2010. Specifically, the increase was most pronounced in Bulgaria, Italy, Romania, Estonia and Latvia but weakest in the UK, Poland or Portugal.

**Figure 5.2.13 / Contribution of differences between occupations to Gini index (in %)**



Note: Countries are ranked according to contribution to Gini in 2010.

Source: SES; wiiw calculations.

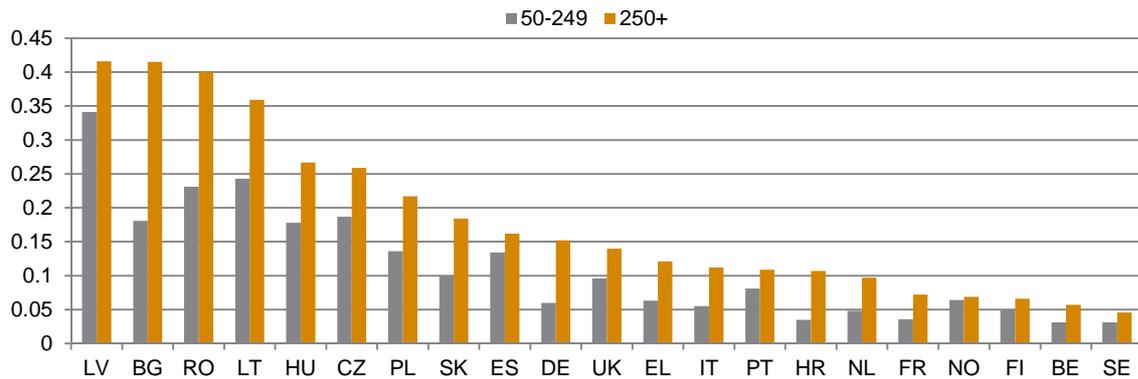
## 5.3 FIRM CHARACTERISTICS

### 5.3.1 FIRM SIZE

A vast literature using firm-level data indicates that a number of firm characteristics (such as size, trading status, foreign ownership, etc.) are correlated with various indicators of firm performance (e.g. productivity, profits, wages, employment). In this sub-section we discuss the relationship between firm size and wages. Figure 5.3.1 reports estimates of wage differentials by firm size for 2010 from the Mincer regressions. Relative to small firms (with less than 50 employees), large firms (with more than 250 employees) pay up to 42% higher wages while medium-sized firms (with between 50 and 249 employees) pay up to 35% higher wages. The figure also indicates strongly diverging size-premia across countries. In particular, size-wage premia appear to be highest among CEECs but lowest among the remaining EU-countries. For instance, at 42%, the size-wage premia paid by large firms are highest in Latvia and Bulgaria, followed by Romania and Lithuania (with wage-size premia ranging between 35 and 40%), Hungary and the Czech Republic (with size-wage premia slightly above 25%), Poland and

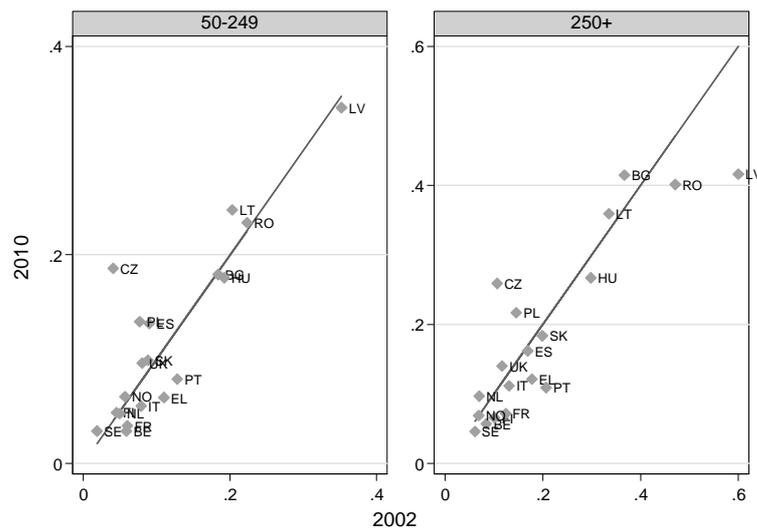
Slovakia (with size-wage premia around 20%). Size-wage premia of large firms are below 10% in the Netherlands, France, Norway, Finland and Belgium, and are even below 5% in Sweden. Similarly, size-wage premia paid by medium-sized firms are again highest in Latvia (at around 35%), followed by Lithuania, Romania, the Czech Republic, Hungary and Bulgaria (ranging between 25% and 15%). With less than 10%, size-wage premia of medium-sized firms are lowest in Belgium, Croatia, France and Sweden.

**Figure 5.3.1 / Relative wage by firm size categories (2010)**



Note: The coefficients are taken from the full Mincer regressions estimated separately for each country as reported in Appendix Table A.1. Reference group is size 1-45. Ranked according to coefficient for 250+.  
Source: SES; wiiw calculations.

**Figure 5.3.2 / Change in size-related wage premia between 2002 and 2010**

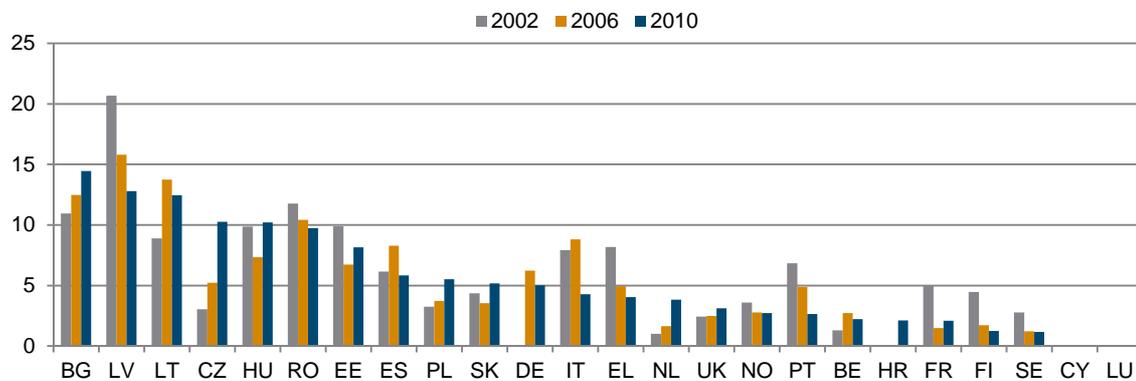


Note: The coefficients are taken from the full Mincer regressions estimated separately for each country as reported in Appendix Tables A.1 and A.3. Reference group is size 1-45.  
Source: SES; wiiw calculations.

Figure 5.3.2 depicts changes in wage premia between 2002 and 2010. It shows that in around half of the countries in the sample, the wage premium paid by medium-sized firms (with between 50 and 249 employees) increased between 2002 and 2010. In particular, at nearly 15 percentage points, it increased

the most in the Czech Republic, followed by Poland (with an increase of around 6 pp), Spain and Lithuania (with increases of around 4 pp). In contrast, wage-premia paid by medium-sized firms deteriorated the most in Portugal and Greece (by around 5 pp), Belgium (by around 3 pp), and Italy and France (with around 2 pp). The wage premium remained almost unchanged in Bulgaria, the Netherlands and Finland. Wage premia paid by large firms deteriorated in the majority of countries. The loss in the wage premium was most pronounced in Latvia (by 18 pp), followed by Portugal (by 10 pp), Romania (by 7 pp) and Greece (by 6 pp). In contrast, no changes in the wage premia paid by large firms occurred in Norway while wage premia rose the most in the Czech Republic (by around 15 pp), followed by more moderate increases in Poland (by around 7 pp), Bulgaria (by 5 pp), and the Netherlands, Lithuania and the UK (by around 2 to 3 pp).

**Figure 5.3.3 / Contribution of differences between size classes of enterprise to Gini index**



Note: Countries are ranked according to contribution to Gini index in 2010.

Source: SES; wiiw calculations.

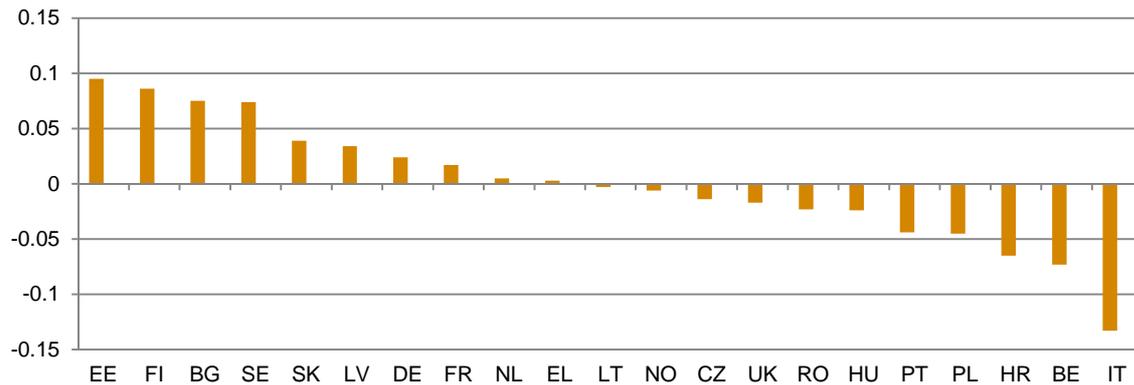
The contribution of differences between size classes to inequality are depicted in Figure 5.3.3 for 2002, 2006 and 2010. The figure highlights that differences in firm size classes contribute relatively little to inequality. In particular, size-class related differences contribute between 1 and 15% to inequality (if the 2002-outlier for Latvia is ignored). In 2010, the size-related contribution to inequality was below 5% in the majority of countries and lowest in Finland and Sweden, at around 1%. With a premium of between 8% and 15%, it was highest among a group of CEECs comprising Bulgaria, Latvia, Lithuania, the Czech Republic, Hungary, Romania and Estonia. As for the change in the size-related contribution to inequality, Figure 5.3.3 emphasises that between 2002 and 2010 the contribution of wage differences between size classes decreased in the majority of countries. The decrease was most pronounced in Latvia, Greece, France and Finland and almost negligible in Spain and Norway. By comparison, increases were strongest in the Czech Republic, Lithuania and Bulgaria.

### 5.3.2 PUBLIC AND PRIVATE CONTROL

Another interesting aspect to consider is the wage gap between enterprises that are either under public or private economic and financial control. Figure 5.3.4 reports the estimated coefficients on a private sector dummy from the Mincer regressions for 2010. Overall, a rather heterogeneous picture emerges. Specifically, in about half of all countries, publicly controlled firms pay more than privately owned ones. In particular, the wage advantage in publicly owned firms is most pronounced in Italy (with almost 15%),

followed by Belgium and Croatia (with around 6%) or Poland and Portugal (with almost 5%). Relative to privately owned firms, publicly owned firms pay least generously in Estonia (giving rise to a premia of 10%), followed by Finland, Bulgaria and Sweden.

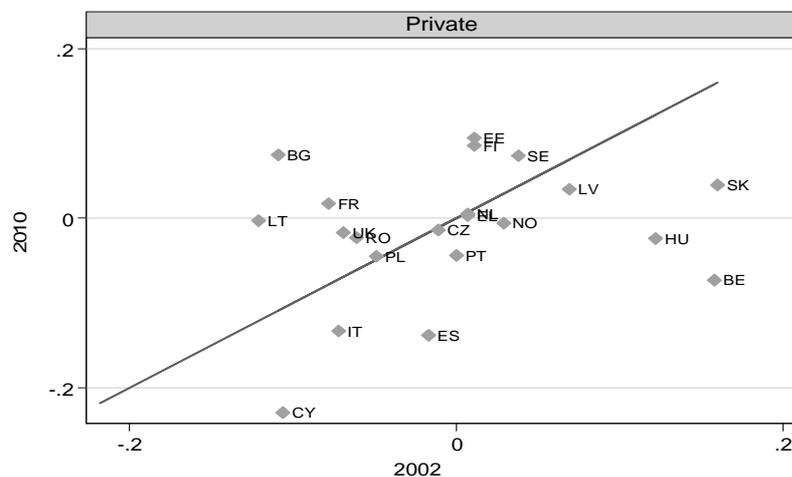
**Figure 5.3.4 / Wages of privately controlled employers relative to publicly controlled employers (2010)**



Note: The coefficients are taken from the full Mincer regressions estimated separately for each country as reported in Appendix Table A.1. Reference group is public ownership.

Source: SES; wiiw calculations.

**Figure 5.3.5 / Change in the ownership wage gap between 2002 and 2010**



Note: The coefficients are taken from the full Mincer regressions estimated separately for each country as reported in Appendix Tables A.1 and A.3. Reference group is public ownership.

Source: SES; wiiw calculations.

Figure 5.3.5 depicts changes between 2002 and 2010 in the wage gap between privately and publicly controlled enterprises. It highlights that in 12 out of 21 cases, the wage gap declined between 2002 and 2010. The most pronounced reductions are observable for Belgium, where the wage gap dropped by around 23 percentage points, followed by Hungary, Cyprus, Slovakia and Spain where wage gaps dropped by between 12 and 15 pp. By comparison, ownership-related wage gaps increased the most in Bulgaria (by almost 19 pp), followed by Latvia (by 12 pp), France (by around 10 pp), and Estonia and

Finland (by around 8 pp). Ownership-related wage premia remained fairly stable in a number of countries including Greece, the Czech Republic, the Netherlands and Poland.

**Table 5.3.1 / Blinder-Oaxaca enterprise control decomposition**

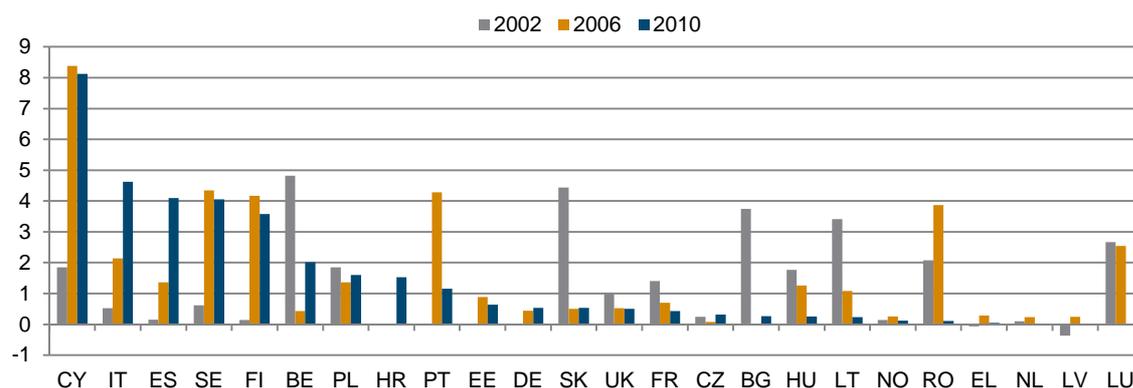
	2002			2006			2010		
	Difference	Explained	Unexplained	Difference	Explained	Unexplained	Difference	Explained	Unexplained
Belgium	0.040***	-0.328*** (-820.00)	0.369*** (922.50)	0.328***	0.345*** (105.18)	-0.016 (-4.88)	0.329***	0.231*** (70.21)	0.097*** (29.48)
Bulgaria	0.323***	0.250*** (77.40)	0.073*** (22.60)	0.303***	0.181*** (59.74)	0.122*** (40.26)	0.193***	0.096*** (49.74)	0.097*** (50.26)
Cyprus	0.266***	0.157*** (59.02)	0.109*** (40.98)	0.388***	0.593*** (152.84)	-0.205 (-52.84)	0.420***	0.332*** (79.05)	0.088*** (20.95)
Czech Republic	0.078***	0.088*** (112.82)	-0.010*** (-12.82)	0.038***	0.012*** (31.58)	0.026*** (68.42)	0.059***	0.021*** (35.59)	0.038*** (64.41)
Germany				0.193***	0.210*** (108.81)	-0.017*** (-8.81)	-0.008***	0.040*** (-500.00)	-0.047*** (587.50)
Estonia	0.174***	0.003 (1.72)	0.171*** (98.28)	-0.015***	0.075*** (-500.00)	-0.090*** (600.00)	0.062***	-0.038*** (-61.29)	0.100*** (161.29)
Spain	0.265***	0.259*** (97.74)	0.007 (2.64)	0.324***	0.276*** (85.19)	0.048*** (14.81)	0.279***	0.201*** (72.04)	0.079*** (28.32)
Finland	-0.036***	-0.016*** (44.44)	-0.019*** (52.78)	-0.133***	-0.070*** (52.63)	-0.064*** (48.12)	-0.112***	-0.064*** (57.14)	-0.048*** (42.86)
France	0.146***	-0.007 (-4.79)	0.154*** (105.48)	0.020***	-0.185*** (-925.00)	0.205*** (1025.00)	-0.112***	-0.159*** (141.96)	0.046*** (-41.07)
Greece	0.463***	0.282*** (60.91)	0.181*** (39.09)	0.331***	0.330*** (99.70)	0.002 (0.60)	0.204***	0.123*** (60.29)	0.081*** (39.71)
Croatia							0.198***	0.234*** (118.18)	-0.036*** (-18.18)
Hungary	-0.080***	-0.007 (8.75)	-0.073*** (91.25)	0.336***	0.171*** (50.89)	0.165*** (49.11)	-0.025***	-0.083*** (332.00)	0.058*** (-232.00)
Italy	0.195***	0.189*** (96.92)	0.007 (3.59)	0.354***	0.359*** (101.41)	-0.005 (-1.41)	0.343***	0.285*** (83.09)	0.057*** (16.62)
Lithuania	0.236***	-0.033*** (-13.98)	0.269*** (113.98)	0.254***	0.336*** (132.28)	-0.082* (-32.28)	0.175***	0.184*** (105.14)	-0.01 (-5.71)
Latvia	0.451***	0.217*** (48.12)	0.234*** (51.88)	0.190***	0.181*** (95.26)	0.01 (5.26)	0.069***	-0.032 (-46.38)	0.101*** (146.38)
Netherlands	0.126***	-0.063*** (-50.00)	0.189*** (150.00)	0.178***	0.166*** (93.26)	0.012 (6.74)	0.203***	0.133 (65.52)	0.07 (34.48)
Norway	0.051***	-0.004 (-7.84)	0.055*** (107.84)	0.068***	0.001 (1.47)	0.067*** (98.68)	0.037***	-0.045*** (-121.62)	0.081*** (218.92)
Poland	0.307***	0.219*** (71.34)	0.088*** (28.66)	0.364***	0.321*** (88.19)	0.042*** (11.54)	0.340***	0.333*** (97.94)	0.007** (2.06)
Portugal	0.740***	0.534*** (72.16)	0.207*** (27.97)	0.629***	0.598*** (95.07)	0.031* (4.93)	0.555***	0.532*** (95.86)	0.023 (4.14)
Romania	0.366***	0.328*** (89.62)	0.039*** (10.66)	0.443***	0.297*** (67.04)	0.146*** (32.96)	0.045***	0.050*** (111.11)	-0.004 (-8.89)
Sweden	-0.086***	-0.090*** (104.65)	0.005*** (-5.81)	-0.095***	-0.094*** (98.95)	-0.001 (1.05)	-0.095***	-0.056*** (58.95)	-0.040*** (42.11)
Slovakia	-0.136***	-0.009* (6.62)	-0.127*** (93.38)	0.016***	0.140*** (875.00)	-0.124*** (-775.00)	0.018***	0.111*** (616.67)	-0.093*** (-516.67)
United Kingdom	0.087***	0.031 (35.63)	0.055** (63.22)	0.109***	0.072** (66.06)	0.037 (33.94)	0.176***	0.170*** (96.59)	0.006 (3.41)

Note: t-values in brackets; \*\*\*, \*\*, \* denotes significance at the 1, 5 and 10% level.

Source: SES; wiiw calculations.

Results from the Blinder-Oaxaca decomposition of wage differences between publicly and privately owned enterprises are reported in Table 5.3.1. The results indicate that in 2002 the wage gap favoured public sector employees in the majority of cases (i.e. 17 out of 21 cases). These positive wage gaps were found to be relatively large for Greece (46%), Bulgaria (32%), Latvia (45%), Poland (31%), Portugal (74%) and Romania (37%). In contrast, in very few cases (i.e. Finland, Hungary, Sweden and Slovakia) does a wage gap in favour of the private sector emerge. The extent to which these wage gaps can be explained by observable characteristics varies greatly across the sample of countries considered. For two countries only (Sweden and the Czech Republic) observable characteristics explain more than 100% of the wage gap between employees in publicly and privately owned enterprises, while for five countries (Belgium, France, Lithuania, the Netherlands and Norway) unobservable factors explain more than 100% of this wage gap. Unexplained factors also account for a relatively large share of the wage gap (i.e. above 50%) in Estonia, Finland, Hungary, Latvia, Slovakia and the United Kingdom. In the majority of cases (13 out of 21) a decline in the wage gap is observable between 2002 and 2010. These declines were relatively large in Latvia (by 39 pp), Romania (by 32 pp), Greece (by 26 pp) and France (by 25 pp). In the remaining eight countries increases in the wage gap between 2002 and 2010 are observable, which are highest for Belgium (by 28 pp). For Germany, a negative wage gap for 2010 emerges, indicating that employees in privately owned enterprises earn more than those in publicly owned enterprises, while for Croatia in 2010 a positive wage gap is observed. As for 2002 there is a great deal of heterogeneity in the extent to which these wage gaps can be explained by observable characteristics. For France, Croatia, Hungary, Lithuania, Romania and Slovakia the results indicate that observable characteristics explain more than 100% of the wage gap, while for Germany, Estonia, Latvia and Norway unexplained factors account for more than 100% of the wage gap. In another two countries (Bulgaria and Croatia) unexplained factors account for more than 50% of the observed wage gap.

**Figure 5.3.6 / Contribution of differences between publicly and privately owned enterprises to Gini index (in %)**



Note: Countries are ranked according to contribution to Gini index in 2010.

Source: SES; wiiw calculations.

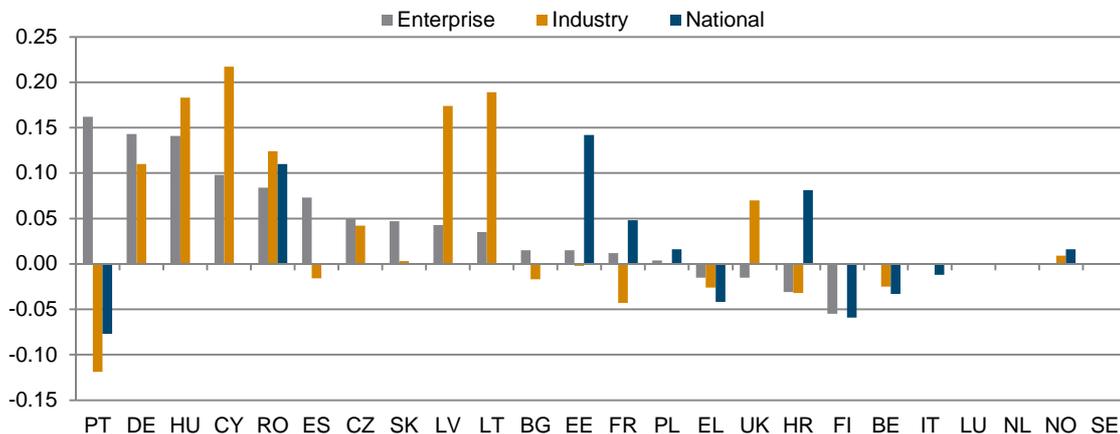
Figure 5.3.6 reports results of the Shapley decomposition for the public-private ownership distinction. Differences between public and privately owned enterprises are found to be, in general, low conditional on all other explanatory variables. In 2010, the contribution to inequality was above 2% in only five countries: it was highest in Cyprus (with only 8%), followed by Italy, Spain, Sweden and Finland (with around 4%). For the remaining countries, the contribution was below 2%. Moreover, in some countries

the inclusion of the variable in the decomposition analysis actually lowers the general wage differences, which leads to a negative contribution of the characteristic, which is the case for Bulgaria in 2006, Greece in 2002, Latvia in 2002 and Portugal in 2002. The contribution of conditional wage differences to total inequality however does not only stem from higher wages in public enterprises compared to privately owned ones. Contrary to results from the Mincer regressions, higher than average contributions in Finland and Sweden are the result of lower conditional wage levels in the public sector, whereas in Cyprus public sector employees earn a substantial premium compared to those in the private sector. Throughout the period 2002 to 2010 conditional wage differences had a very low contribution to the Gini index (around 1%) in the Czech Republic, Germany, Estonia, Greece, Latvia the Netherlands and the UK. In Bulgaria, Hungary, as well as Lithuania, the contribution of differences between publicly and privately owned enterprises to inequality fell below that level.

### 5.3.3 COLLECTIVE PAY AGREEMENTS

The results of the Mincer regressions on collective pay agreements are rather mixed across countries. Figure 5.3.7 reports the results of the Mincer regressions for 2010, with non-collective pay agreements as reference group. As far as data are available (see the appendix for details) results suggest that enterprise and/or industry level bargaining has positive effects on wages, particularly in Portugal, Germany, Hungary, Cyprus, Lithuania and Latvia. These effects can be relatively sizeable with about 10-15%. National pay agreements are particularly important for Cyprus, Estonia and Croatia; in Portugal and Finland these have a negative impact.

**Figure 5.3.7 / Wage effects of collective pay agreements (2010)**

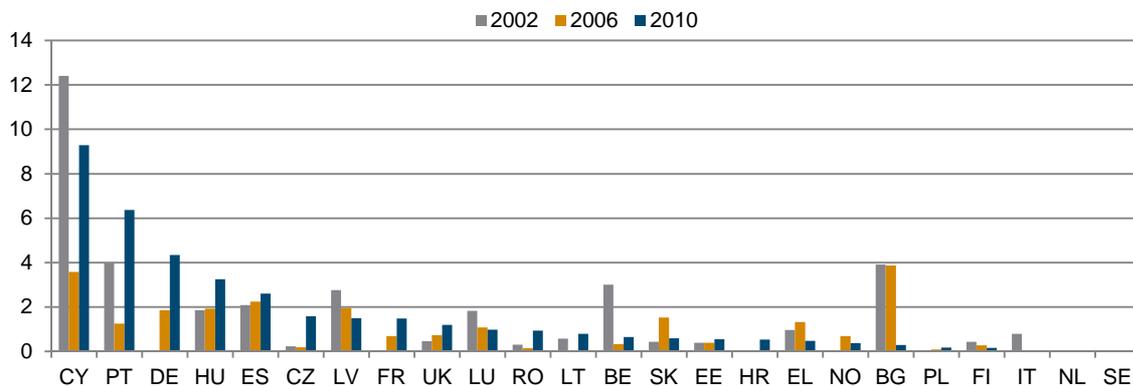


Note: The coefficients are taken from the full Mincer regressions estimated separately for each country as reported in Appendix Table A.1. Reference group is non-collective pay agreements. Countries are ranked according to Enterprise. Source: SES; wiiw calculations.

Figure 5.3.8 reports the contribution to inequality of differences between the wages of employees working in enterprise units covered by collective agreements and those who are not covered by collective agreements. The results indicate that such differences explain a relatively small share of inequality in the majority of countries. Explaining up to 12% (in 2002) and 9% (in 2010) it is, however, relatively high in Cyprus, along with Portugal, Germany, Hungary and Spain. For Portugal, the regression results show that contrary to expectations conditional wage levels are lower for employees

covered by collective agreements compared to employees who are not covered, which also resulted in its high contribution to overall inequality. For Germany and Spain, due to higher remuneration in covered enterprises, the contribution is also above the average of all countries for all years considered. In Bulgaria this was only the case in 2002 and 2006. On the contrary, particularly low contributions to inequality of below 1% are found in Belgium and Italy (both after 2002), as well as Croatia, Estonia, Finland, Lithuania, Norway, Poland and Romania.

**Figure 5.3.8 / Contribution of differences due to collective pay agreements to Gini index (in %)**



Note: Countries are ranked according to contribution to Gini index in 2010.

Source: SES; wiiw calculations.

#### 5.3.4 SECTORS

In the Mincer regression reported in the appendix sector dummies are included as well. As reported above, unconditional means suggest that the mining sector (NACE Rev. 1 10-14) pays highest wages on average. This also holds for the conditional results as presented in Table 5.3.2. In Figure 5.3.9 cross-country averages are reported due to wide cross-country differences. The wage gaps are lowest with around 10-15% in sectors such as utilities (electrical energy, etc.), financial services and coke, chemicals and rubber and plastics industry. Even in high-tech sectors such as electronics, these gaps are substantial with around 20%. The largest conditional gaps are observed for personal and public services, retail trade and hotels and restaurants.

Table 5.3.2 / Coefficients of industry dummies, 2010

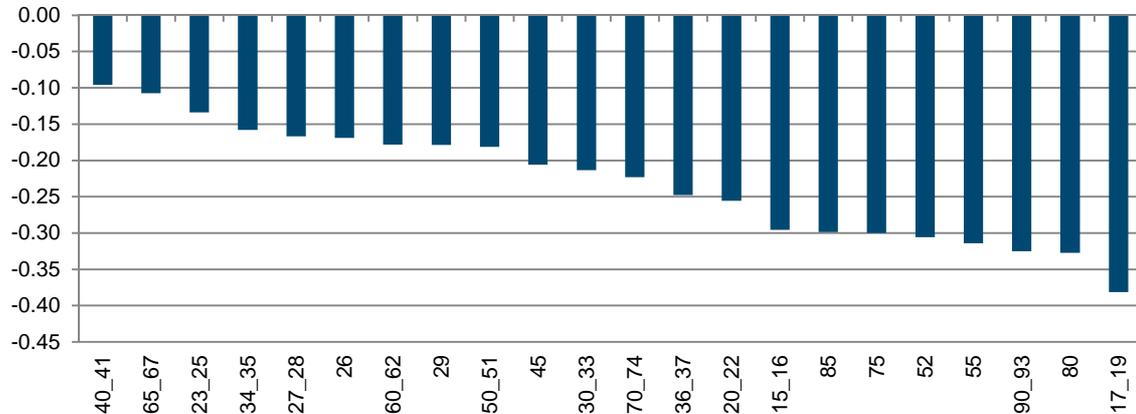
	Belgium	Bulgaria	Cyprus	Czech Republic	Germany	Estonia	Spain	Finland	France	Greece	Croatia	Hungary
15_16	-0.106***	-0.326***	-0.348***	-0.263***	-0.342***	-0.387***	-0.197***	-0.020	-0.088***	-0.242***		-0.256***
17_19	-0.158***	-0.596***	-0.550***	-0.440***	-0.320***	-0.519***	-0.326***	-0.204***	-0.154***	-0.291***		-0.397***
20_22	-0.099***	-0.537***	-0.266***	-0.280***	-0.211***	-0.310***	-0.191***	0.020	-0.071***	-0.259***		-0.215***
23_25	-0.014	-0.382***	-0.254***	-0.170***	-0.045***	-0.290***	-0.050***	0.010	0.008	-0.111***	-0.003	-0.008
26	-0.058***	-0.184***	-0.179***	-0.137***		-0.174***	-0.097***	-0.064***	-0.055***	-0.146***	-0.204***	-0.106***
27_28	-0.055***	-0.360***	-0.257***	-0.166***	-0.158***	-0.240***	-0.095***	-0.042***	-0.066***	-0.239***	0.138***	-0.113***
29	-0.088***	-0.343***	-0.284***	-0.207***	-0.117***	-0.160***	-0.103***	-0.043***	-0.090***	-0.286***	0.122***	-0.086***
30_33	-0.088***	-0.281***	-0.273***	-0.196***	-0.125***	-0.314***	-0.157***	-0.010	-0.070***	-0.237***		-0.198***
34_35	-0.072***	-0.315***	-0.275***	-0.086***	-0.045***	-0.227***	-0.081***	-0.053***	-0.025	-0.138***		-0.088***
36_37	-0.126***	-0.478***	-0.256***	-0.251***	-0.286***	-0.342***	-0.204***	-0.140***	-0.115***	-0.265***	0.128***	-0.233***
40_41	0.139***	-0.040***	-0.259***	0.028***	-0.026**	-0.176***	-0.033**	0.055***	0.064***	-0.036		0.013
45	-0.043***	-0.257***	-0.241***	-0.222***	-0.213***	-0.290***	-0.124***	0.008	-0.117***	-0.234***	0.027*	-0.239***
50_51	-0.111***	-0.222***	-0.222***	-0.116***	-0.214***	-0.253***	-0.166***	-0.009	-0.109***	-0.252***	0.156***	-0.183***
52	-0.196***	-0.320***	-0.404***	-0.280***	-0.316***	-0.441***	-0.280***	-0.122***	-0.219***	-0.381***	0.105***	-0.275***
55	-0.221***	-0.344***	-0.361***	-0.436***	-0.435***	-0.384***	-0.186***	-0.158***	-0.178***	-0.280***	0.125***	-0.271***
60_62	-0.068***	-0.285***	-0.133***	-0.219***	-0.326***	-0.269***	-0.113***	0.025**	-0.096***	-0.130***	0.103***	-0.156***
65_67	-0.047***	-0.393***	-0.091***	-0.153***	-0.105***		-0.089***	0.044***	-0.075***	-0.141***	0.132***	0.016
70_74	-0.112***	-0.271***	-0.268***	-0.159***	-0.283***	-0.309***	-0.265***	-0.097***	-0.139***	-0.245***	0.165***	-0.232***
75		-0.416***	-0.360***	-0.255***		-0.230***	-0.269***	-0.077***	-0.228***	-0.443***	0.077***	-0.168***
80	-0.101***	-0.316***	-0.206***	-0.284***	-0.537***	-0.438***	-0.275***	-0.193***	-0.448***	-0.270***	-0.060***	-0.328***
85	-0.144***	-0.412***	-0.415***	-0.223***	-0.387***	-0.271***	-0.238***	-0.098***	-0.247***	-0.404***	0.104***	-0.296***
90_93	-0.144***	-0.488***	-0.380***	-0.323***	-0.381***	-0.429***	-0.333***	-0.202***	-0.213***	-0.329***	0.077***	-0.269***

Table 5.3.2 (contd.) / Coefficients of industry dummies, 2010

	Italy	Lithuania	Luxembourg	Latvia	Netherlands	Norway	Poland	Portugal	Romania	Sweden	Slovak Republic	United Kingdom
15_16		-0.254***		-0.415***	-0.356***	-0.375***	-0.488***		-0.554***	-0.230***	-0.229***	-0.433***
17_19	-0.153***	-0.357***		-0.565***	-0.375***	-0.429***	-0.696***	-0.151***	-0.581***	-0.275***	-0.364***	-0.484***
20_22	-0.101***	-0.257***		-0.376***	-0.332***	-0.401***	-0.527***	0.087***	-0.524***	-0.175***	-0.188***	-0.413***
23_25	-0.014	0.01			-0.262***	-0.251***	-0.410***	0.151***	-0.297***	-0.141***	-0.056***	-0.364***
26	-0.024**	-0.191***	-0.096***		-0.334***	-0.312***	-0.442***	0.070***	-0.362***	-0.218***	-0.052***	-0.353***
27_28	-0.044***	-0.111**	0.015		-0.377***	-0.325***	-0.435***	0.047***	-0.329***	-0.213***	-0.015*	-0.392***
29	-0.036***	-0.132***	-0.152***		-0.339***	-0.277***	-0.433***	0.042***	-0.447***	-0.232***	-0.066***	-0.349***
30_33	-0.088***	-0.090***		-0.276***	-0.334***	-0.282***	-0.417***		-0.337***	-0.185***	-0.141***	-0.379***
34_35	-0.012	-0.109***			-0.368***	-0.273***	-0.376***	0.118***	-0.255***	-0.219***	-0.151***	-0.264***
36_37	-0.077***	-0.244***	0.066	-0.358***	-0.482***	-0.392***	-0.470***	-0.052***	-0.499***	-0.235***	-0.185***	-0.445***
40_41	0.013	-0.061**		-0.250***	-0.263***	-0.303***	-0.322***		-0.156***	-0.162***	0.035***	-0.274***
45	0.045***	-0.316***	-0.193***	-0.380***	-0.306***	-0.297***	-0.462***	0.085***	-0.455***	-0.151***	-0.195***	-0.367***
50_51	-0.006	-0.220***	-0.116***	-0.285***	-0.398***	-0.342***	-0.382***	0.142***	-0.364***	-0.196***	-0.063***	-0.423***
52	-0.074***	-0.280***	-0.236***	-0.475***	-0.536***	-0.506***	-0.514***	0.028**	-0.478***	-0.277***	-0.232***	-0.623***
55	-0.146***	-0.288***	-0.221***	-0.406***	-0.615***	-0.512***	-0.440***	0.001	-0.513***	-0.307***	-0.290***	-0.671***
60_62	-0.042***	-0.256***	-0.005	-0.284***	-0.353***	-0.313***	-0.492***	0.192***	-0.325***	-0.209***	-0.176***	-0.344***
65_67	0.287***	-0.150***	0.086***	-0.140***	-0.300***	-0.287***	-0.497***	0.288***	-0.457***	-0.105***	-0.072***	-0.219***
70_74	-0.124***	-0.244***	-0.108***	-0.304***	-0.460***	-0.354***	-0.437***	0.074***	-0.389***	-0.242***	-0.140***	-0.412***
75		-0.206***		-0.340***	-0.364***		-0.504***		-0.717***	-0.330***	-0.163***	-0.408***
80	-0.179***	-0.197***	0.016	-0.587***	-0.406***	-0.529***	-0.320***	-0.006	-0.945***	-0.425***	-0.332***	-0.486***
85	-0.184***	-0.290***	0.143***	-0.470***	-0.367***	-0.445***	-0.599***	-0.116***	-0.688***	-0.381***	-0.244***	-0.496***
90_93	-0.141***	-0.367***	-0.04	-0.409***	-0.468***	-0.474***	-0.578***	0.047***	-0.791***	-0.320***	-0.292***	-0.550***

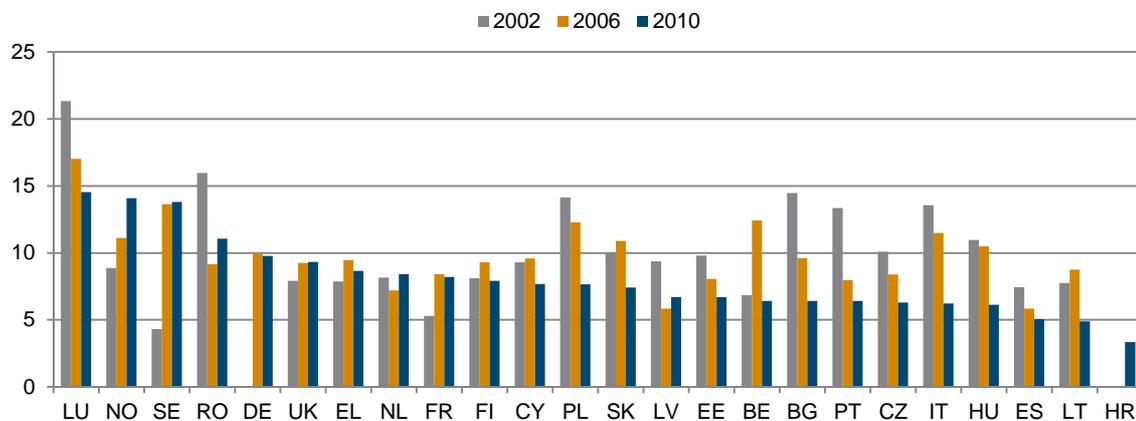
Note: The coefficients are taken from the full Mincer regressions estimated separately for each country as reported in Appendix Table A.1. Reference group is the mining sector. \*\*\*, \*\*, \* denote significance at the 1, 5 and 10% level.

Source: SES; wiiw calculations

**Figure 5.3.9 / Industry specific wage gaps (mean over countries), 2010**

Note: The coefficients are taken from the full Mincer regressions estimated separately for each country as reported in Appendix Table A.1. Reference group is the mining industry. Industry codes correspond to NACE Rev. 1 classification.  
Source: SES; wiiw calculations

In Figure 5.3.9 we report the effect of (conditional) wage differentials by sector on the overall Gini index. The contribution of differences between NACE sectors to inequality are depicted in Figure 5.2.10. It highlights that conditional wage differences between NACE sectors account for a substantial part of overall inequality, contributing on average 9.7% to the Gini index over all countries across the period considered. In 2010, the contribution of NACE sectors to inequality ranged from 5% (in Spain, Lithuania and Croatia) to almost 15% (in Luxembourg, Norway and Sweden). However, a comparison between contributions to inequality across time points at interesting changes. In particular, between 2002 and 2010, the contribution of NACE sectors to inequality dropped in the majority of countries. In particular, it dropped the most in the set of countries with initially highest contributions. In contrast, it increased in a small number of countries and increased the most in Sweden (from initially 4% to 13%), Norway (from initially 8% to 13%) and France (from around 5% to around 8%).

**Figure 5.3.10 / Contribution of differences between NACE sectors to Gini index (in %)**

Note: Countries are ranked according to contribution to Gini in 2010.

Source: SES; wiiw calculations

## 6 Summary and conclusions

This study provides a detailed view on earnings inequalities over the period 2002 to 2010 based on the Structure of Earnings Survey. In doing so Mincer wage equations have been estimated to highlight patterns and trends in earnings structures due to individual characteristics (sex, age, and education), job characteristics (experience, contract type, full-time/part-time, occupations) and firm characteristics (firms size, public and private control, collective pay agreements, sectors). Based on these results the contributions of each of these characteristics to overall inequality as measured by the Gini index has been calculated.

Particularly in the context of the Europe 2020 strategy, which puts strong emphasis on goals such as high levels of employment, productivity and social cohesion, the study points to interesting findings. For instance, results demonstrate that the crisis had no significant effect on the earnings distribution and did not, as widely feared, lead to higher inequality among workers. In fact, inequality – as measured by the Gini coefficient - remained fairly stable across time. This finding is indicative of a high degree of wage rigidity across the EU which helped maintain average wages for workers roughly at pre-crisis levels. This also implies that labour market adjustments needed to accommodate the crisis were predominantly of quantitative nature via adjustments in average hours worked and/or number of employees. Though overall income inequality could be affected due to changes in employment and therefore household income, the results do not point towards a significant increase in inequality due to changes in earnings of those which remain in employment.

Likewise, the contribution of individual worker, job and firm characteristics to inequality also hardly changed as a result of the crisis. In particular, the analysis reveals that for all three years considered, on average 70% of observed inequality can be explained by individual worker, job and firm characteristics while 30% remain unexplained. However, the contribution to inequality differs across characteristics considered: individual characteristics contribute around 20% to inequality, job characteristics around 35% and firm characteristics around 15%. In addition, as for the role of particular individual characteristics, occupation and education turn out to be the two most important factors with about 25% and 12%, respectively, followed by industry (with around 10%), enterprise size and job duration (with around 6% each), age (with around 5%), gender (with only around 3.5%), type of ownership and type of collective pay agreements (with around 2% each) and, finally, type of contract and full-time or part-time employment (with only around 1% each).

Moreover, findings point to interesting trends in wage differences between 2002 and 2010. For instance, gender wage gaps clearly narrowed over time. In contrast, except for the oldest age cohort 60+, age-related wage differences increased in the majority of countries. In addition, increases in education-related wage differences observable in the majority of countries tended to be stronger for higher levels of education and were most pronounced in the highest level of education. No clear trends emerge for the remaining job and firm characteristics.

Thus, with respect to social cohesion one has to be aware of the changes in the dimensions driving inequality in earnings. For example, whereas there is clear evidence that the gender wage declined in the period considered above in all countries, wage gaps increased with respect to other characteristics such as age cohorts and educational attainment levels. However, as results also indicate some of these trends can be quite heterogeneous across countries and would therefore need a more in-depth cross-country analysis on underlying institutional and labour market changes. This could be done focusing on the most important aspects of earnings differences and contributions to inequality arising from the broad patterns and trends outlined in this study. Another aspect which could deserve further attention is to explain potential differences in the conditional and unconditional wage gaps which might arise due to the fact that some groups in the labour market cannot enter specific jobs (e.g. occupations) for various reasons or the effect of changes in employment patterns (e.g. in course of the crisis) on inequality dimensions.

Thus, the dataset – the Structure of Earnings Survey – is a highly valuable source for studying earnings patterns and its determinants across countries and over time. In a next step a more in-depth analysis concerning the question whether earnings differences across the many dimensions of a particular characteristic are actually significantly different and whether changes over time are actually significant. Furthermore, some analysis on interaction effects (e.g. part-time and female) was undertaken which however could be extended to some other dimensions. Finally, in even allowing for a better assessment of these issues concerning inequality and earnings differentials a solution to some technical problems (such as coding issues, classifications across countries, etc.) with the dataset (as outlined in the Appendix), coherence of the CD-ROM and the Eurostat SAFE Centre dataset, etc. would be appreciated. Furthermore, a slight extension of the survey, which would then capture more aspects of e.g. firm characteristics (such as exporter/non-exporter status, foreign owned, etc.), or a more accurate measure of some characteristics (such as experience) could allow for an even wider range of potential factors to be studied.

## 7 Literature

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## Technical Appendix: Methodological approach and data issues

### MINCER REGRESSIONS

The primary objective of this task is to determine the quantitative impact of the indicators we have looked at in the previous chapter (e.g. age, gender, education, firm size, ...) on the structure of earnings. Though a lot of information is provided by the descriptive analysis, the econometric results shed further light on the relative strength and importance of the various dimensions. Furthermore, the econometric analysis allows one to consider conditional correlations between wages and the set of indicators, which is not possible in the descriptive analysis.

For each SES wave, regression models were estimated at the level of the Member State. The starting point is the estimation of a so-called 'Mincer equation' (Mincer, 1958), which is the baseline specification in estimating earnings. In the initial specification, the log of gross hourly earnings of a worker  $i$  at time  $t$ s regressed on a number of indicators using OLS with robust standard errors. As in the descriptive analysis, weights in the dataset have been used in order to make the sample representative for the whole working population. The basic equation to be estimated is of the following form:

$$\ln w_{it} = \mathbf{b}'_{it}\boldsymbol{\beta} + \mathbf{a}'_{j(i,t)}\boldsymbol{\delta} + \varepsilon_{it}$$

where  $w_{it}$  denotes the log of gross hourly earnings (including bonuses) of a worker  $i$  at time  $t$ ,  $\mathbf{b}'_{it}$  is a vector of individual characteristics, and  $\mathbf{a}'_{j(i,t)}$  denotes firm-specific variables.  $\boldsymbol{\beta}$  and  $\boldsymbol{\delta}$  are parameters to be estimated. Vector  $\mathbf{b}'_{it}$  contains information on the following individual characteristics: age (based on groups defined above), education (based on ISCED), occupation (based on ISCO 1-digit), employment contract type, gender, full-time/part-time and length of the service in the enterprise. The firm-specific variables used in  $\mathbf{a}'_{j(i,t)}$  include firm size, industry affiliation, regional location, information on economic and financial control and type of collective pay agreement covering at least 50% of the employees in the local unit. For all variables, subgroups identical to the ones described in Section 3.4 were generated for each indicator. These subgroups are represented by dummies in the OLS estimation.

In the following two sections, the regression results are discussed in detail. The focus lies on the results of SES 2010, while in some interesting cases, developments are shown over time. In order to be able to present the findings, the results for each individual or firm characteristic are presented separately. However, all results shown are always extracted from the full Mincer regressions accounting for all the firm and personal characteristics.

### BLINDER-OAXACA DECOMPOSITION

The Blinder-Oaxaca decomposition (Blinder, 1973; Oaxaca, 1973) has been extensively used in studies of wages to consider differences in wages by groups (usually by gender or race). The method involves

decomposing differences in mean log wages from wage regressions into an explained and an unexplained component. The explained component can be accounted for by observable differences in group characteristics, such as education and work experience, while the unexplained component cannot be explained by such observable characteristics. In much of the literature, the unexplained component has been used as a measure of discrimination, though this component also includes the effects of differences in unobserved predictors of wages.

The basic idea behind the decomposition is as follows. Consider two groups A and B (e.g. males and females respectively), an outcome variable  $Y$  (e.g. log wages) and a set of explanatory variables  $X$  (e.g. education, work experience, ...). We are interested in finding how much of the mean difference in outcomes (i.e.  $R = E(Y_A) - E(Y_B)$ ) is accounted for by the explanatory variables. The difference in the group specific means is obtained from a linear regression model of the form:

$$Y_l = X_l' \beta_l + \varepsilon_l \quad \text{with } l \in \{A, B\}$$

with  $X$  being the vector of explanatory variables,  $\beta$  being a set of parameters to be estimated and  $\varepsilon$  being an error term that has standard properties.<sup>10</sup> The mean outcome difference can then be expressed as the difference in the linear prediction at the group-specific means of the regressors, i.e.

$$R = E(Y_A) - E(Y_B) = E(X_A') \hat{\beta}_A - E(X_B') \hat{\beta}_B$$

Where a ' $\wedge$ ' indicates estimates from the linear regression model. This equation is then decomposed to allow one to identify the contribution of group differences in the explanatory variables and a remaining unexplained component. Note, that a further three-fold decomposition is also often used that includes an interaction between the above two components, accounting for the fact that differences in endowments and coefficients exist simultaneously between the two groups (see Jann, 2008 for further details). In our analysis we concentrate on the two-fold decomposition. This is obtained by rearranging the above equation to give:

$$R = [E(X_A) - E(X_B)]' \beta^* + [E(X_A')(\beta_A - \beta^*) - E(X_B')(\beta_B - \beta^*)]$$

where  $\beta^*$  is a non-discriminatory vector of coefficients. Here the first term on the RHS captures the difference that is explained by differences in the group explanatory variables, and the second term on the RHS captures the unexplained component. This latter component is usually ascribed to discrimination, but as mentioned above, it should be borne in mind that this will also capture differences in unobservables across groups.

In order to implement this decomposition we need values for the non-discriminatory vector of coefficients,  $\beta^*$ . Here, we have to assume that discrimination is directed towards one of the two groups. Considering our example of gender groups, the male based decomposition assumes that males are paid their marginal products and females are discriminated against. In this case, the non-discriminatory vector of coefficients is that for males, i.e.  $\beta_A$ , and the decomposition becomes:

$$R = [E(X_A) - E(X_B)]' \beta_A + [E(X_A')(\beta_A - \beta_A) - E(X_B')(\beta_B - \beta_A)]$$

$$R = [E(X_A) - E(X_B)]' \beta_A + [E(X_B')(\beta_B - \beta_A)]$$

<sup>10</sup> In our analysis we use unweighted regressions when calculating the Blinder-Oaxaca decomposition.

The alternative is to assume that females are paid their marginal product and males are positively discriminated against. In this case the decomposition is as follows:

$$R = [E(X_A) - E(X_B)]' \beta_B + [E(X'_A)(\beta_A - \beta_B) - E(X'_B)(\beta_B - \beta_B)]$$

$$R = [E(X_A) - E(X_B)]' \beta_B + [E(X'_A)(\beta_A - \beta_B)]$$

Various methods have been suggested to combine these two decompositions, such as the use of averages of the two sets of parameter estimates, weighting the parameter estimates by sample size or using the parameters estimates from pooled regression (e.g. Reimers, 1983; Cotton, 1988; Neumark, 1988).<sup>11</sup>

## INEQUALITY MEASURES

Measuring inequality based on survey data has a long tradition in the literature. Already in the 1970s a wide range of inequality measures existed and their properties were described in detail e.g. in two essential publications of that strand of research, Sen's 'On Economic inequality' (1973) (see Sen, 1997) and Atkinson's 'The Economics of Inequality' (1975) (Atkinson, 1975). Inequality measurement is commonly based on three different (classes of) measures, the first being simple percentile ratios  $p_i/p_j$ ; second the well-known and most frequently used Gini index,

$$G = \frac{N+1}{N-1} - \frac{2}{N(N-1)\mu} \sum_{i=1}^N \rho_i y_i$$

Here  $N$  denotes the number of observations,  $y_i$  is the variable under consideration (e.g. wages of individuals) and  $\rho_i$  denotes the share of units with a specific wage in the total population.<sup>12</sup> The third group of indices considered is the generalised class of entropy measures defined as

$$I_\alpha = \frac{1}{\alpha(\alpha-1)} \frac{1}{N} \sum_{i=1}^N \left[ 1 - \left( \frac{y_i}{\mu} \right)^\alpha \right]$$

for  $\alpha \neq 0, 1$ . In the equation (and both measures described below)  $y_i$  denotes the wage of the individuals,  $N$  is the number of units and  $\mu$  is the unit's average wage in the total population. In the formula of the generalised class of entropy measures, the parameter  $\alpha$  can be seen as an indicator of inequality aversion and it also indicates the sensitivity to transfers at different parts of the distribution (for negative and low positive  $\alpha$  the index is more sensitive to changes in the distribution that affect the lower tail); see Sen (1997) for a discussion. This allows, e.g., to focus on changes in the lower part of the income distribution, which might be more problematic with respect to social cohesion. For the limiting cases of  $\alpha \rightarrow 0$  the entropy measure becomes the Mean logarithmic deviation (also named Theil's second measure)

$$I_0 = \frac{1}{N} \sum_{i=1}^N \ln \frac{\mu}{y_i}$$

<sup>11</sup> There are few quantitative or qualitative differences when using these two approaches in our analysis. In this report, we report results based on the second assumption, assuming that females are paid their marginal product and males are discriminated against.

<sup>12</sup> Note that the Gini index can be expressed in different ways.

For  $\alpha \rightarrow 1$  it becomes the well-known Theil measure ( $I_1$ )

$$I_1 = \frac{1}{N} \sum_{i=1}^N \frac{y_i}{\mu} \ln \frac{y_i}{\mu}$$

The Gini index, the Mean logarithmic deviation and the Theil measure can all take values between 0 and 1, where the former value denotes perfect equality and 1 perfect inequality, i.e. one individual would earn the total payroll.

### SHAPLEY VALUE APPROACH

Recently, the literature on inequality analysis has provided various decomposition methods which are based on regression results like the Shapley value approach as introduced by Shorrocks (1999) but also others; see Fields and Yoo (2000), Morduch and Sicular (2002), Fields (2003), Wan (2004), Gunatilaka and Chotikapanich (2006) or Molini and Wan (2008) for such applications; see also Cowell and Fiorio (2009) for a critical review. The most important advantage of the Shapley value approach is that this takes the potential correlation amongst regressors into account and that it allows assessing the importance of a multitude of explanatories in shaping the situation of inequality.

The Shapley value approach can be illustrated by using a simple example with three explanatory variables. We first regress individual income levels  $y$  on these explanatory variables  $x_i$  ( $i = 1, 2, 3$ ),

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \varepsilon,$$

where  $\varepsilon$  denotes the error term. The predicted income level is then given by

$$\hat{y}_{123} = \hat{\beta}_0 + \hat{\beta}_1 x_1 + \hat{\beta}_2 x_2 + \hat{\beta}_3 x_3.$$

This predicted value is then used to calculate the Gini coefficient when including all explanatory variables,  $\hat{G}_{\{123\}}^{(0)}$ , where subscripts denote the variables included. In the first round one then eliminates one variable when calculating the predicted income level and calculates the predicted income levels  $\hat{y}_{\{23\}}$ ,  $\hat{y}_{\{13\}}$  and  $\hat{y}_{\{12\}}$ , i.e. including explanatory variables 2 and 3, 1 and 3 and 1 and 2, respectively. The corresponding Gini coefficients are then given by  $\hat{G}_{\{23\}}^{(1)}$ ,  $\hat{G}_{\{13\}}^{(1)}$  and  $\hat{G}_{\{12\}}^{(1)}$  respectively. Analogously, in the second round one eliminates two variables, thus calculating  $\hat{y}_{\{1\}}$ ,  $\hat{y}_{\{2\}}$  and  $\hat{y}_{\{3\}}$ . The resulting Gini coefficients are  $\hat{G}_{\{1\}}^{(2)}$ ,  $\hat{G}_{\{2\}}^{(2)}$  and  $\hat{G}_{\{3\}}^{(2)}$ . The final round would then be to include the constant only; the resulting Gini coefficient would thus be  $\hat{G}_{\{1\}}^{(3)} = 0$ . It should be emphasised that in this procedure the Mincer regression is only estimated once including all explanatory variables; the latter are sequentially excluded only when calculating the predicted income levels.

The marginal contributions are then calculated using the Gini coefficients. The first round marginal contributions for each variable are  $C_1^{(1)} = \hat{G}_{\{123\}}^{(0)} - \hat{G}_{\{23\}}^{(1)}$ ,  $C_2^{(1)} = \hat{G}_{\{123\}}^{(0)} - \hat{G}_{\{13\}}^{(1)}$  and  $C_3^{(1)} = \hat{G}_{\{123\}}^{(0)} - \hat{G}_{\{12\}}^{(1)}$ .

The marginal contributions in the second round of the first variable are given by

$$C_1^{(2,1)} = \hat{G}_{\{12\}}^{(1)} - \hat{G}_{\{2\}}^{(2)} \quad \text{and} \quad C_1^{(2,2)} = \hat{G}_{\{13\}}^{(1)} - \hat{G}_{\{3\}}^{(2)}$$

The average of these contributions is the marginal contribution of the first variable in the second round, i.e.

$$C_1^{(2)} = \frac{1}{2}(C_1^{(2,1)} + C_1^{(2,2)}) . \quad \text{Similarly we calculate } C_2^{(2)} \text{ and } C_3^{(2)} . \quad \text{The third round contribution is given by}$$

$$C_1^{(3)} = \hat{G}_{\{1\}}^{(2)} - \hat{G}_{\{\}}^{(3)} = \hat{G}_{\{1\}}^{(2)} \quad \text{as } \hat{G}_{\{\}}^{(3)} = 0 \quad \text{and analogously for } C_2^{(3)} = \hat{G}_{\{2\}}^{(2)} \quad \text{and } C_3^{(3)} = \hat{G}_{\{3\}}^{(2)} .$$

Finally, averaging the marginal contributions of each variable over all rounds results in the total marginal effect of each variable  $j = 1, 2, 3$  i.e.

$$C_j = \frac{1}{3} \cdot (C_j^{(1)} + C_j^{(2)} + C_j^{(3)}) .$$

The proportion of inequality not explained is then given by

$$C_R = G - \hat{G}_{\{123\}}^{(0)} .$$

The approach can easily be extended to any number of explanatory factors and to other inequality or poverty measures.

Wan (2002) points to the fact that the presence of a negative constant in the regression equation may lead to negative predicted individual income levels. In that case the calculation of a Gini-coefficient and thus the contributions of individual variables to overall inequality would be impossible. To overcome this pitfall he shows in Wan (2004) that different model specifications can be used for the underlying estimated income generating function, delivering moreover better log-likelihood values than the linear estimation model. Following his approach, we choose for the analysis in this paper a semilog model:

$$\ln y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \varepsilon ,$$

Since we are not interested in the decomposition of the log of income, but income we have to take the antilog of the above model resulting in

$$e^{\ln y} = e^{\beta_0} * (e^{\beta_1})^{x_1} * (e^{\beta_2})^{x_2} * (e^{\beta_3})^{x_3} * e^{\varepsilon} , \quad \text{which is}$$

$$y = e^{\beta_0} * (e^{\beta_1})^{x_1} * (e^{\beta_2})^{x_2} * (e^{\beta_3})^{x_3} * e^{\varepsilon} .$$

The simple advantage of this model is that the constant  $e^{\beta_0}$  is now a positive scalar, which does not influence the magnitude of the calculated Gini coefficient. The elimination procedure as described above however remains unchanged.

## DATA ISSUES

The underlying data for this study - the Structure of Earnings Survey (SES) - is conducted every four years in the Member States of the European Union and provides comparable information at EU level on relationships between the level of earnings, individual characteristics of employees (gender, age, educational level), job characteristics (occupation, length of services in the enterprise, employment contract type, etc.) and characteristics of their employer (economic activity, size of the enterprise, existence and type of pay agreement, geographical location, etc.). Taken together, the different waves of the survey allow one to observe earnings disparities for three years: 2002, 2006, and 2010.

Restricted access to CD-Rom version of the SES microdataset is available for up to 24 countries for the 2002, 2006 and 2010 SES releases (BE, BG, CY, CZ, DE (since 2006), EE, ES, FI, FR, EL, HR (since 2010), HU, IT, LT, LU, LV, NL, PL, PT, RO, SE, SK, UK, NO). Restricted access to more detailed microdata for the 2002, 2006 and 2010 SES releases are available through the SAFE Centre at the premises of Eurostat in Luxembourg. The 2002 and 2006 SES releases cover 21 EEA countries (CY, CZ, EE, ES, FI, FR, EL, HU, IE, IT, LT, LU, LV, NL, PL, PT, RO, SE, SI, SK, NO). Two more countries, namely HR and TR, have been added for the 2010 SES release.

With respect to the coverage of the SES survey, the following workers are excluded from the dataset (European Commission, 2010):

- › own-account workers (self-employed)
- › sales representatives and other persons who are wholly remunerated by way of fees or commission, are not on the payroll, or are self-employed
- › owners, directors or managers whose remuneration wholly takes the form of a share in profits
- › family workers who are not employees (as defined above) of the enterprise or local unit
- › unpaid voluntary workers (e.g. those who typically work for non-profit institutions such as charities)

The focus of the report is on variables available in all SES versions. The SES 2002 version contains some additional variables covering career breaks, days of sick leave, vocational training, as well as more detailed information on bonuses paid. Information about these variables is, however, missing for most countries and thus is not used.

Bonuses are included only in gross annual earnings. The word 'bonuses' is here a bit too narrow as bonuses include any 'periodic, irregular, ad-hoc and exceptional bonuses and other payments that do not feature every pay period' (European Commission, 2010). The regression results are based on gross hourly earnings including bonuses. To that end, the share of bonuses in gross annual earnings was calculated and added to the gross hourly earnings.

The SES datasets includes gross hourly, monthly and annual earnings in national currency. In order to make the data comparable across countries, data on purchasing power parities based on actual individual consumption was used from Eurostat.

Three major issues have arisen with respect to the SES datasets. The first two issues are related to coding differences across countries. In order to ensure confidentiality, and possibly also for other reasons, rather different groupings were used across countries for some variables. These differences across countries have, to some extent, shaped the groupings of our individual, job and firm

characteristics as can be seen from the list below. Second, the same information is not coded alike across countries. Two examples of variables where these issues arise are sectors and firm size. An example of a specific entry, which is coded differently: information, which is not available may be coded '99999999', '999999999999', '9999999999999999', 'OPT', 'UNK', ':', ',', '@' or 'X' depending on the country and SES version. Third, we stumbled upon a number of problems in the SAFE Centre versions of the SES releases, mostly regarding separators.<sup>13</sup>

Concerning the identification of outliers, some manual research was done and outliers related to part time identified. In particular, we dropped employees which worked less than 1% of the full time equivalent and some instances with very high part time salaries (more than 400 PPP EUR per hour worked).

The following individual, job and firm characteristics were used in the analysis:

#### *Individual characteristics:*

Concerning individual characteristics three dimensions are included.

- › Sex (male/female)
- › Age cohorts (15-19, 20-29, 30-39, 40-49, 50-59, 60+). In the SAFE Center version, the age of the employee is available as a numeric variable, but the CD Rom version only contains information according to the six groups mentioned above. At the SAFE Center, 5-year age groups were formed to identify wage effects for certain groups (e.g. those aged 60 to 65).
- › Educational attainment based on ISCED (0-1 Primary, 2, 3-4 Upper and post-secondary, 5B, Short-cycle tertiary, 5A Bachelor and Master, and 6 Doctoral). ISCED 3 and 4 have been reported separately in 2002, but together in 2006 and 2010. Therefore, these have been merged into one group also in 2002.

#### *Job characteristics*

With respect to job characteristics four variables are considered.

- › Job duration (or experience) with groupings into less than one year, 1-4 years, 5-14 years and 15+ years. For most countries, job duration is available as a continuous variable, but the data for the Netherlands only allows for a grouping into these four categories.
- › Employment contract type distinguished between indefinite duration (A), fixed/temporary duration (B), apprenticeship (C). This distinction is however not reported in Sweden in all three years and not

<sup>13</sup> Croatia 2010: Numeric values are sometimes, but not always, formatted in the following way: '200.120.140'. It seems as if 1000 separators (commas) have been replaced by points. As the decimal character is a point, it is unclear what numbers such as '120.140' stand for.

- Netherlands 2006 Table B: The decimal character suddenly is a comma whereas it is a point in Table A and everywhere else.
- Finland 2002 Table B: The header is missing and values are separated by commas instead of semicolons (all other files are separated by semicolons).
- Estonia 2002 Table B: lots of commas are at the end of each line. As the separator is semicolon, the commas are then stored together with KEY\_L, the variable identifying the enterprise. That makes it hard to merge employer and employee data.
- Greece 2010: Same point as above but with varying amount of spaces after KEY\_L in both tables.

for Poland in 2002. A group of other contract types (D), which is reported for a few countries in 2002 only, has been merged with the group for which the contract type was not available.

- › Full-time/part-time – the grouping follows the classification in the dataset. Part-time workers were then also subdivided into three groups: those that work up to 39%, 40 to 79% and above 80% of the full-time equivalent in the respective country.
- › Occupation according to ISCO-88 1-digit. In a few cases (e.g. NO 2002 and 2010; SI 2006) some are coded as 'Not applicable' or 'Not available'. As the shares are rather small these have been skipped them from the analysis.

#### *Firm characteristics*

Finally, four dimensions of firm characteristics could be included in the analysis.

- › Firm size: 1-49, 50-249, 250+. These groups were most widely used by the member states. Two notable deviations from this pattern are Estonia, which only reported 1-50 and 50+ and Italy, which reported parallel to the above groups the size classes 50+, 1-250, 50-1000. Whenever these groups did not fit the broad classification, they were dropped. In the case of Ital, this parallel regime was not very widely used.
- › Type of collective pay agreement covering at least 50% of the employees: national level or interconfederal (A), industry (B+C), enterprise or local unit (D+E), any other type (F), and no collective agreement (N)
- › Firm's economic and financial control: public (A) or private (B). Another type, covering balanced public and private ownership (50/50 'shared control'), which existed as a separate group (C) in SES 2002 was coded as under private control in later SES versions. Thus, it was put into group private (B) for all SES versions in our analysis. The sector coverage, particularly related to public administration differs quite significantly across countries.
- › Industry is reported according to NACE Rev. 1 in 2002 and 2006 and NACE Rev.2 in 2010. The industry aggregation level used in our analysis is the same in the anonymised and the SAFE Centre version due to confidentiality problems in some countries (less than 10 observations). Information on employment in agriculture was limited to a number of observations in few countries in some SES waves, so this sector was dropped entirely. There were some issues related to the German SES dataset, in which industries were coded very differently from the other countries. In the SES 2010 dataset, the NACE Rev. 2 data was converted to NACE Rev. 1 to make the results comparable to the earlier SES version.

#### *SAFE Centre experience*

While the administrative part worked very well, a number of problems arose at the SAFE Centre with respect to data processing. The problems are related to the dataset, as described above, as well as the IT infrastructure. The IT infrastructure at the SAFE Centre limited our analysis to a large extent. The first problem relates to the memory of the computer provided at the SAFE Centre. The computer had 2 GB of RAM for the Operation System (Windows XP) and applications. The Stata file of each SES version (2002, 2006, 2010) is around 2 GB when combining all countries. It was thus impossible to run regressions across all countries. Secondly, the processor of the computer was too slow to conduct more sophisticated econometric analyses. Running e.g. quantile regressions for each country would take more than a week to finish for all SES versions with the current setup. It would therefore be desirable that the SAFE Centre is equipped better in terms of hardware as well as with a multiprocessor version of the statistical programme (in this case Stata).

## Appendix of Tables

**Table A.1a / Mincer regression results by country for 2010 (1/3)**

ln(gross hourly wages)	BE	BG	CY	CZ	DE	EE	ES	FI	FR	EL	HR	HU
<i>Sex - Reference group: Male</i>												
Female	-0.068*** (-37.911)	-0.049*** (-20.760)	-0.148*** (-13.509)	-0.139*** (-47.289)	-0.096*** (-90.035)	-0.169*** (-42.556)	-0.138*** (-42.582)	-0.125*** (-91.977)	-0.094*** (-20.787)	-0.088*** (-17.036)	-0.132*** (-21.183)	-0.084*** (-30.648)
<i>Age - Reference group: 15-19</i>												
20-29	0.044*** (5.624)	0.007 (0.710)	0.091** (2.300)	0.073*** (7.162)	0.115*** (27.245)	0.091*** (5.005)	-0.017 (-0.755)	0.022*** (3.250)	0.404*** (10.837)	0.008 (0.217)	0.069** (2.573)	0.012 (0.440)
30-39	0.153*** (19.236)	0.006 (0.605)	0.211*** (5.273)	0.155*** (15.036)	0.250*** (56.892)	0.127*** (6.949)	0.059*** (2.617)	0.099*** (14.367)	0.505*** (13.274)	0.140*** (3.862)	0.163*** (5.993)	0.071*** (2.730)
40-49	0.242*** (30.248)	0.014 (1.448)	0.263*** (6.512)	0.136*** (13.109)	0.283*** (64.504)	0.062*** (3.372)	0.088*** (3.880)	0.158*** (22.944)	0.562*** (14.748)	0.238*** (6.560)	0.173*** (6.363)	0.070*** (2.683)
50-59	0.294*** (36.050)	0.016 (1.638)	0.281*** (6.824)	0.126*** (12.220)	0.278*** (62.700)	-0.004 (-0.233)	0.116*** (5.052)	0.165*** (23.811)	0.601*** (15.761)	0.312*** (8.470)	0.210*** (7.403)	0.093*** (3.562)
60+	0.306*** (31.390)	-0.019* (-1.891)	0.216*** (4.615)	0.145*** (13.013)	0.266*** (55.266)	-0.071*** (-3.852)	0.169*** (7.068)	0.169*** (23.464)	0.714*** (18.151)	0.341*** (8.303)	0.274*** (9.279)	0.150*** (5.520)
<i>Education - Reference group: Primary</i>												
Lower secondary	0.052*** (18.193)	-0.008 (-1.027)	0.049* (1.729)	-0.065*** (-9.254)		0.030 (1.500)	0.013*** (3.441)		0.065*** (11.682)	0.023*** (2.630)	0.058** (2.440)	-0.071*** (-5.627)
Upper and post-secondary	0.114*** (40.177)	0.029*** (3.954)	0.087*** (3.538)	0.043*** (6.662)	0.168*** (124.413)	0.081*** (4.175)	0.082*** (17.647)	0.040*** (21.112)	0.118*** (24.898)	0.078*** (10.115)	0.170*** (7.765)	0.049*** (3.902)
Short-cycle tertiary	0.268*** (73.051)	0.028*** (3.298)	0.191*** (6.460)	0.115*** (7.352)		0.145*** (7.193)	0.100*** (17.352)	0.078*** (31.359)	0.205*** (30.810)	0.149*** (14.533)	0.412*** (16.886)	0.184*** (5.844)
Bachelor and Master	0.448*** (98.708)	0.253*** (31.045)	0.317*** (10.740)	0.285*** (34.575)	0.447*** (209.898)	0.274*** (13.655)	0.207*** (31.604)	0.190*** (74.591)	0.259*** (35.441)	0.296*** (22.335)	0.612*** (24.359)	0.472*** (34.155)
Doctoral	0.632*** (21.687)	0.390*** (24.911)	0.626*** (15.061)	0.217*** (11.907)		0.633*** (23.616)	0.197*** (11.411)	0.468*** (94.091)	0.491*** (22.052)	0.443*** (23.291)	0.933*** (31.241)	

**Table A.1a / Mincer regression results by country for 2010 (2/3)**

ln(gross hourly wages)	BE	BG	CY	CZ	DE	EE	ES	FI	FR	EL	HR	HU
<i>Job duration - Reference group: less than 1 year</i>												
1-4yrs	0.028*** (12.354)	0.066*** (25.924)	0.067*** (5.008)	0.082*** (20.251)	0.108*** (79.647)	0.068*** (14.774)	0.051*** (11.916)	0.077*** (39.863)	0.023*** (2.801)	0.046*** (6.296)	0.046*** (4.741)	0.106*** (31.024)
5-14yrs	0.074*** (32.354)	0.113*** (39.637)	0.182*** (12.319)	0.128*** (31.058)	0.195*** (139.483)	0.080*** (17.142)	0.128*** (28.555)	0.108*** (55.776)	0.070*** (12.116)	0.148*** (19.463)	0.100*** (10.631)	0.140*** (40.971)
15+ yrs	0.143*** (52.359)	0.181*** (46.848)	0.369*** (19.901)	0.184*** (39.621)	0.312*** (193.632)	0.122*** (21.012)	0.307*** (53.968)	0.123*** (58.573)	0.163*** (24.962)	0.292*** (30.487)	0.183*** (17.616)	0.221*** (53.290)
<i>Full-time/part-time - Reference group: Full-time</i>												
Part time	-0.076*** (-41.376)	-0.062*** (-20.210)	-0.110*** (-4.853)	-0.069*** (-9.461)	-0.136*** (-118.054)	-0.108*** (-23.382)	-0.018*** (-4.089)	0.004** (2.039)	0.024*** (4.811)	-0.019* (-1.694)	0.018 (1.219)	0.301*** (72.714)
<i>Contract type - Reference group: Indefinite duration</i>												
Fixed term	-0.031*** (-9.319)	-0.046*** (-13.700)	-0.039* (-1.949)	-0.090*** (-26.218)	-0.056*** (-31.416)	-0.002 (-0.299)	-0.025*** (-6.264)	-0.067*** (-35.049)	-0.066*** (-4.582)	-0.008 (-0.815)	-0.121*** (-12.467)	-0.085*** (-17.864)
Trainee	-0.163*** (-8.387)	-0.052 (-1.511)			-0.871*** (-317.302)			-0.131*** (-8.377)	-0.388*** (-16.791)	-0.522*** (-10.996)	-0.321*** (-12.915)	
<i>Occupation - Reference group: Elementary occupations</i>												
Managers	0.580*** (95.019)	0.917*** (132.106)	0.994*** (40.701)	0.799*** (87.104)	0.779*** (210.917)	0.718*** (72.627)	0.787*** (50.649)	0.769*** (150.361)	0.699*** (92.790)	0.523*** (27.969)	0.738*** (24.769)	0.579*** (69.761)
Professionals	0.302*** (78.907)	0.633*** (118.920)	0.466*** (20.200)	0.555*** (93.438)	0.496*** (226.383)	0.695*** (94.137)	0.479*** (65.256)	0.476*** (175.273)	0.518*** (45.229)	0.327*** (24.567)	0.412*** (27.213)	0.434*** (61.340)
Technicians	0.207*** (63.406)	0.471*** (100.057)	0.387*** (19.760)	0.434*** (85.921)	0.425*** (240.950)	0.487*** (80.396)	0.278*** (52.101)	0.277*** (117.351)	0.329*** (63.577)	0.221*** (18.781)	0.369*** (30.123)	0.368*** (86.141)
Clerical support	0.108*** (38.648)	0.219*** (51.241)	0.120*** (6.853)	0.282*** (43.204)	0.173*** (101.399)	0.299*** (40.931)	0.088*** (17.861)	0.136*** (54.226)	0.140*** (27.173)	0.123*** (14.743)	0.248*** (22.314)	0.234*** (47.918)
Service and Sales	0.117*** (38.547)	0.050*** (15.780)	0.097*** (5.361)	0.076*** (13.743)	0.163*** (77.520)	0.099*** (17.127)	0.069*** (13.437)	0.122*** (55.355)	0.180*** (28.764)	0.098*** (11.241)	0.079*** (6.593)	0.146*** (33.034)
Skilled agricul., forestry and fishery workers		-0.005 (-0.260)	-0.152 (-1.252)	0.088*** (2.826)	0.071*** (12.465)	0.269*** (4.640)	0.010 (0.665)	0.034*** (4.496)	0.024* (1.733)	-0.023 (-0.535)	0.068* (1.890)	0.066*** (4.503)
Craft and related trades workers	0.052*** (18.011)	0.269*** (76.569)	0.149*** (7.013)	0.147*** (29.884)	0.116*** (63.316)	0.273*** (40.274)	0.104*** (22.306)	0.139*** (46.412)	0.108*** (18.340)	0.161*** (16.670)	0.066*** (5.035)	0.162*** (38.292)
Plant and machine operators & assem.	0.054*** (18.064)	0.239*** (67.961)	0.092*** (4.546)	0.128*** (29.730)	0.077*** (42.139)	0.213*** (31.986)	0.071*** (13.690)	0.145*** (45.311)	0.086*** (15.474)	0.153*** (15.340)	0.117*** (7.966)	0.167*** (35.561)

**Table A.1a / Mincer regression results by country for 2010 (3/3)**

ln(gross hourly wages)	BE	BG	CY	CZ	DE	EE	ES	FI	FR	EL	HR	HU
<i>Collective pay agreement - Reference group: None</i>												
National	-0.033*** (-9.783)					0.142*** (11.403)		-0.059*** (-6.413)	0.048** (2.457)	-0.042*** (-3.085)	0.081*** (4.038)	
Industry	-0.025*** (-13.765)	-0.017*** (-4.547)	0.217*** (16.694)	0.042*** (7.354)	0.110*** (105.923)	-0.002 (-0.357)	-0.016*** (-2.605)		-0.043*** (-3.214)	-0.026* (-1.842)	-0.032*** (-3.478)	0.183*** (32.477)
Enterprise		0.015*** (5.130)	0.098*** (6.593)	0.050*** (28.163)	0.143*** (71.050)	0.015** (2.526)	0.073*** (12.250)	-0.055*** (-5.433)	0.012 (0.660)	-0.015 (-0.919)	-0.031*** (-4.026)	0.141*** (37.945)
N/A			0.385*** (5.353)			0.567*** (4.766)			-0.044*** (-2.636)	-0.057*** (-4.065)	-0.078*** (-6.488)	0.040*** (4.608)
<i>Enterprise control - Reference group: Public</i>												
Private	-0.073*** (-12.920)	0.075*** (16.387)	-0.229*** (-16.025)	-0.014*** (-3.396)	0.024*** (22.777)	0.095*** (15.651)	-0.138*** (-28.966)	0.086*** (57.235)	0.017* (1.825)	0.003 (0.283)	-0.065*** (-6.421)	-0.024*** (-6.129)
N/A	-0.082*** (-13.749)	-0.018*** (-2.696)										
<i>Firm size - Reference group: 1-49</i>												
50-249 employees	0.031*** (16.396)	0.181*** (66.340)		0.187*** (56.227)	0.060*** (49.472)		0.134*** (34.116)	0.049*** (19.606)	0.036*** (9.393)	0.063*** (8.928)	0.035*** (5.233)	0.178*** (61.937)
250+ employees	0.057*** (29.323)	0.415*** (140.908)		0.259*** (78.230)	0.152*** (118.404)		0.162*** (44.687)	0.066*** (29.387)	0.072*** (19.487)	0.121*** (16.038)	0.107*** (13.770)	0.267*** (93.002)
N/A	-0.014 (-1.409)	0.224*** (27.579)				0.248*** (72.996)	0.095*** (22.298)					
Industry effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country/regional effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	137,254	204,939	32,566	1,992,666	1,614,527	119,219	216,733	315,709	219,786	39,809	40,716	765,293
R-squared	0.711	0.536	0.714	0.522	0.714	0.472	0.565	0.572	0.568	0.543	0.461	0.546

Note: t-values in brackets; \*\*\*, \*\*, \* denote significance at 10, 5, 1% level.

Source: SES; wiiw calculations

**Table A.1b / Mincer regression results by country for 2010 (1/3)**

ln(gross hourly wages)	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
<i>Sex - Reference group: Male</i>												
Female	-0.105*** (-30.546)	-0.122*** (-12.715)	-0.102*** (-16.469)	-0.085*** (-16.182)	-0.099*** (-38.901)	-0.093*** (-128.076)	-0.134*** (-97.590)	-0.132*** (-33.732)	-0.041*** (-15.161)	-0.087*** (-64.504)	-0.160*** (-48.333)	-0.134*** (-59.090)
<i>Age - Reference group: 15-19</i>												
20-29	0.015 (0.503)	-0.030 (-0.364)	0.162*** (3.133)	0.077*** (4.234)	0.398*** (68.396)	0.182*** (92.238)	0.000 (0.039)	-0.006 (-0.384)	0.028* (1.659)	0.063*** (11.572)	0.079*** (5.483)	0.105*** (19.518)
30-39	0.109*** (3.617)	0.031 (0.370)	0.286*** (5.482)	0.092*** (5.071)	0.570*** (91.848)	0.307*** (148.808)	0.093*** (9.534)	0.110*** (7.010)	0.064*** (3.784)	0.156*** (28.509)	0.155*** (10.922)	0.271*** (47.879)
40-49	0.188*** (6.275)	-0.007 (-0.081)	0.350*** (6.693)	0.045** (2.452)	0.619*** (89.396)	0.370*** (178.411)	0.126*** (12.906)	0.198*** (12.313)	0.069*** (4.093)	0.220*** (40.165)	0.138*** (9.663)	0.308*** (54.373)
50-59	0.233*** (7.773)	-0.033 (-0.398)	0.365*** (6.935)	0.020 (1.077)	0.629*** (87.348)	0.371*** (175.215)	0.097*** (9.928)	0.266*** (16.267)	0.089*** (5.208)	0.225*** (40.866)	0.130*** (9.034)	0.280*** (48.353)
60+	0.284*** (8.939)	-0.055 (-0.655)	0.363*** (6.138)	0.034* (1.742)	0.584*** (57.976)	0.353*** (155.377)	0.070*** (6.646)	0.279*** (14.175)	0.111*** (5.951)	0.228*** (40.207)	0.116*** (7.320)	0.218*** (33.529)
<i>Education - Reference group: Primary</i>												
Lower secondary	0.027*** (3.459)	0.127 (1.624)	0.017** (2.221)	0.004 (0.223)	0.046*** (10.169)	0.011*** (7.943)	0.099*** (6.248)	0.128*** (27.262)	0.021 (1.426)	0.045*** (12.399)		-0.006 (-0.217)
Upper and post-secondary	0.136*** (17.641)	0.137* (1.808)	0.102*** (13.880)	0.044** (2.291)	0.139*** (30.612)	0.070*** (54.360)	0.058*** (25.770)	0.223*** (37.855)	0.075*** (5.234)	0.075*** (22.500)	0.132*** (36.474)	0.015 (0.573)
Short-cycle tertiary	0.200*** (18.729)	0.195** (2.555)	0.200*** (17.268)	0.136*** (6.199)	0.273*** (32.297)	0.170*** (112.778)	0.219*** (59.520)	0.487*** (34.766)	0.185*** (11.253)	0.142*** (37.408)	0.267*** (29.836)	0.064** (2.375)
Bachelor and Master	0.285*** (31.521)	0.466*** (6.086)	0.282*** (21.356)	0.339*** (16.587)	0.336*** (62.863)	0.197*** (64.808)	0.410*** (133.039)	0.566*** (60.337)	0.365*** (23.433)	0.174*** (45.775)	0.394*** (55.367)	0.112*** (4.197)
Doctoral	0.431*** (21.923)	0.668*** (8.244)	0.494*** (16.597)	0.642*** (19.711)	0.591*** (41.412)	0.363*** (124.565)	0.254*** (37.136)	0.952*** (68.170)	0.771*** (36.414)	0.205*** (50.643)	0.538*** (43.450)	0.175*** (6.155)

**Table A.1b / Mincer regression results by country for 2010 (2/3)**

ln(gross hourly wages)	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
<i>Job duration - Reference group: Less than 1 year</i>												
1-4yrs	0.031*** (4.805)	0.083*** (7.307)	0.072*** (10.430)	0.092*** (16.119)	0.380*** (16.157)	0.021*** (21.802)	0.040*** (21.880)	0.032*** (6.157)	0.063*** (17.873)	0.041*** (23.750)	0.083*** (17.951)	0.052*** (18.924)
5-14yrs	0.083*** (13.639)	0.123*** (10.368)	0.173*** (24.211)	0.120*** (20.646)	0.483*** (20.279)	0.008*** (9.279)	0.106*** (51.778)	0.095*** (18.464)	0.114*** (32.099)	0.074*** (43.872)	0.127*** (28.514)	0.106*** (36.858)
15+ yrs	0.168*** (27.210)	0.203*** (15.180)	0.349*** (37.822)	0.177*** (24.110)	0.517*** (21.313)	0.019*** (15.175)	0.175*** (78.343)	0.211*** (33.925)	0.231*** (51.024)	0.079*** (41.071)	0.164*** (31.455)	0.156*** (43.710)
<i>Full-time/part-time - Reference group: Full-time</i>												
Part-time	-0.092*** (-16.428)	-0.130*** (-11.449)	0.018** (2.460)	-0.150*** (-27.939)	-0.060*** (-23.653)	-0.025*** (-35.094)	0.009*** (3.778)	0.073*** (6.287)	-0.140*** (-14.133)	-0.011*** (-8.722)	-0.057*** (-8.413)	-0.062*** (-25.703)
<i>Contract type - Reference group: Indefinite duration</i>												
Fixed term	-0.024*** (-3.186)	0.032** (1.997)	-0.078*** (-7.763)	0.075*** (7.745)	-0.111*** (-26.336)	-0.021*** (-17.370)	-0.126*** (-79.389)	-0.080*** (-17.233)	-0.030*** (-3.021)		-0.032*** (-9.197)	-0.040*** (-9.950)
Trainee	-0.142*** (-15.141)	0.957*** (2.981)	-0.748*** (-15.880)	-0.192 (-1.143)	-1.665*** (-78.374)	-0.203*** (-35.469)						
<i>Occupation - Reference group: Elementary occupations</i>												
Managers	0.870*** (26.164)	0.628*** (29.165)	0.963*** (50.594)	0.425*** (43.105)	0.519*** (82.452)	0.504*** (220.509)	0.777*** (205.397)	0.917*** (50.433)	1.015*** (102.286)	0.615*** (133.803)	0.778*** (50.111)	0.741*** (140.355)
Professionals	0.608*** (73.722)	0.522*** (34.116)	0.553*** (43.284)	0.475*** (60.795)	0.386*** (78.506)	0.325*** (199.704)	0.571*** (224.358)	0.591*** (60.530)	0.663*** (92.724)	0.349*** (139.701)	0.524*** (79.477)	0.687*** (192.817)
Technicians	0.274*** (40.441)	0.347*** (22.053)	0.457*** (45.400)	0.324*** (41.907)	0.285*** (65.366)	0.255*** (158.232)	0.357*** (140.615)	0.412*** (50.986)	0.498*** (81.605)	0.237*** (96.416)	0.416*** (80.010)	0.373*** (105.609)
Clerical support	0.147*** (22.546)	0.212*** (11.515)	0.308*** (30.838)	0.205*** (23.487)	0.151*** (35.006)	0.067*** (42.376)	0.215*** (87.205)	0.185*** (26.507)	0.344*** (63.177)	0.076*** (32.266)	0.258*** (37.456)	0.160*** (52.509)
Service and Sales	0.104*** (14.299)	0.090*** (6.347)	0.136*** (14.616)	0.100*** (15.210)	0.115*** (27.925)	0.132*** (90.626)	0.052*** (20.114)	0.094*** (13.957)	0.057*** (13.487)	0.177*** (85.222)	0.090*** (17.723)	0.144*** (50.969)
Skilled agricul., forestry and fishery workers	-0.070*** (-3.911)	0.092 (1.492)	0.051* (1.707)	0.122*** (4.902)	0.031*** (3.006)	0.018** (2.011)	-0.056*** (-4.148)	0.010 (0.431)	-0.004 (-0.241)	0.033*** (5.649)	-0.002 (-0.087)	0.054*** (4.805)
Craft and related trades workers	0.032*** (4.758)	0.223*** (15.249)	0.147*** (16.046)	0.179*** (24.825)	0.118*** (25.241)	0.063*** (34.688)	0.169*** (71.866)	0.121*** (17.217)	0.256*** (62.886)	0.091*** (33.392)	0.149*** (32.518)	0.224*** (47.461)
Plant and machine operators & assem.	0.082*** (11.438)	0.270*** (17.337)	0.065*** (6.029)	0.178*** (24.602)	0.047*** (8.137)	0.021*** (11.706)	0.186*** (74.406)	0.093*** (13.265)	0.242*** (55.743)	0.064*** (23.828)	0.117*** (28.032)	0.060*** (14.759)

**Table A.1b / Mincer regression results by country for 2010 (3/3)**

ln(gross hourly wages)	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
<i>Collective pay agreement - Reference group: None</i>												
National	-0.012 (-0.505)					0.016*** (11.752)	0.016*** (6.347)	-0.077*** (-9.820)	0.110*** (14.010)			
Industry		0.189*** (2.643)		0.174*** (18.013)		0.009*** (6.188)		-0.119*** (-14.786)	0.124*** (14.132)		0.003 (0.716)	0.070*** (22.013)
Enterprise		0.035*** (4.092)		0.043*** (9.044)			0.004*** (3.503)	0.162*** (17.862)	0.084*** (11.730)		0.047*** (10.302)	-0.015*** (-5.481)
N/A			0.051*** (8.244)					-0.115*** (-12.516)	0.136*** (7.698)			0.059*** (11.766)
<i>Enterprise control - Reference group: Public</i>												
Private	-0.133*** (-19.867)	-0.003 (-0.225)		0.034*** (5.059)	0.005 (1.041)	-0.006*** (-4.890)	-0.045*** (-21.260)	-0.044*** (-6.009)	-0.023*** (-4.815)	0.074*** (42.814)	0.039*** (11.105)	-0.017*** (-4.563)
<i>Firm size - Reference group: 1-49</i>												
50-249 employees	0.055*** (11.499)	0.243*** (23.849)		0.341*** (75.475)	0.048*** (16.545)	0.064*** (61.398)	0.136*** (88.618)	0.081*** (18.177)	0.231*** (63.886)	0.031*** (12.201)	0.099*** (26.272)	0.096*** (26.084)
250+ employees	0.112*** (28.577)	0.359*** (33.805)		0.416*** (79.203)	0.097*** (37.640)	0.069*** (75.699)	0.217*** (125.968)	0.109*** (22.483)	0.401*** (107.161)	0.046*** (25.842)	0.184*** (41.564)	0.140*** (47.073)
N/A	-0.014 (-0.431)											0.120*** (5.104)
Industry effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country/regional effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	263,031	38,370	18,212	213,315	172,469	1,399,113	681,612	114,391	278,251	284,901	773,785	178,786
R-squared	0.544	0.476	0.699	0.382	0.646	0.526	0.570	0.701	0.561	0.487	0.452	0.555

Note: t-values in brackets; \*\*\*, \*\*, \* denote significance at 10, 5, 1% level.

Source: SES; wiiw calculations

**Table A.2a / Mincer regression results by country for 2006 (1/3)**

ln(gross hourly wages)	BE	BG	CY	CZ	DE	EE	ES	FI	FR	EL	HU
<i>Sex - Reference group: Male</i>											
Female	-0.098*** (-40.596)	-0.044*** (-17.056)	-0.226*** (-22.322)	-0.187*** (-65.794)	-0.138*** (-128.832)	-0.190*** (-45.031)	-0.163*** (-44.450)	-0.148*** (-110.328)	-0.107*** (-24.906)	-0.112*** (-12.708)	-0.095*** (-43.378)
<i>Age - Reference group: 15-19</i>											
20-29	0.017 (1.402)	0.000 (0.014)	0.093** (2.208)	0.102*** (10.086)	0.107*** (24.823)	0.071*** (5.765)	0.062*** (5.201)	0.043*** (7.162)	0.278*** (7.761)	0.037* (1.713)	-0.025* (-1.648)
30-39	0.115*** (9.458)	0.034*** (3.088)	0.200*** (4.651)	0.177*** (17.153)	0.251*** (55.027)	0.081*** (6.435)	0.134*** (11.249)	0.125*** (20.623)	0.382*** (10.575)	0.183*** (8.343)	0.044*** (2.967)
40-49	0.169*** (13.875)	0.069*** (6.343)	0.244*** (5.804)	0.163*** (15.695)	0.286*** (62.641)	-0.001 (-0.088)	0.167*** (13.886)	0.166*** (27.157)	0.444*** (12.309)	0.268*** (10.784)	0.060*** (4.045)
50-59	0.204*** (16.508)	0.097*** (8.833)	0.285*** (6.583)	0.151*** (14.604)	0.280*** (60.835)	-0.068*** (-5.364)	0.195*** (15.607)	0.174*** (28.251)	0.492*** (13.598)	0.340*** (13.883)	0.106*** (7.074)
60+	0.213*** (13.581)	0.087*** (7.431)	0.179*** (3.836)	0.167*** (14.310)	0.277*** (53.258)	-0.142*** (-10.970)	0.222*** (14.552)	0.180*** (26.536)	0.662*** (15.724)	0.350*** (9.200)	0.153*** (9.798)
<i>Education - Reference group: Primary</i>											
Lower secondary	0.003 (0.595)	-0.020** (-2.094)	0.027 (1.287)	0.004 (0.499)		0.052*** (2.746)	0.013*** (3.341)		0.076*** (10.455)	0.009 (0.829)	0.005 (0.479)
Upper and post-secondary	0.076*** (16.590)	0.001 (0.099)	0.060*** (3.474)	0.063*** (9.485)	0.121*** (82.360)	0.115*** (6.175)	0.073*** (15.104)	0.037*** (21.520)	0.137*** (21.051)	0.074*** (6.714)	0.089*** (8.252)
Short-cycle tertiary	0.189*** (36.219)	-0.009 (-0.854)	0.126*** (5.882)	0.154*** (12.556)	0.365*** (135.668)	0.140*** (7.093)	0.071*** (11.218)	0.071*** (32.808)	0.230*** (28.814)	0.103*** (5.774)	0.244*** (9.863)
Bachelor and Master	0.317*** (50.013)	0.185*** (17.535)	0.273*** (11.790)	0.378*** (45.652)	0.485*** (168.519)	0.308*** (15.844)	0.200*** (28.513)	0.198*** (78.966)	0.295*** (32.279)	0.149*** (10.558)	0.531*** (46.021)
Doctoral	0.466*** (20.956)	0.393*** (23.625)	0.571*** (11.794)	0.241*** (9.826)		0.692*** (21.518)	0.166*** (5.452)	0.450*** (81.130)	0.398*** (23.021)	0.278*** (10.088)	

**Table A.2a / Mincer regression results by country for 2006 (2/3)**

ln(gross hourly wages)	BE	BG	CY	CZ	DE	EE	ES	FI	FR	EL	HU
<i>Job duration - Reference group: Less than 1 year</i>											
1-4yrs	0.059*** (18.002)	0.038*** (13.426)	0.060*** (4.164)	0.087*** (22.749)	0.109*** (70.517)	0.019*** (4.092)	0.060*** (13.258)	0.073*** (38.037)	0.021*** (3.480)	0.107*** (8.371)	0.078*** (28.164)
5-14yrs	0.103*** (33.464)	0.127*** (38.763)	0.182*** (13.887)	0.143*** (39.541)	0.189*** (125.903)	0.055*** (11.790)	0.130*** (28.730)	0.106*** (56.234)	0.077*** (12.767)	0.220*** (15.659)	0.156*** (57.043)
15+ yrs	0.192*** (53.166)	0.199*** (50.643)	0.386*** (24.528)	0.172*** (42.559)	0.298*** (170.473)	0.074*** (11.645)	0.283*** (50.484)	0.127*** (64.345)	0.159*** (23.737)	0.343*** (17.645)	0.214*** (67.284)
<i>Full-time/part-time - Reference group: Full-time</i>											
Part time	0.035*** (14.051)	-0.015*** (-3.740)	0.005 (0.108)	-0.046*** (-7.748)	-0.069*** (-60.700)	-0.154*** (-27.765)	-0.020*** (-3.757)	0.008*** (3.797)	0.004 (0.561)	0.148*** (7.653)	0.275*** (68.003)
<i>Contract type - Reference group: Indefinite duration</i>											
Fixed term	-0.055*** (-15.048)	-0.019*** (-5.449)	-0.005 (-0.256)	-0.080*** (-25.566)	-0.089*** (-47.916)	0.029*** (3.414)	-0.045*** (-11.027)	-0.068*** (-38.155)	-0.052*** (-6.654)	0.056*** (6.716)	-0.112*** (-30.677)
Trainee	-0.225*** (-8.790)	-0.114*** (-2.604)			-0.956*** (-286.328)			-0.139*** (-20.989)	-0.477*** (-19.368)	-0.139** (-2.365)	0.298*** (4.480)
<i>Occupation - Reference group: Elementary occupations</i>											
Managers	0.658*** (68.115)	0.901*** (106.972)	0.908*** (33.809)	0.702*** (75.111)	0.774*** (140.801)	0.670*** (74.583)	0.854*** (69.624)	0.673*** (140.309)	0.674*** (56.061)	0.644*** (23.492)	0.617*** (113.877)
Professionals	0.414*** (71.666)	0.654*** (104.968)	0.598*** (26.123)	0.562*** (93.539)	0.465*** (171.569)	0.715*** (83.459)	0.490*** (54.337)	0.420*** (154.680)	0.559*** (53.439)	0.347*** (12.209)	0.420*** (77.548)
Technicians	0.243*** (55.026)	0.461*** (84.253)	0.366*** (20.381)	0.484*** (109.082)	0.391*** (217.487)	0.508*** (77.529)	0.284*** (43.586)	0.224*** (99.586)	0.328*** (36.925)	0.235*** (17.727)	0.352*** (97.639)
Clerical support	0.141*** (34.155)	0.207*** (47.649)	0.093*** (5.187)	0.278*** (50.819)	0.300*** (170.546)	0.276*** (35.243)	0.098*** (18.196)	0.107*** (45.276)	0.136*** (15.505)	0.105*** (9.603)	0.158*** (39.826)
Service and Sales	0.104*** (24.825)	0.021*** (6.458)	0.128*** (6.555)	0.124*** (25.421)	0.163*** (75.205)	0.125*** (17.416)	0.049*** (8.570)	0.096*** (47.362)	0.135*** (13.821)	0.116*** (10.847)	0.115*** (28.359)
Skilled agricul., forestry and fishery workers		0.073*** (5.219)	0.137*** (4.306)	0.264*** (3.698)	0.029*** (3.901)	0.260*** (3.680)	0.079*** (3.818)	0.025* (1.780)	0.066 (1.406)	-0.004 (-0.104)	-0.036*** (-2.779)
raft and related trades workers	0.070*** (17.565)	0.242*** (68.345)	0.143*** (7.806)	0.193*** (44.730)	0.134*** (75.996)	0.302*** (44.462)	0.101*** (19.142)	0.132*** (44.297)	0.091*** (9.178)	0.132*** (12.979)	0.113*** (28.966)
Plant and machine operators & assem.	0.096*** (22.497)	0.244*** (70.148)	0.103*** (5.581)	0.187*** (45.857)	0.069*** (35.202)	0.290*** (42.230)	0.078*** (15.253)	0.134*** (49.409)	0.104*** (12.271)	0.137*** (13.049)	0.140*** (35.198)

**Table A.2a / Mincer regression results by country for 2006 (3/3)**

ln(gross hourly wages)	BE	BG	CY	CZ	DE	EE	ES	FI	FR	EL	HU
<i>Collective pay agreement - Reference group: None</i>											
National	-0.021*** (-5.119)							-0.094*** (-11.203)		-0.012 (-0.765)	
Industry	-0.009*** (-3.961)	-0.013*** (-3.301)	0.136*** (13.465)	0.019*** (4.006)	0.037*** (37.739)	0.075*** (9.363)	0.074** (2.535)		-0.002 (-0.295)	0.027* (1.804)	0.164*** (30.660)
Enterprise		0.136*** (42.253)	0.093*** (5.327)	-0.013*** (-6.277)	0.084*** (57.052)	0.011* (1.790)	0.167*** (5.654)	-0.056*** (-5.864)	0.013 (0.887)	0.072* (1.958)	0.105*** (29.939)
N/A			0.435*** (7.692)		-0.998*** (-437.825)				-0.060*** (-5.674)		0.018** (2.476)
<i>Enterprise control - Reference group: Public</i>											
Private	-0.006 (-1.097)	0.008* (1.774)	-0.220*** (-16.887)	0.008* (1.663)	-0.004*** (-2.952)	0.092*** (13.661)	-0.096*** (-15.242)	0.091*** (59.161)	-0.045*** (-4.996)	-0.004 (-0.499)	-0.059*** (-17.077)
N/A	-0.054*** (-8.090)				-0.020*** (-9.727)						
<i>Firm size - Reference group: 1-49</i>											
50-249 employees	0.051*** (25.713)	0.155*** (51.819)		0.109*** (27.379)	0.050*** (35.616)		0.131*** (35.127)	0.050*** (20.978)	0.020*** (3.794)	0.086*** (9.925)	0.157*** (58.537)
250+ employees	0.123*** (54.685)	0.329*** (103.678)		0.179*** (47.872)	0.155*** (106.431)		0.183*** (49.595)	0.080*** (36.798)	0.049*** (9.201)	0.144*** (9.962)	0.238*** (84.901)
N/A	0.129*** (20.900)					0.249*** (67.085)	0.098*** (10.288)				
Industry effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country/regional effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	165,182	186,663	26,475	1,970,091	2,587,433	126,485	235,261	305,598	113,472	47,905	781,830
R-squared	0.596	0.563	0.704	0.490	0.686	0.409	0.527	0.561	0.585	0.561	0.560

Note: t-values in brackets; \*\*\*, \*\*, \* denote significance at 10, 5, 1% level.

Source: SES; wiiw calculations

**Table A.2b / Mincer regression results by country for 2006 (1/3)**

<i>ln(gross hourly wages)</i>	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
<i>Sex - Reference group: Male</i>												
Female	-0.117*** (-24.987)	-0.121*** (-32.798)	-0.098*** (-20.975)	-0.116*** (-29.738)	-0.123*** (-36.860)	-0.093*** (-100.388)	-0.137*** (-98.817)	-0.161*** (-19.383)	-0.058*** (-18.831)	-0.087*** (-59.698)	-0.174*** (-53.861)	-0.142*** (-52.454)
<i>Age - Reference group: 15-19</i>												
20-29	0.055** (2.288)	0.033** (2.491)	0.130*** (5.358)	0.043*** (3.133)	0.516*** (69.859)	0.157*** (64.529)	0.043*** (5.206)	0.111*** (6.629)	0.030** (2.496)	0.035*** (7.511)	0.081*** (6.994)	0.148*** (23.956)
0-39	0.143*** (5.779)	0.044*** (3.278)	0.232*** (9.562)	0.007 (0.544)	0.733*** (99.795)	0.265*** (104.565)	0.140*** (17.042)	0.257*** (13.589)	0.071*** (5.960)	0.130*** (27.059)	0.146*** (12.749)	0.287*** (44.784)
40-49	0.214*** (8.686)	0.013 (1.003)	0.297*** (12.233)	-0.063*** (-4.613)	0.795*** (109.358)	0.319*** (124.816)	0.151*** (18.334)	0.325*** (17.073)	0.093*** (7.749)	0.184*** (38.268)	0.140*** (12.129)	0.298*** (46.491)
0-59	0.276*** (11.186)	0.005 (0.384)	0.329*** (13.294)	-0.081*** (-5.942)	0.811*** (109.858)	0.307*** (116.895)	0.150*** (18.093)	0.379*** (18.899)	0.128*** (10.485)	0.192*** (39.858)	0.140*** (12.029)	0.273*** (41.558)
60+	0.339*** (12.719)	-0.050*** (-3.498)	0.307*** (8.204)	-0.153*** (-10.849)	0.760*** (66.069)	0.292*** (100.627)	0.107*** (11.591)	0.336*** (14.256)	0.108*** (6.771)	0.194*** (38.423)	0.110*** (8.091)	0.206*** (27.148)
<i>Education - Reference group: Primary</i>												
Lower secondary	0.026*** (3.666)	0.037* (1.909)	-0.014*** (-2.617)	0.013 (0.837)	0.058*** (10.735)	-0.002 (-0.816)	0.016*** (7.881)	0.133*** (15.973)	0.075*** (6.996)	0.051*** (18.228)		
Upper and post-secondary	0.123*** (16.187)	0.078*** (4.176)	0.056*** (11.601)	0.065*** (4.476)	0.140*** (26.132)	0.048*** (24.679)	0.096*** (45.072)	0.207*** (18.104)	0.130*** (12.320)	0.079*** (32.294)	0.133*** (30.413)	0.077*** (23.189)
Short-cycle tertiary	0.123*** (10.219)	0.152*** (7.935)	0.133*** (16.657)	0.176*** (10.393)	0.316*** (28.705)	0.160*** (72.284)	0.292*** (78.542)	0.380*** (19.698)	0.248*** (17.380)	0.145*** (38.195)	0.226*** (22.535)	0.148*** (29.583)
Bachelor and Master	0.320*** (32.496)	0.431*** (22.326)	0.279*** (26.734)	0.407*** (26.441)	0.347*** (54.434)	0.168*** (47.234)	0.367*** (98.066)	0.455*** (24.465)	0.446*** (33.068)	0.175*** (56.832)	0.427*** (58.179)	0.207*** (44.550)
Doctoral	0.287*** (6.958)	0.599*** (19.774)	0.403*** (12.713)	0.797*** (23.438)	0.586*** (36.074)	0.329*** (82.662)	0.537*** (160.542)	0.618*** (15.464)	0.863*** (39.869)	0.419*** (65.822)	0.556*** (29.198)	0.264*** (20.494)

**Table A.2b / Mincer regression results by country for 2006 (2/3)**

ln(gross hourly wages)	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
<i>Job duration - Reference group: Less than 1 year</i>												
1-4yrs	0.045*** (5.516)	0.063*** (14.721)	0.075*** (15.275)	0.046*** (10.584)	0.089*** (24.146)	0.051*** (44.409)	0.056*** (28.900)	0.051*** (3.601)	0.072*** (20.233)	0.044*** (22.778)	0.078*** (19.548)	0.059*** (19.792)
5-14yrs	0.082*** (10.053)	0.122*** (28.100)	0.164*** (34.265)	0.120*** (27.691)	0.111*** (28.626)	0.071*** (62.570)	0.138*** (66.042)	0.113*** (8.212)	0.151*** (39.778)	0.065*** (35.970)	0.132*** (33.674)	0.118*** (37.428)
15+ yrs	0.150*** (18.570)	0.180*** (34.483)	0.301*** (48.538)	0.238*** (39.505)	0.164*** (36.519)	0.056*** (40.446)	0.202*** (89.480)	0.225*** (14.549)	0.242*** (56.361)	0.062*** (32.857)	0.139*** (34.035)	0.178*** (44.885)
<i>Full-time/part-time - Reference group: Full-time</i>												
Part-time	-0.021*** (-3.624)	-0.139*** (-27.345)	0.047*** (8.123)	-0.034*** (-6.090)	0.000 (0.056)	-0.031*** (-31.113)	0.000 (0.128)	0.228*** (7.520)	-0.064*** (-3.945)	-0.009*** (-6.982)	-0.078*** (-14.584)	-0.039*** (-13.357)
<i>Contract type - Reference group: Indefinite duration</i>												
Fixed term	-0.085*** (-10.248)	-0.013* (-1.796)	-0.053*** (-5.824)	0.085*** (9.183)	-0.109*** (-26.791)	-0.001 (-0.436)	-0.113*** (-67.802)	-0.068*** (-6.507)	-0.133*** (-14.875)		-0.064*** (-14.437)	-0.038*** (-7.899)
Trainee	-0.262*** (-20.492)	-0.294*** (-3.263)	-0.752*** (-24.880)	-0.167*** (-3.757)		-0.165*** (-38.418)			-0.317*** (-3.034)		-0.300*** (-16.193)	
<i>Occupation -Reference group: Elementary occupations</i>												
Managers	0.896*** (55.762)	0.610*** (82.638)	1.018*** (68.111)	0.521*** (66.156)	0.427*** (62.781)	0.508*** (176.548)	0.779*** (191.126)	0.975*** (35.883)	0.990*** (86.595)	0.601*** (127.591)	0.779*** (69.953)	0.723*** (136.848)
Professionals	0.500*** (50.316)	0.497*** (80.845)	0.634*** (61.584)	0.558*** (80.546)	0.357*** (60.413)	0.370*** (165.548)	0.534*** (196.329)	0.702*** (31.750)	0.589*** (59.151)	0.371*** (132.204)	0.487*** (70.949)	0.698*** (128.987)
Technicians	0.330*** (34.163)	0.321*** (48.510)	0.536*** (67.489)	0.386*** (62.607)	0.258*** (51.685)	0.251*** (123.247)	0.366*** (145.422)	0.506*** (31.646)	0.493*** (84.988)	0.234*** (89.890)	0.395*** (78.807)	0.435*** (94.165)
Clerical support	0.232*** (31.500)	0.222*** (29.605)	0.318*** (45.552)	0.266*** (37.623)	0.139*** (28.142)	0.063*** (32.515)	0.190*** (75.586)	0.193*** (16.032)	0.288*** (39.630)	0.067*** (26.563)	0.207*** (29.489)	0.157*** (45.311)
Service and Sales	0.133*** (16.290)	0.128*** (22.735)	0.228*** (31.572)	0.129*** (23.328)	0.092*** (17.377)	0.087*** (44.601)	0.052*** (19.563)	0.050*** (3.015)	-0.019*** (-3.794)	0.173*** (78.353)	0.056*** (8.771)	0.107*** (31.492)
Skilled agricul., forestry and fishery workers	-0.094* (-1.757)	0.036 (1.119)	0.141*** (2.932)	0.046** (2.178)	-0.009 (-0.702)	0.027 (1.463)	0.163*** (7.644)	-0.062*** (-2.661)	-0.066*** (-3.653)	-0.007 (-1.006)	0.013 (0.675)	0.012 (0.886)
Craft and related trades workers	0.105*** (13.550)	0.272*** (48.941)	0.199*** (27.712)	0.236*** (41.030)	0.112*** (18.979)	0.075*** (35.014)	0.180*** (81.799)	0.110*** (12.746)	0.212*** (44.528)	0.068*** (25.661)	0.145*** (29.276)	0.217*** (41.749)
Plant and machine operators & assem.	0.116*** (11.174)	0.267*** (44.134)	0.161*** (21.569)	0.224*** (37.353)	0.081*** (12.044)	0.039*** (19.481)	0.204*** (90.319)	0.125*** (13.939)	0.204*** (43.401)	0.063*** (24.217)	0.143*** (29.426)	0.092*** (19.398)

**Table A.2b / Mincer regression results by country for 2006 (3/3)**

ln(gross hourly wages)	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
<i>Collective pay agreement - Reference group: None</i>												
National	0.316*** (9.209)		-0.047*** (-2.900)			0.011*** (5.744)		0.008 (0.495)	-0.046*** (-4.676)			
Industry			0.018*** (3.544)	0.183*** (18.276)		-0.021*** (-19.979)		0.000 (0.022)	-0.083*** (-8.260)		0.053*** (11.627)	0.024*** (6.531)
Enterprise		-0.002 (-0.485)	0.057*** (9.797)	0.067*** (18.127)			-0.028*** (-9.699)	0.082*** (5.141)	-0.034*** (-3.769)		0.063*** (22.459)	-0.032*** (-11.029)
N/A								-0.034* (-1.724)	-0.185*** (-9.880)			-0.025*** (-4.343)
<i>Enterprise control - Reference group: Public</i>												
Entr. control: Private	-0.053*** (-6.557)	-0.034*** (-5.190)	-0.139*** (-20.639)	-0.008 (-1.192)	0.024*** (3.885)	0.032*** (23.102)	-0.038*** (-19.456)	-0.152*** (-10.583)	-0.131*** (-23.582)	0.079*** (39.819)	0.044*** (10.757)	-0.028*** (-7.007)
<i>Firm size - Reference group: 1-49</i>												
50-249 employees	0.060*** (14.536)	0.289*** (74.577)		0.390*** (108.662)	0.025*** (6.978)	0.055*** (45.238)	0.118*** (73.927)	0.108*** (19.248)	0.264*** (65.070)	0.029*** (10.194)	0.094*** (21.112)	0.087*** (20.086)
250+ employees	0.174*** (36.964)	0.458*** (105.527)		0.554*** (124.767)	0.057*** (17.197)	0.066*** (62.950)	0.189*** (116.498)	0.168*** (21.270)	0.443*** (112.966)	0.054*** (27.759)	0.157*** (34.535)	0.122*** (34.329)
N/A	0.114*** (4.201)											
Industry effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country/regional effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	155,026	131,156	29,606	299,675	153,788	989,299	652,683	101,400	252,993	284,561	674,352	132,993
R-squared	0.591	0.437	0.723	0.361	0.521	0.516	0.583	0.696	0.560	0.507	0.461	0.578

Note: t-values in brackets; \*\*\*, \*\*, \* denote significance at 10, 5, 1% level.

Source: SES; wiiw calculations

**Table A.3a / Mincer regression results by country for 2002 (1/3)**

ln(gross hourly wages)	BE	BG	CY	CZ	EE	ES	FI	FR	EL	HU	IT
<i>Sex - Reference group: Male</i>											
Female	-0.075*** (-19.404)	-0.093*** (-30.244)	-0.223*** (-16.454)	-0.205*** (-92.103)	-0.201*** (-32.042)	-0.177*** (-52.629)	-0.145*** (-67.401)	-0.131*** (-27.613)	-0.132*** (-29.372)	-0.100*** (-42.437)	-0.147*** (-32.209)
<i>Age - Reference group: 15-19</i>											
20-29	0.015 (0.974)	0.049*** (2.894)	0.011 (0.398)	0.149*** (12.276)	0.148*** (7.355)	0.056*** (5.952)	0.038*** (5.476)	0.240*** (9.529)	0.073*** (2.827)	0.063*** (5.920)	0.078*** (4.109)
0-39	0.204*** (12.981)	0.108*** (6.446)	0.125*** (4.224)	0.204*** (16.651)	0.143*** (6.991)	0.157*** (16.645)	0.118*** (16.599)	0.342*** (13.326)	0.224*** (8.714)	0.102*** (9.573)	0.193*** (9.901)
40-49	0.307*** (18.962)	0.168*** (10.019)	0.151*** (4.844)	0.202*** (16.581)	0.041** (2.032)	0.205*** (21.159)	0.139*** (19.343)	0.381*** (14.755)	0.316*** (12.146)	0.122*** (11.442)	0.261*** (13.413)
0-59	0.360*** (21.338)	0.206*** (12.260)	0.157*** (4.992)	0.205*** (16.833)	-0.001 (-0.055)	0.237*** (23.129)	0.140*** (18.939)	0.412*** (15.715)	0.393*** (14.996)	0.166*** (15.519)	0.277*** (13.825)
60+	0.415*** (15.041)	0.211*** (11.217)	0.028 (0.566)	0.162*** (12.621)	-0.094*** (-4.350)	0.214*** (16.719)	0.127*** (13.683)	0.476*** (13.960)	0.433*** (12.923)	0.212*** (17.364)	0.260*** (9.433)
<i>Education - Reference group: Primary</i>											
Lower secondary	-0.006 (-0.501)	-0.105*** (-8.607)	-0.011 (-0.521)	0.016** (2.117)	0.033 (1.628)	0.001 (0.381)	-0.023 (-0.844)	0.074*** (9.771)	0.045*** (6.812)	0.087*** (8.212)	0.042*** (7.059)
Upper and post-secondary	0.054*** (4.373)	-0.043*** (-3.537)	0.042** (2.166)	0.102*** (13.758)	0.095*** (4.830)	0.081*** (18.360)	0.031*** (12.912)	0.112*** (23.314)	0.109*** (18.414)	0.163*** (15.280)	0.148*** (22.006)
Short-cycle tertiary	0.154*** (12.074)	-0.005 (-0.343)	0.228*** (8.156)	0.152*** (16.053)	0.053** (2.359)	0.100*** (18.445)	0.065*** (18.514)	0.218*** (30.297)	0.177*** (14.571)	0.393*** (11.977)	0.209*** (8.241)
Bachelor and Master	0.302*** (21.925)	0.152*** (11.456)	0.145*** (5.759)	0.441*** (46.843)	0.299*** (13.578)	0.182*** (26.130)	0.212*** (45.578)	0.309*** (28.731)	0.369*** (26.704)	0.564*** (46.598)	0.269*** (22.181)
Doctoral	0.553*** (13.828)	0.402*** (24.335)	0.425*** (5.866)	0.544*** (34.726)	0.336*** (4.274)	0.203*** (7.413)	0.383*** (22.174)	0.500*** (10.276)	0.520*** (8.530)		0.288*** (12.357)

**Table A.3a / Mincer regression results by country for 2002 (2/3)**

ln(gross hourly wages)	BE	BG	CY	CZ	EE	ES	FI	FR	EL	HU	IT
<i>Job duration - Reference group: Less than 1 year</i>											
1-4yrs	0.076*** (13.695)	0.074*** (17.795)	0.060*** (3.995)	0.080*** (22.077)	0.068*** (9.859)	0.057*** (15.170)	0.058*** (19.605)	-0.000 (-0.039)	0.094*** (15.878)	0.048*** (17.032)	0.031*** (4.233)
5-14yrs	0.121*** (20.036)	0.151*** (38.167)	0.172*** (10.899)	0.117*** (31.847)	0.118*** (16.524)	0.154*** (37.086)	0.077*** (25.099)	0.060*** (8.157)	0.203*** (32.360)	0.091*** (32.113)	0.083*** (11.916)
15+ yrs	0.181*** (25.688)	0.178*** (41.134)	0.337*** (16.018)	0.122*** (33.909)	0.150*** (15.233)	0.280*** (51.119)	0.097*** (27.268)	0.140*** (17.249)	0.356*** (44.986)	0.118*** (35.744)	0.128*** (17.835)
<i>Full-time/part-time - Reference group: Full-time</i>											
Part time	-0.052*** (-9.980)	-0.108*** (-13.669)	-0.100*** (-2.956)	-0.034*** (-8.430)	-0.095*** (-8.738)	0.032*** (5.336)	-0.007** (-2.074)	0.069*** (9.738)	-0.019* (-1.856)	0.331*** (72.519)	0.027*** (3.140)
<i>Contract type - Reference group: Indefinite duration</i>											
Fixed term	-0.167*** (-16.439)	-0.031*** (-7.013)	-0.007 (-0.241)	-0.085*** (-27.098)	-0.012 (-1.105)	-0.070*** (-20.419)	-0.095*** (-28.809)	0.062*** (4.598)	0.020*** (2.591)	-0.050*** (-12.952)	-0.032*** (-3.727)
Trainee	-0.500*** (-8.530)	0.085 (1.312)	-0.436*** (-4.282)			-0.394*** (-30.561)	-0.115*** (-12.680)	-0.602*** (-34.738)	-0.440*** (-11.421)	0.229 (1.318)	-0.184*** (-11.793)
N/A	-0.045** (-2.336)	0.241*** (9.195)		0.008* (1.893)			-0.151*** (-3.016)	-0.028 (-1.550)	-0.056* (-1.800)	-0.098*** (-7.879)	0.078*** (2.923)
<i>Occupation - Reference group: Elementary occupations</i>											
Managers	0.523*** (37.318)	0.777*** (87.148)	0.809*** (27.091)	0.700*** (88.725)	0.662*** (49.061)	0.891*** (71.621)	0.671*** (50.695)	0.748*** (68.556)	0.538*** (32.620)	0.616*** (97.687)	1.008*** (42.846)
Professionals	0.323*** (40.342)	0.546*** (75.597)	0.519*** (15.182)	0.421*** (50.401)	0.668*** (41.212)	0.608*** (72.857)	0.473*** (98.631)	0.630*** (60.474)	0.279*** (19.615)	0.364*** (52.965)	0.969*** (22.943)
Technicians	0.130*** (17.807)	0.413*** (70.357)	0.340*** (16.161)	0.428*** (87.784)	0.543*** (50.695)	0.368*** (60.689)	0.264*** (70.286)	0.281*** (35.554)	0.224*** (19.370)	0.311*** (75.464)	0.269*** (32.259)
Clerical support	0.055*** (8.924)	0.187*** (31.382)	0.064*** (3.141)	0.249*** (39.133)	0.321*** (28.642)	0.131*** (24.547)	0.091*** (23.849)	0.141*** (17.195)	0.117*** (17.315)	0.137*** (31.808)	0.157*** (23.094)
Service and Sales		0.057*** (10.846)	0.070*** (2.751)	0.095*** (19.305)	0.114*** (11.001)	0.120*** (21.383)	0.084*** (18.224)	0.161*** (14.854)	0.077*** (10.160)	0.080*** (19.703)	0.060*** (8.407)
Skilled agricul., forestry and fishery workers		0.112*** (5.178)	0.019 (0.369)	0.062*** (4.829)	0.037 (0.466)	-0.015 (-0.510)	0.185 (1.477)	0.087 (0.947)	-0.121 (-1.551)	-0.003 (-0.201)	0.077*** (8.464)
Craft and related trades workers		0.247*** (49.446)	0.141*** (7.274)	0.172*** (37.927)	0.208*** (24.937)	0.143*** (32.611)	0.146*** (35.498)	0.110*** (15.412)	0.131*** (18.338)	0.080*** (21.223)	0.025*** (4.206)
Plant and machine operators & assem.		0.271*** (56.442)	0.094*** (5.376)	0.181*** (43.149)	0.225*** (26.524)	0.122*** (28.171)	0.126*** (35.821)	0.102*** (14.863)	0.126*** (17.720)	0.106*** (26.789)	0.016** (2.462)

**Table A.3a / Mincer regression results by country for 2002 (3/3)**

ln(gross hourly wages)	BE	BG	CY	CZ	EE	ES	FI	FR	EL	HU	IT
<i>Collective pay agreement - Reference group: None</i>											
National	-0.024*** (-4.551)		0.203*** (7.572)		-0.177*** (-5.517)		-0.102*** (-11.840)	0.012 (1.192)	-0.024* (-1.945)		0.111*** (6.785)
Industry		0.067*** (16.574)	0.281*** (19.136)	-0.008** (-2.059)	-0.218*** (-13.961)	0.011 (1.624)			0.009 (0.745)	0.080*** (13.773)	
Enterprise	0.051*** (10.311)	0.120*** (34.015)	0.164*** (9.000)	-0.028*** (-11.931)	0.003 (0.370)	0.093*** (13.098)	-0.249*** (-15.656)		0.008 (0.608)	0.055*** (16.785)	
N/A			0.387*** (10.075)							0.033** (2.263)	
<i>Enterprise control - Reference group: Public</i>											
Private	0.158*** (19.839)	-0.109*** (-23.049)	-0.106*** (-6.300)	-0.011*** (-3.911)	0.011 (1.099)	-0.017*** (-3.574)	0.011*** (4.005)	-0.078*** (-10.511)	0.007 (0.934)	0.122*** (32.697)	-0.072*** (-7.164)
N/A	0.228*** (17.419)										
<i>Firm size - Reference group: 1-49</i>											
50-249 employees	0.059*** (15.964)	0.184*** (44.889)		0.041*** (9.979)		0.090*** (28.156)	0.045*** (11.726)	0.060*** (12.730)	0.110*** (20.498)	0.192*** (66.559)	0.079*** (17.581)
50+ employees	0.085*** (20.239)	0.367*** (89.971)		0.107*** (26.715)		0.169*** (46.767)	0.101*** (26.872)	0.124*** (26.101)	0.178*** (32.402)	0.298*** (96.318)	0.131*** (31.791)
N/A	-0.046* (-1.869)				0.333*** (61.654)	0.086*** (12.954)					0.116*** (9.426)
Industry effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country/regional effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	61,741	152,962	13,176	1,030,674	78,099	217,135	125,158	120,708	49,113	478,534	81,975
R-squared	0.602	0.534	0.676	0.516	0.356	0.535	0.560	0.503	0.539	0.503	0.556

Note: t-values in brackets; \*\*\*, \*\*, \* denote significance at 10, 5, 1% level.

Source: SES; wiiw calculations

**Table A3b / Mincer regression results by country for 2002 (1/3)**

ln(gross hourly wages)	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
<i>Sex - Reference group: Male</i>											
Female	-0.118*** (-30.196)	-0.133*** (-27.970)	-0.145*** (-25.533)	-0.115*** (-7.976)	-0.088*** (-72.671)	-0.115*** (-75.565)	-0.101*** (-11.403)	-0.082*** (-25.676)	-0.100*** (-87.152)	-0.157*** (-14.427)	-0.152*** (-57.775)
<i>Age - Reference group: 15-19</i>											
20-29	0.012 (0.606)	0.072*** (3.673)	0.060*** (4.708)	0.571*** (12.581)	0.165*** (63.908)	0.119*** (15.445)	0.109*** (7.540)	0.023** (2.198)	0.050*** (14.712)	0.111*** (7.023)	0.168*** (27.677)
0-39	0.005 (0.272)	0.194*** (9.879)	0.024* (1.898)	0.743*** (17.170)	0.267*** (98.462)	0.235*** (30.405)	0.241*** (16.962)	0.111*** (10.616)	0.159*** (46.413)	0.183*** (11.210)	0.298*** (49.045)
0-49	-0.016 (-0.828)	0.232*** (11.757)	-0.016 (-1.220)	0.795*** (18.279)	0.305*** (109.136)	0.245*** (31.619)	0.274*** (18.517)	0.172*** (16.476)	0.193*** (56.455)	0.185*** (11.979)	0.293*** (47.384)
0-59	-0.018 (-0.923)	0.251*** (12.324)	-0.015 (-1.163)	0.826*** (18.381)	0.292*** (102.753)	0.260*** (33.142)	0.314*** (19.822)	0.219*** (20.185)	0.196*** (56.857)	0.208*** (13.098)	0.246*** (39.259)
60+	-0.072*** (-3.476)	0.294*** (8.113)	-0.039*** (-2.609)	0.783*** (10.465)	0.262*** (74.698)	0.206*** (19.176)	0.227*** (8.398)	0.216*** (12.744)	0.186*** (47.597)	0.182*** (9.220)	0.148*** (19.640)
<i>Education - Reference group: Primary</i>											
Lower secondary	0.010 (0.721)	-0.023*** (-3.664)	-0.018 (-0.669)	0.045* (1.895)	-0.024*** (-8.405)	0.041*** (17.063)	0.114*** (10.026)	0.097*** (7.649)	0.037*** (20.119)		
Upper and post-secondary	0.053*** (4.095)	0.064*** (12.345)	0.042 (1.540)	0.142*** (6.132)	0.024*** (8.972)	0.122*** (43.307)	0.179*** (11.744)	0.189*** (15.029)	0.070*** (42.662)	0.096*** (11.642)	0.016*** (6.593)
Short-cycle tertiary	0.123*** (8.928)	0.163*** (18.512)	0.104*** (3.239)	0.337*** (7.939)	0.142*** (32.331)		0.321*** (11.781)	0.447*** (23.191)	0.130*** (40.716)	0.161*** (8.150)	0.088*** (22.352)
Bachelor and Master	0.350*** (24.850)	0.288*** (26.569)	0.314*** (11.093)	0.380*** (14.226)	0.166*** (51.450)	0.343*** (76.778)	0.473*** (16.426)	0.638*** (38.351)	0.252*** (80.897)	0.374*** (13.638)	0.161*** (38.873)
Doctoral	0.510*** (15.832)	0.367*** (9.061)	0.342*** (6.736)	0.582*** (7.931)	0.210*** (24.515)	0.469*** (111.102)		0.984*** (39.392)	0.344*** (36.905)	0.414*** (5.090)	0.235*** (40.976)

**Table A3b / Mincer regression results by country for 2002 (2/3)**

ln(gross hourly wages)	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
<i>Job duration - Reference group: Less than 1 year</i>											
1-4yrs	0.090*** (17.942)	0.061*** (12.576)	0.058*** (10.181)	0.092*** (5.130)	0.042*** (29.656)	0.131*** (55.513)	0.089*** (8.452)	0.076*** (18.802)		0.076*** (5.357)	0.070*** (24.168)
5-14yrs	0.148*** (30.830)	0.152*** (29.830)	0.221*** (34.603)	0.142*** (7.558)	0.054*** (36.974)	0.210*** (101.909)	0.147*** (15.067)	0.158*** (39.128)		0.126*** (11.844)	0.132*** (44.726)
15+ yrs	0.201*** (36.942)	0.303*** (44.683)	0.309*** (32.018)	0.200*** (11.142)	0.056*** (34.986)	0.238*** (107.564)	0.215*** (18.824)	0.182*** (40.520)		0.144*** (14.800)	0.202*** (55.720)
<i>Full-time/part-time - Reference group: Full-time</i>											
Part time	-0.206*** (-44.261)	-0.007 (-0.980)	-0.174*** (-23.561)	-0.021 (-1.217)	-0.067*** (-40.884)		0.317*** (13.643)	-0.019 (-0.706)	-0.007*** (-5.241)	-0.136*** (-11.834)	-0.088*** (-30.799)
<i>Contract type - Reference group: Indefinite duration</i>											
Fixedterm	0.010* (1.692)	-0.050*** (-4.337)	0.052*** (4.818)	-0.050** (-2.349)	-0.084*** (-33.800)		-0.063*** (-5.194)	-0.183*** (-14.744)		-0.048*** (-3.503)	-0.022*** (-4.108)
Trainee		-0.842*** (-26.210)	-0.204* (-1.929)		-0.242*** (-29.804)					0.031 (0.424)	-0.221*** (-8.004)
N/A		0.048** (2.494)					-0.076*** (-5.675)			-0.019** (-2.108)	
<i>Occupation - Reference group: Elementary occupations</i>											
Managers	0.650*** (81.018)	0.849*** (55.646)	0.306*** (27.231)	0.340*** (14.965)	0.530*** (150.009)	0.835*** (183.631)	1.075*** (27.079)	0.804*** (63.371)	0.679*** (157.447)	0.678*** (15.267)	0.707*** (140.949)
Professionals	0.603*** (81.890)	0.571*** (53.183)	0.389*** (29.653)	0.262*** (13.402)	0.410*** (133.218)	0.645*** (182.146)	0.729*** (23.863)	0.397*** (33.170)	0.488*** (172.533)	0.428*** (16.311)	0.669*** (131.726)
Technicians	0.427*** (69.735)	0.428*** (48.872)	0.301*** (28.554)	0.183*** (8.470)	0.276*** (109.420)	0.366*** (136.308)	0.561*** (33.192)	0.475*** (81.281)	0.312*** (161.389)	0.415*** (33.170)	0.451*** (100.139)
Clerical support	0.242*** (33.363)	0.298*** (41.562)	0.139*** (14.337)	0.068*** (2.816)	0.082*** (35.787)	0.228*** (86.098)	0.246*** (11.133)	0.254*** (34.953)	0.100*** (54.635)	0.139*** (8.998)	0.162*** (47.409)
Service and Sales	0.182*** (32.188)	0.134*** (17.836)	0.066*** (8.742)	0.015 (0.630)	0.083*** (35.769)	0.046*** (11.717)	0.123*** (8.496)	-0.038*** (-6.898)	0.143*** (56.881)	0.018 (0.955)	0.101*** (27.990)
Skilled agricul., forestry and fishery workers	0.073** (2.153)		-0.139*** (-4.379)	0.024 (0.343)	0.062*** (4.954)	0.079*** (6.213)	0.047 (0.527)	0.005 (0.370)	0.023** (2.119)	0.087*** (3.414)	0.031** (2.418)
Craft and related trades workers	0.281*** (52.297)	0.130*** (19.482)	0.101*** (14.455)	0.066** (2.532)	0.099*** (40.876)	0.199*** (90.659)	0.157*** (17.064)	0.214*** (48.767)	0.117*** (62.359)	0.181*** (18.671)	0.210*** (44.110)
Plant and machine operators & assem.	0.285*** (48.825)	0.063*** (7.878)	0.133*** (17.466)	0.085** (2.349)	0.055*** (23.860)	0.244*** (102.149)	0.153*** (11.929)	0.226*** (47.705)	0.102*** (61.282)	0.188*** (18.195)	0.059*** (14.148)

**Table A3b / Mincer regression results by country for 2002 (3/3)**

ln(gross hourly wages)	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
<i>Collective pay agreement - Reference group: None</i>											
National		-0.045*** (-8.292)					-0.134*** (-5.619)	-0.046*** (-2.899)			
Industry			0.118*** (8.396)				-0.164*** (-6.952)	-0.082*** (-5.141)		0.018** (2.428)	-0.028*** (-6.755)
Enterprise	0.036*** (8.015)	0.055*** (8.692)	0.112*** (17.374)				-0.009 (-0.375)	-0.087*** (-5.514)		0.011** (2.045)	-0.017*** (-6.283)
N/A							-0.169*** (-7.019)			-0.031*** (-4.517)	0.000 (0.055)
<i>Enterprise control - Reference group: Public</i>											
Private	-0.121*** (-17.932)	-0.218*** (-24.183)	0.069*** (7.655)	0.007 (0.246)	0.029*** (15.976)	-0.049*** (-25.768)	0.000 (0.021)	-0.061*** (-14.061)	0.038*** (23.107)	0.160*** (26.916)	-0.069*** (-18.908)
<i>Firm size - Reference group: 1-49</i>											
50-249 employees	0.203*** (48.269)		0.352*** (74.397)	0.050*** (2.695)	0.057*** (42.823)	0.077*** (49.584)	0.128*** (19.181)	0.223*** (48.038)	0.019*** (9.825)	0.088*** (9.693)	0.080*** (19.667)
250+ employees	0.335*** (56.792)		0.600*** (87.698)	0.070*** (4.275)	0.069*** (56.236)	0.146*** (80.373)	0.207*** (20.039)	0.471*** (104.656)	0.061*** (34.917)	0.199*** (21.944)	0.117*** (35.401)
Industry effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country/regional effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	145,521	26,123	192,442	82,452	573,114	647,315	60,446	220,921	956,633	419,709	150,211
R-squared	0.423	0.746	0.387	0.570	0.558	0.561	0.624	0.554	0.527	0.434	0.562

Note: t-values in brackets; \*\*\*, \*\*, \* denote significance at 10, 5, 1% level.

Source: SES; wiiw calculations

**Table A4a / Mincer regression results by country with a focus on gender and part-time/full-time for 2010 (1/3)**

In(gross hourly wages)	BE	BG	CY	CZ	DE	EE	ES	FI	FR	EL	HR	HU
<i>Sex - Reference group: Male-fulltime</i>												
Female full-time	-0.079*** (-26.609)	0.028*** (5.266)	-0.035 (-0.786)	-0.082*** (-5.303)	-0.075*** (-39.082)	-0.058*** (-6.548)	-0.103*** (-10.991)	-0.098*** (-26.804)	-0.078*** (-11.935)	-0.024 (-0.934)	-0.092*** (-3.115)	0.000 (0.031)
Female part-time	-0.068*** (-34.505)	-0.060*** (-23.941)	-0.155*** (-13.872)	-0.142*** (-48.309)	-0.123*** (-105.638)	-0.190*** (-44.482)	-0.143*** (-44.823)	-0.128*** (-92.650)	-0.096*** (-19.585)	-0.093*** (-17.976)	-0.134*** (-20.994)	-0.101*** (-35.267)
<i>Age - Reference group: 15-19</i>												
Age: 20-29	0.047*** (5.893)	0.009 (0.925)	0.095** (2.385)	0.073*** (7.135)	0.101*** (23.980)	0.088*** (4.805)	-0.006 (-0.267)	0.037*** (5.579)	0.401*** (10.622)	0.007 (0.203)	0.069** (2.562)	0.040* (1.694)
Age: 30-39	0.154*** (19.296)	0.008 (0.818)	0.214*** (5.320)	0.154*** (14.957)	0.219*** (50.069)	0.124*** (6.784)	0.070*** (3.141)	0.118*** (17.553)	0.503*** (13.038)	0.138*** (3.806)	0.163*** (5.989)	0.098*** (4.164)
Age: 40-49	0.244*** (30.296)	0.016 (1.625)	0.266*** (6.559)	0.136*** (13.089)	0.253*** (57.731)	0.060*** (3.255)	0.098*** (4.343)	0.177*** (26.387)	0.559*** (14.491)	0.237*** (6.501)	0.175*** (6.399)	0.098*** (4.144)
Age: 50-59	0.295*** (35.903)	0.017* (1.779)	0.284*** (6.840)	0.126*** (12.204)	0.247*** (55.884)	-0.006 (-0.319)	0.124*** (5.492)	0.184*** (27.302)	0.598*** (15.481)	0.310*** (8.391)	0.211*** (7.449)	0.122*** (5.163)
Age: 60+	0.306*** (31.248)	-0.021** (-2.129)	0.220*** (4.671)	0.145*** (13.015)	0.266*** (56.085)	-0.073*** (-3.968)	0.157*** (6.650)	0.190*** (27.051)	0.711*** (17.846)	0.339*** (8.253)	0.275*** (9.316)	0.145*** (5.901)
<i>Education - Reference group: Primary</i>												
Lower secondary	0.053*** (18.285)	-0.010 (-1.309)	0.049* (1.726)	-0.065*** (-9.212)		0.031 (1.576)	0.012*** (3.064)		0.065*** (11.737)	0.022*** (2.587)	0.059** (2.492)	-0.067*** (-5.707)
Upper and post-secondary	0.114*** (39.988)	0.026*** (3.584)	0.087*** (3.552)	0.043*** (6.645)	0.128*** (96.457)	0.082*** (4.229)	0.081*** (17.594)	0.040*** (21.108)	0.119*** (25.090)	0.078*** (10.149)	0.172*** (7.834)	0.052*** (4.418)
Short-cycle tertiary	0.267*** (72.484)	0.026*** (3.095)	0.191*** (6.478)	0.115*** (7.341)		0.148*** (7.320)	0.100*** (17.450)	0.078*** (31.589)	0.207*** (30.980)	0.149*** (14.503)	0.411*** (16.869)	0.185*** (5.936)
Bachelor and Master	0.448*** (98.499)	0.251*** (30.822)	0.317*** (10.774)	0.285*** (34.534)	0.404*** (192.248)	0.276*** (13.724)	0.206*** (31.636)	0.190*** (74.831)	0.260*** (35.715)	0.295*** (22.187)	0.612*** (24.358)	0.474*** (36.206)
Doctoral	0.633*** (21.652)	0.388*** (24.777)	0.624*** (14.988)	0.218*** (11.876)		0.639*** (23.838)	0.189*** (10.921)	0.465*** (94.263)	0.488*** (21.987)	0.442*** (23.392)	0.937*** (31.197)	

**Table A4a / Mincer regression results by country with a focus on gender and part-time/full-time for 2010 (2/3)**

ln(gross hourly wages)	BE	BG	CY	CZ	DE	EE	ES	FI	FR	EL	HR	HU
<i>Job duration - Reference group: Less than 1 year</i>												
1-4yrs	0.027*** (12.087)	0.066*** (26.013)	0.065*** (4.878)	0.082*** (20.264)	0.096*** (72.427)	0.068*** (14.771)	0.050*** (11.755)	0.078*** (40.415)	0.022*** (2.721)	0.045*** (6.172)	0.045*** (4.733)	0.112*** (33.666)
5-14yrs	0.072*** (31.590)	0.114*** (39.768)	0.182*** (12.284)	0.128*** (31.078)	0.173*** (126.596)	0.080*** (17.011)	0.127*** (28.359)	0.109*** (56.472)	0.070*** (11.989)	0.147*** (19.405)	0.099*** (10.524)	0.149*** (44.751)
15+ yrs	0.142*** (51.814)	0.182*** (47.123)	0.368*** (19.846)	0.185*** (39.649)	0.275*** (172.677)	0.122*** (20.921)	0.304*** (53.767)	0.124*** (59.189)	0.163*** (24.707)	0.291*** (30.531)	0.181*** (17.436)	0.231*** (57.036)
<i>Full-time/part-time - Reference group: Full-time</i>												
Part time 0-39%	-0.055*** (-10.360)	-0.043*** (-4.047)	-0.209*** (-2.684)	-0.073** (-2.075)	-0.327*** (-146.639)	-0.211*** (-20.140)	0.081*** (6.211)	0.102*** (16.085)	0.074*** (4.955)	-0.126*** (-3.467)	-0.059* (-1.788)	0.631*** (38.390)
Part time 40-79%	-0.076*** (-24.312)	-0.119*** (-28.016)	-0.191*** (-5.244)	-0.115*** (-6.991)	-0.082*** (-39.759)	-0.198*** (-21.266)	-0.081*** (-9.042)	-0.040*** (-10.378)	-0.015* (-1.852)	-0.057** (-2.473)	-0.060** (-2.107)	0.314*** (53.265)
Part time 80%+	-0.055*** (-12.916)	-0.152** (-2.305)		-0.113*** (-8.175)	-0.106*** (-35.820)	-0.195*** (-15.053)	-0.105*** (-11.395)	-0.034*** (-7.513)	0.016** (1.965)		0.423*** (5.229)	-0.110*** (-13.215)
<i>Contract type - Reference group: Indefinite duration</i>												
Fixed term	-0.032*** (-9.456)	-0.050*** (-14.762)	-0.037* (-1.898)	-0.090*** (-25.920)	-0.089*** (-49.660)	0.000 (0.013)	-0.034*** (-8.474)	-0.068*** (-35.518)	-0.067*** (-4.614)	-0.005 (-0.482)	-0.121*** (-12.400)	-0.084*** (-18.429)
Trainee	-0.165*** (-8.539)	-0.050 (-1.390)			-0.931*** (-337.825)			-0.129*** (-8.238)	-0.388*** (-16.805)	-0.524*** (-11.094)	-0.319*** (-12.808)	
<i>Occupation - Reference group: Elementary occupations</i>												
Managers	0.580*** (94.771)	0.914*** (131.785)	0.994*** (40.799)	0.800*** (87.414)	0.767*** (206.020)	0.720*** (72.866)	0.787*** (49.923)	0.769*** (150.659)	0.701*** (92.479)	0.523*** (27.963)	0.737*** (24.757)	0.597*** (73.532)
Professionals	0.302*** (78.728)	0.631*** (118.675)	0.467*** (20.228)	0.556*** (93.733)	0.485*** (223.687)	0.694*** (93.938)	0.479*** (65.630)	0.475*** (175.652)	0.519*** (45.655)	0.329*** (24.601)	0.412*** (27.296)	0.442*** (63.761)
Technicians	0.205*** (62.703)	0.469*** (99.697)	0.389*** (19.807)	0.435*** (86.310)	0.421*** (241.481)	0.488*** (80.708)	0.280*** (52.768)	0.277*** (117.953)	0.331*** (62.519)	0.222*** (18.867)	0.366*** (30.055)	0.375*** (91.323)
Clerical support	0.106*** (37.617)	0.218*** (50.905)	0.121*** (6.959)	0.283*** (43.345)	0.181*** (108.518)	0.302*** (41.415)	0.094*** (19.185)	0.136*** (54.242)	0.143*** (26.734)	0.124*** (14.731)	0.247*** (22.209)	0.242*** (51.280)
Service and Sales	0.116*** (38.076)	0.048*** (15.129)	0.097*** (5.397)	0.077*** (13.927)	0.154*** (74.844)	0.102*** (17.798)	0.071*** (13.909)	0.122*** (55.660)	0.183*** (28.622)	0.097*** (10.947)	0.079*** (6.549)	0.148*** (36.026)
Skilled agricul., forestry and fishery workers		-0.004 (-0.223)	-0.155 (-1.281)	0.090*** (2.874)	0.070*** (12.937)	0.271*** (4.598)	0.013 (0.892)	0.036*** (4.745)	0.028* (1.939)	-0.022 (-0.491)	0.068* (1.877)	0.074*** (5.232)
Craft and related trades workers	0.051*** (17.528)	0.267*** (75.991)	0.149*** (7.013)	0.147*** (30.005)	0.105*** (58.467)	0.272*** (40.191)	0.106*** (22.976)	0.140*** (47.039)	0.110*** (18.378)	0.160*** (16.594)	0.065*** (4.964)	0.169*** (41.523)
Plant and machine operators & assem.	0.053*** (17.484)	0.237*** (67.447)	0.094*** (4.640)	0.129*** (29.924)	0.070*** (39.204)	0.212*** (31.881)	0.072*** (13.898)	0.146*** (45.886)	0.088*** (15.703)	0.153*** (15.470)	0.116*** (7.929)	0.175*** (38.663)

**Table A4a / Mincer regression results by country with a focus on gender and part-time/full-time for 2010 (3/3)**

ln(gross hourly wages)	BE	BG	CY	CZ	DE	EE	ES	FI	FR	EL	HR	HU
<i>Collective pay agreement - Reference group: None</i>												
National	-0.032*** (-9.592)					0.138*** (11.104)		-0.059*** (-6.356)	0.056*** (2.863)	-0.043*** (-3.111)	0.080*** (3.994)	
Industry	-0.025*** (-13.648)	-0.018*** (-4.599)	0.217*** (16.681)	0.042*** (7.318)	0.105*** (103.828)	-0.003 (-0.480)	-0.017*** (-2.728)		-0.038*** (-2.774)	-0.026* (-1.834)	-0.033*** (-3.585)	0.176*** (31.850)
Enterprise		0.015*** (5.185)	0.097*** (6.480)	0.050*** (27.979)	0.138*** (69.947)	0.016*** (2.680)	0.073*** (12.306)	-0.054*** (-5.248)	0.019 (1.032)	-0.012 (-0.745)	-0.031*** (-4.064)	0.139*** (37.997)
N/A			0.385*** (5.368)			0.574*** (4.882)			-0.036** (-2.147)	-0.058*** (-4.129)	-0.078*** (-6.476)	0.039*** (4.518)
<i>Enterprise control - Reference group: Public</i>												
Private	-0.073*** (-12.694)	0.073*** (15.928)	-0.229*** (-15.898)	-0.014*** (-3.322)	0.024*** (23.235)	0.095*** (15.567)	-0.141*** (-29.583)	0.084*** (56.274)	0.017* (1.844)	0.003 (0.299)	-0.062*** (-6.141)	-0.024*** (-6.447)
N/A	-0.082*** (-13.602)	-0.020*** (-2.995)				-0.197*** (-10.174)						
<i>Firm size - Reference group: 1-49</i>												
50-249 employees	0.031*** (16.117)	0.180*** (66.355)		0.187*** (56.354)	0.056*** (46.946)		0.135*** (34.622)	0.050*** (19.921)	0.036*** (9.452)	0.064*** (9.145)	0.034*** (5.176)	0.182*** (64.301)
250+ employees	0.056*** (28.709)	0.414*** (140.611)		0.259*** (78.237)	0.148*** (117.263)		0.162*** (44.683)	0.067*** (29.686)	0.072*** (19.503)	0.122*** (16.414)	0.108*** (13.827)	0.274*** (96.259)
N/A	-0.016 (-1.572)	0.222*** (27.281)				0.247*** (72.472)	0.095*** (22.447)					
Industry effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country/regional effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	137,254	204,939	32,566	1,992,666	1,614,527	119,219	216,733	315,709	219,786	39,809	40,716	765,293
R-squared	0.711	0.532	0.709	0.517	0.709	0.470	0.563	0.570	0.568	0.542	0.457	0.538

Note: t-values in brackets; \*\*\*, \*\*, \* denote significance at 10, 5, 1% level.

Source: SES; wiiw calculations

**Table A4b / Mincer regression results by country with a focus on gender and part-time/full-time for 2010 (1/3)**

In(gross hourly wages)	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
<i>Sex - Reference group: Male-fulltime</i>												
Female full-time	-0.105*** (-7.531)	0.050** (2.571)	-0.069*** (-5.217)	-0.016* (-1.691)	-0.059*** (-16.093)	-0.034*** (-32.584)	0.005 (0.934)	-0.065*** (-2.822)	0.054*** (2.924)	-0.065*** (-28.924)	-0.093*** (-6.878)	-0.127*** (-29.208)
Female part-time	-0.106*** (-33.407)	-0.168*** (-16.613)	-0.107*** (-16.835)	-0.117*** (-21.196)	-0.142*** (-42.462)	-0.121*** (-140.400)	-0.146*** (-103.266)	-0.137*** (-35.714)	-0.044*** (-16.186)	-0.095*** (-64.942)	-0.165*** (-50.062)	-0.137*** (-53.561)
<i>Age - Reference group: 15-19</i>												
20-29	0.016 (0.541)	-0.025 (-0.303)	0.161*** (3.109)	0.073*** (3.967)	0.393*** (65.813)	0.188*** (94.293)	-0.000 (-0.044)	-0.018 (-1.238)	0.028* (1.658)	0.066*** (12.175)	0.080*** (5.557)	0.120*** (21.797)
0-39	0.110*** (3.617)	0.037 (0.446)	0.284*** (5.433)	0.087*** (4.748)	0.559*** (86.812)	0.312*** (147.999)	0.092*** (9.581)	0.094*** (6.266)	0.065*** (3.863)	0.159*** (29.205)	0.156*** (10.948)	0.285*** (49.453)
40-49	0.188*** (6.255)	-0.005 (-0.064)	0.348*** (6.637)	0.040** (2.149)	0.609*** (85.468)	0.375*** (176.942)	0.126*** (13.052)	0.182*** (11.749)	0.070*** (4.184)	0.224*** (40.964)	0.139*** (9.697)	0.322*** (55.727)
50-59	0.234*** (7.737)	-0.031 (-0.371)	0.363*** (6.893)	0.014 (0.757)	0.620*** (84.121)	0.377*** (173.833)	0.097*** (10.031)	0.248*** (15.789)	0.089*** (5.317)	0.229*** (41.740)	0.131*** (9.040)	0.293*** (49.811)
60+	0.284*** (8.904)	-0.059 (-0.703)	0.366*** (6.211)	0.028 (1.438)	0.583*** (57.632)	0.359*** (155.130)	0.073*** (7.014)	0.262*** (13.502)	0.114*** (6.173)	0.232*** (40.969)	0.116*** (7.331)	0.228*** (34.834)
<i>Education - Reference group: Primary</i>												
Lower secondary	0.028*** (3.616)	0.129* (1.646)	0.017** (2.129)	0.005 (0.233)	0.047*** (10.320)	0.010*** (7.214)	0.099*** (6.276)	0.130*** (27.811)	0.022 (1.498)	0.045*** (12.317)		-0.009 (-0.317)
Upper and post-secondary	0.137*** (17.831)	0.139* (1.834)	0.101*** (13.774)	0.043** (2.195)	0.141*** (31.014)	0.068*** (53.032)	0.058*** (25.730)	0.226*** (38.628)	0.076*** (5.339)	0.075*** (22.442)	0.133*** (36.757)	0.012 (0.448)
Short-cycle tertiary	0.201*** (18.786)	0.197** (2.563)	0.200*** (17.238)	0.135*** (6.089)	0.275*** (32.697)	0.169*** (112.773)	0.218*** (59.538)	0.490*** (34.897)	0.185*** (11.356)	0.140*** (37.201)	0.268*** (29.827)	0.061** (2.252)
Bachelor and Master	0.286*** (31.575)	0.467*** (6.063)	0.281*** (21.314)	0.339*** (16.299)	0.338*** (63.322)	0.196*** (64.417)	0.410*** (133.183)	0.568*** (61.042)	0.366*** (23.624)	0.174*** (45.777)	0.394*** (55.776)	0.110*** (4.066)
Doctoral	0.431*** (21.952)	0.676*** (8.284)	0.493*** (16.573)	0.640*** (19.513)	0.593*** (41.521)	0.364*** (124.789)	0.254*** (37.188)	0.953*** (68.758)	0.772*** (36.541)	0.204*** (50.725)	0.539*** (43.526)	0.172*** (6.010)

**Table A4b / Mincer regression results by country with a focus on gender and part-time/full-time for 2010 (2/3)**

ln(gross hourly wages)	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
<i>Job duration - Reference group: Less than 1 year</i>												
1-4yrs	0.032*** (5.180)	0.085*** (7.473)	0.072*** (10.450)	0.092*** (16.184)	0.379*** (16.152)	0.022*** (23.098)	0.040*** (22.041)	0.033*** (6.328)	0.062*** (17.676)	0.041*** (23.833)	0.082*** (17.910)	0.053*** (19.103)
5-14yrs	0.084*** (14.600)	0.124*** (10.517)	0.172*** (24.210)	0.121*** (20.904)	0.480*** (20.209)	0.010*** (11.333)	0.106*** (51.904)	0.097*** (18.968)	0.113*** (31.806)	0.075*** (43.322)	0.127*** (28.524)	0.107*** (37.365)
15+ yrs	0.170*** (28.491)	0.207*** (15.583)	0.349*** (37.814)	0.180*** (24.418)	0.512*** (21.169)	0.022*** (16.834)	0.176*** (78.642)	0.214*** (34.749)	0.229*** (50.750)	0.079*** (40.639)	0.164*** (31.406)	0.158*** (44.181)
<i>Full-time/part-time - Reference group: Full-time</i>												
Part time 0-39%	-0.045 (-1.556)	-0.188*** (-7.841)	-0.028 (-0.929)	-0.178*** (-14.048)	-0.112*** (-21.900)	-0.056*** (-39.154)	-0.059*** (-8.352)	0.196*** (5.893)	-0.288*** (-16.075)	-0.013*** (-3.682)	-0.066*** (-3.219)	-0.013** (-2.277)
Part time 40-79%	-0.081*** (-6.417)	-0.284*** (-17.000)	-0.005 (-0.389)	-0.240*** (-26.947)	-0.115*** (-28.197)	-0.081*** (-68.763)	-0.095*** (-20.726)	-0.050*** (-2.818)	-0.137*** (-9.429)	-0.039*** (-16.441)	-0.111*** (-7.471)	-0.091*** (-19.858)
Part time 80%+	-0.155*** (-9.303)	-0.230*** (-6.382)	-0.044* (-1.951)	-0.148*** (-14.358)	-0.063*** (-16.704)	-0.096*** (-63.321)	-0.085*** (-9.964)			-0.021*** (-7.540)	-0.125*** (-10.304)	
<i>Contract type - Reference group: Indefinite duration</i>												
Fixed term	-0.024*** (-3.236)	0.023 (1.453)	-0.077*** (-7.660)	0.074*** (7.661)	-0.103*** (-24.173)	-0.019*** (-15.887)	-0.126*** (-79.521)	-0.078*** (-16.949)	-0.034*** (-3.484)		-0.033*** (-9.336)	-0.048*** (-12.029)
Trainee	-0.140*** (-14.968)	0.993*** (3.074)	-0.749*** (-15.867)	-0.190 (-1.120)	-1.667*** (-78.042)	-0.201*** (-35.163)						
<i>Occupation - Reference group: Elementary occupations</i>												
Managers	0.870*** (26.221)	0.632*** (29.445)	0.964*** (50.624)	0.425*** (43.280)	0.512*** (80.792)	0.507*** (222.129)	0.778*** (205.862)	0.923*** (50.718)	1.016*** (102.345)	0.615*** (133.863)	0.780*** (50.151)	0.747*** (141.311)
Professionals	0.608*** (75.030)	0.519*** (34.361)	0.553*** (43.220)	0.473*** (60.548)	0.380*** (76.490)	0.329*** (202.106)	0.572*** (224.990)	0.596*** (61.228)	0.664*** (92.926)	0.348*** (138.838)	0.526*** (79.877)	0.693*** (193.557)
Technicians	0.275*** (41.870)	0.350*** (22.333)	0.457*** (45.372)	0.323*** (41.915)	0.279*** (63.292)	0.257*** (159.893)	0.358*** (141.261)	0.419*** (51.835)	0.500*** (81.812)	0.237*** (95.719)	0.418*** (80.155)	0.379*** (106.814)
Clerical support	0.148*** (23.570)	0.215*** (11.693)	0.308*** (30.801)	0.203*** (23.239)	0.148*** (34.013)	0.072*** (45.999)	0.216*** (87.650)	0.193*** (27.723)	0.345*** (63.362)	0.077*** (32.240)	0.259*** (37.830)	0.168*** (54.222)
Service and Sales	0.105*** (14.904)	0.091*** (6.523)	0.137*** (14.690)	0.098*** (14.839)	0.109*** (26.461)	0.132*** (90.795)	0.053*** (20.666)	0.103*** (15.243)	0.057*** (13.560)	0.176*** (84.356)	0.090*** (17.912)	0.148*** (52.173)
Skilled agricul., forestry and fishery workers	-0.069*** (-3.889)	0.113** (2.007)	0.052* (1.756)	0.131*** (5.171)	0.026** (2.503)	0.023** (2.486)	-0.056*** (-4.148)	0.020 (0.848)	0.010 (0.498)	0.033*** (5.587)	0.002 (0.080)	0.061*** (5.424)
Craft and related trades workers	0.031*** (4.781)	0.226*** (15.555)	0.147*** (15.971)	0.179*** (24.894)	0.111*** (23.434)	0.062*** (34.301)	0.168*** (71.467)	0.126*** (18.088)	0.256*** (62.761)	0.090*** (32.901)	0.151*** (32.829)	0.231*** (48.659)
Plant and machine operators & assem.	0.082*** (11.816)	0.265*** (17.007)	0.065*** (6.067)	0.175*** (24.203)	0.043*** (7.472)	0.022*** (12.430)	0.185*** (74.169)	0.099*** (14.249)	0.242*** (55.756)	0.064*** (23.566)	0.119*** (28.369)	0.066*** (16.214)

**Table A4b / Mincer regression results by country with a focus on gender and part-time/full-time for 2010 (3/3)**

ln(gross hourly wages)	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
<i>Collective pay agreement - Reference group: None</i>												
National	-0.011 (-0.488)					0.021*** (15.157)	0.016*** (6.393)	-0.079*** (-10.080)	0.109*** (13.955)			
Industry		0.183*** (2.635)		0.172*** (17.842)		0.015*** (9.711)		-0.121*** (-14.936)	0.123*** (14.020)		0.003 (0.602)	0.071*** (22.338)
Enterprise		0.033*** (3.849)		0.041*** (8.745)			0.004*** (3.407)	0.159*** (17.587)	0.083*** (11.710)		0.046*** (10.045)	-0.014*** (-5.290)
N/A			0.051*** (8.234)					-0.118*** (-12.814)	0.135*** (7.633)			0.060*** (11.927)
<i>Enterprise control: Reference group: Public</i>												
Private	-0.134*** (-21.241)	-0.012 (-1.054)		0.033*** (4.857)	0.007 (1.386)	-0.005*** (-4.567)	-0.045*** (-21.215)	-0.045*** (-6.317)	-0.022*** (-4.584)	0.075*** (42.933)	0.040*** (11.355)	-0.017*** (-4.521)
N/A												
<i>Firm size: Reference group: 1-49</i>												
50-249 employees	0.055*** (11.669)	0.242*** (23.856)		0.341*** (76.079)	0.046*** (15.850)	0.063*** (61.034)	0.137*** (88.815)	0.081*** (18.304)	0.231*** (63.850)	0.031*** (12.289)	0.099*** (26.398)	0.097*** (26.568)
250+ employees	0.112*** (28.723)	0.357*** (33.865)		0.415*** (79.638)	0.095*** (36.683)	0.069*** (76.156)	0.217*** (125.818)	0.107*** (22.307)	0.401*** (106.970)	0.046*** (26.048)	0.185*** (41.528)	0.142*** (47.784)
N/A	-0.016 (-0.522)											0.119*** (5.093)
Industry effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country/regional effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	263,031	38,370	18,212	213,315	172,469	1,399,113	681,612	114,391	278,251	284,901	773,785	178,786
R-squared	0.543	0.461	0.697	0.382	0.642	0.526	0.567	0.701	0.557	0.487	0.449	0.554

Note: t-values in brackets; \*\*\*, \*\*, \* denote significance at 10, 5, 1% level.

Source: SES; wiiw calculations

Table B.1 / Shares in % in 2002

		BE	BG	CY	CZ	DE	EE	ES	FI	FR	EL	HR	HU	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
Gender	Male	60.9	48.9	58.4	55.0	54.0	63.0	62.7	64.6	61.5	51.3	67.5	47.2	66.7	53.0	55.6	65.2	52.1	59.8	52.6	65.5	48.8	50.6		
	Female	39.1	51.1	41.6	45.0	46.0	37.0	37.3	35.4	38.5	48.7	32.5	52.8	33.3	47.0	44.4	34.8	47.9	40.2	47.4	34.5	51.2	49.4		
Age	14-19	0.4	0.6	1.7	0.6	1.1	1.4	2.0	1.3	0.7	0.3	0.6	0.6	1.2	1.5	6.0	4.3	0.3	2.7	0.8	2.2	0.6	5.4		
	20-29	21.8	17.0	24.4	19.8	20.2	26.7	19.7	21.8	25.5	21.8	18.9	18.5	24.6	21.4	21.1	21.1	20.3	28.6	19.3	21.5	21.3	19.0		
	30-39	32.3	25.3	28.4	22.9	24.6	31.4	26.9	29.7	32.2	24.5	35.0	27.4	37.3	25.3	28.2	28.1	27.4	30.0	31.2	28.4	26.0	26.5		
	40-49	27.6	30.6	24.8	26.5	26.9	23.7	27.5	27.3	26.5	29.5	28.2	29.5	25.7	27.3	24.6	23.3	33.3	22.5	32.8	22.4	30.4	25.2		
	50-59	17.0	23.9	16.3	26.4	18.9	14.5	22.0	18.9	14.1	21.2	16.2	18.8	10.7	18.6	18.0	18.5	17.1	13.6	14.8	21.0	20.1	19.4		
	60+	0.9	2.5	4.4	3.7	8.2	2.3	1.9	1.1	1.1	2.7	1.1	5.2	0.6	5.9	2.0	4.8	1.6	2.6	1.1	4.4	1.7	4.5		
Education	Primary	2.4	1.1	18.0	0.4	1.0	25.6	23.4	20.6	15.3	0.7	7.3	0.7	12.9	0.4	9.7	4.7	9.8	55.0	1.0	6.4				
	Lower secondary	13.3	12.3	9.5	10.2	10.7	27.6	0.1	6.5	13.6	17.3	42.0	5.6	14.7	9.7	20.9	11.5	28.3	18.4	10.0	13.5	9.2	31.3		
	Upper and post-secondary	36.0	57.2	49.0	71.2	64.2	17.7	45.5	48.4	51.5	62.8	42.0	52.2	52.5	67.3	45.6	65.4	38.6	17.9	70.1	63.7	67.9	36.7		
	Short-cycle secondary	20.5	21.0	10.2	13.5	18.0	19.8	13.9	11.6	12.8	19.1	7.7	29.5	8.0	19.4	21.2	15.1	9.1	6.3	16.6	11.0	18.0	14.5		
	Bachelor and Master	27.1	7.5	13.1	3.9	5.8	9.0	16.9	12.2	6.5	0.1	0.5	11.5	11.4	2.8	2.2	3.0		2.4	1.8	4.8	4.2	11.1		
	Doctoral	0.7	0.8	0.1	0.8	0.2	0.3	0.3	0.6	0.2				0.5	0.5	0.4	0.3	0.4	0.3	14.1		0.5	0.5	0.7	6.5
Experience	0-1 years	21.1	32.6	29.2	21.3	29.3	36.3	23.6	12.7	32.7	29.0	16.7	31.8	29.6	38.4	19.6	33.9	17.2	30.4	23.4		21.2	29.7		
	1-4 years	22.4	21.2	21.7	19.9	29.5	21.2	20.8	26.3	22.1	22.6	20.6	21.1	25.6	31.3	39.9	24.5	23.0	22.7	22.4		22.2	24.6		
	5-14 years	25.3	28.0	31.6	36.8	32.0	23.7	27.1	30.4	25.6	29.7	32.9	31.8	30.4	24.3	24.5	29.6	35.1	29.7	29.8		35.1	29.1		
	more than 14 years	31.2	18.1	17.6	22.1	9.2	18.8	28.5	30.6	19.6	18.7	29.7	15.3	14.4	5.9	16.0	12.0	24.7	17.2	24.4		21.5	16.6		
	N/A																								100.0
Contract type	Indefinite duration	95.0	86.6	95.3	81.9	95.2	73.5	91.1	92.0	90.8	92.8	95.1	91.4	92.8	92.9	80.8	97.9		73.1	98.2		83.9	94.7		
	Fixed term	4.7	13.0	4.6	12.4	4.8	26.2	7.7	4.2	8.7	6.6	3.5	8.6	4.7	7.1	19.2	1.6		20.6	1.8		9.3	4.9		
	Trainee	0.1	0.0	0.2			0.3	1.1	1.8	0.1	0.0	1.2		0.7	0.0		0.4					0.0	0.4		
	N/A	0.3	0.4		5.8				0.1	2.0	0.4	0.5	0.3		1.8				100.0	6.3		100.0	6.7		
Full-time/Part-time	Full-time	84.7	97.2	96.2	90.6	90.2	89.2	91.2	84.4	94.5	94.6	87.6	84.3	88.6	83.4	56.8	78.4	100.0	96.6	99.2	84.0	93.5	73.9		
	Part-time	15.3	2.8	3.8	9.4	9.8	10.8	8.8	15.6	5.5	5.4	12.4	15.7	11.4	16.6	43.2	21.6		3.4	0.8	16.0	6.5	26.1		
Occupation	Managers	6.5	5.3	4.9	7.1	11.4	2.1	3.1	9.1	4.1	8.2	1.4	11.4	3.9	13.0	8.9	8.5	5.0	2.5	4.6	5.9	6.4	13.6		
	Professionals	23.4	13.7	4.3	11.8	7.2	12.0	9.7	8.2	9.0	12.1	0.5	20.6	8.9	9.2	15.9	6.5	18.6	3.8	13.3	11.2	12.6	12.5		
	Technicians	18.9	15.1	12.4	21.7	13.6	15.4	21.0	17.0	9.5	14.2	7.8	13.0	12.0	8.7	17.7	17.4	15.1	10.8	12.4	19.4	22.6	11.9		
	Clerical support	40.0	7.8	17.7	7.2	7.0	12.4	9.7	13.6	23.4	9.1	33.7	5.3	21.6	9.4	12.4	14.4	11.2	16.2	7.4	13.3	13.2	15.4		
	Service and sales	11.2	9.2	18.6	7.0	12.0	13.1	12.1	9.8	14.6	9.8	11.0	10.1	11.7	15.5	11.7	16.6	8.9	11.6	9.2	9.0	7.4	18.6		
	Skilled agricultural		0.2	0.2	0.2	0.1	0.2	0.0	0.1	0.2	0.3	3.3	0.1		0.3	0.8	0.1	0.1	0.0	0.4	0.1	0.1	0.4		
	Craft and related trade workers		16.7	15.8	20.0	22.0	16.1	16.8	13.8	12.5	21.3	22.6	15.1	17.5	20.7	9.0	15.3	19.2	25.8	26.5	13.8	16.3	7.9		
	Plant and machine operators		18.0	8.6	17.2	15.5	14.9	19.1	19.5	12.1	14.3	7.7	13.7	8.8	14.1	6.4	13.9	12.4	13.9	16.8	19.0	14.1	7.2		
	Elementary occupations		14.0	17.4	7.8	11.2	13.7	8.4	9.0	14.6	10.8	11.9	10.7	15.4	9.3	16.7	7.2	9.5	15.4	9.5	8.4	7.3	12.4		

Table B.1 (contd.) / Shares in % in 2002

		BE	BG	CY	CZ	DE	EE	ES	FI	FR	EL	HR	HU	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK	
NACE	10_14	0.1	2.0	0.3	1.4		1.7	0.5	0.3	0.2	1.4		0.4	0.4	0.3		0.4	0.1	2.2	2.5		4.1	0.4	1.0	0.2	
	15_16	2.8	5.4	6.0	3.7		5.1	3.3	4.1	3.5	6.4		5.4	3.4	4.6		6.7	2.0	4.8	5.6	4.4	3.8	3.4	3.3	1.8	
	17_19	1.0	10.7	2.1	3.7		6.6	2.5	1.2	1.6	4.8		4.9	7.0	5.6		4.8	0.3	0.5	3.4	12.5	11.4	0.5	4.6	0.7	
	20_22	2.2	1.9	2.3	1.7		5.7	2.6	9.4	4.4	4.1		2.4	3.2	3.3		7.5	1.8	4.1	2.7	3.7	2.6	5.9	2.3	2.1	
	23_25	8.9	3.0	2.0	3.0		2.2	2.9	4.4	4.9	4.1		3.5	5.1	1.5	2.8	1.4	1.6	1.9	2.9	2.3	2.6	3.6	2.1	2.2	
	26	0.9	1.2	1.4	2.7		1.0	1.8	2.0	1.0	1.8		1.3	2.3	0.8	1.4	0.8	0.5	0.8	1.6	2.9	1.8	0.8	1.5	0.6	
	27_28	3.2	3.0	1.6	4.6		2.6	3.7	5.2	5.3	3.2		3.3	7.0	1.1	2.9	2.0	1.7	3.5	3.1	3.8	3.8	5.0	4.8	1.8	
	29	2.0	4.1	0.5	4.6		1.3	1.6	5.8	2.9	1.5		2.6	6.5	1.0	1.3	1.4	1.3	1.6	2.4	2.0	4.0	4.4	3.1	1.5	
	30_33	3.4	1.8	0.4	4.9		2.8	1.8	7.2	4.3	1.3		4.8	4.4	1.7	0.8	1.1	1.3	1.5	2.1	2.2	2.0	5.4	3.0	1.7	
	34_35	2.9	0.8	0.3	3.2		1.1	2.7	2.3	3.2	1.4		2.2	3.5	0.9		1.3	0.8	3.1	1.9	1.9	3.1	5.1	1.7	2.0	
	36_37	0.5	1.0	1.6	1.6		3.7	1.3	1.1	1.3	1.6		1.1	2.5	1.6		2.2	2.1	1.1	1.9	2.0	2.3	1.2	0.8	0.7	
	40_41	2.7	3.6	1.6	2.5		2.7	0.9	1.2	3.3	3.0		3.2	1.7	3.0		3.2	0.4	1.2	3.2		4.1	1.2	1.8	0.6	
	45	2.7	5.5	13.1	5.9		8.7	12.0	7.9	7.5	5.3		5.4	6.0	6.9	13.2	8.5	5.8	8.9	5.5	13.9	7.6	7.3	5.0	3.9	
	50_51	9.1	5.6	12.1	4.9		11.9	8.3	8.4	8.7	13.3		6.3	6.8	7.7	8.4	11.3	8.1	13.0	7.0	11.4	5.0	10.1	8.4	6.0	
	52	7.8	2.6	10.0	4.4		11.7	8.0	8.5	8.9	10.4		6.2	5.5	6.2	8.0	16.4	9.2	10.5	4.9	8.0	3.7	8.9	4.4	9.3	
	55	1.7	2.0	17.6	1.3		3.6	5.1	2.8	5.5	10.7		2.5	3.9	1.6	4.9	3.2	3.8	6.4	1.2	6.2	1.4	3.6	1.1	4.0	
	60_62	4.5	4.1	3.5	8.7		6.6	3.5	4.9	6.9	4.8		6.3	5.4	4.6	7.5	8.1	3.4	8.1	3.8	4.0	5.0	5.1	4.5	2.4	
	63_64	9.7	5.0	6.8	2.7		5.6	2.7	6.6	4.7	6.4		4.3	6.4	2.8	3.7	6.0	3.1	6.7	3.4	3.5	2.8	6.1	15.6	3.8	
	65_67	16.1	1.6	9.2	2.9		2.0	4.3	4.2	5.5	6.5		2.5	5.9	1.8	17.5	3.3	3.7	3.9	3.0	4.4	1.5	4.4	1.4	5.1	
	70_74	18.0	5.1	7.4	7.6		13.3	13.5	12.6	16.3	8.0		6.6	13.0	5.2	27.6	10.4	15.8	16.1	8.8	10.9	4.5	17.5	5.9	13.2	
	75		6.2		7.8											7.7			7.6		5.8		5.8		5.1	5.9
	80			12.2		6.0			4.6			0.0		12.7		16.3			6.7		10.7		9.6		7.5	15.4
	85			7.4		6.0			8.1			0.0		9.0		9.6			14.9		10.4		5.9		7.6	11.5
	90_93			4.2		4.3			4.2			0.0		3.0		4.1			4.0		2.3		1.6		3.6	3.8
	Size class	1_49	6.2	19.6		19.4		49.4	33.8	23.4	24.7	32.3		32.0	34.1	29.0		44.3	31.5	42.0	26.1	41.0	14.7	25.3	25.3	19.9
50_249		15.5	36.8		31.3			23.2	21.7	20.3	26.4		24.6	23.4	35.5		25.2	18.4	22.9	32.8	27.7	21.5	23.0	22.8	12.1	
>250		74.4	43.6		49.3			40.5	54.9	54.9	41.2		43.4	41.5	35.5		30.5	50.1	35.1	41.2	31.3	63.7	51.7	52.0	68.0	
N/A		3.9		100.0			50.6	2.4							1.0		100.0									
Public/Private	Public	11.7	44.9	8.8	35.5		7.8	10.4	9.9	9.4	10.3		33.4	8.0	45.3	5.7	15.3	31.2	8.1	46.0	6.7	44.2	10.7	38.5	26.6	
	Private	72.8	55.1	91.2	64.5		92.2	89.6	90.1	90.6	89.7		66.6	92.0	54.7	94.3	84.7	68.8	91.9	54.0	93.3	55.8	89.3	61.5	73.4	
	N/A	15.4																								
Pay agreement	Enterprise	35.2	31.8	4.4	62.3		14.8	19.3	0.1		12.7		27.2		18.9	14.5	21.2				8.4	73.7		49.1	37.3	
	None		46.6	41.9	29.9		82.2		2.4	4.9	0.0		68.3	7.2	81.1	43.4	75.8				2.9	0.7		34.2	42.5	
	Individual	35.7	21.6	49.1	7.7		2.9	76.8				55.0		4.0			3.0					35.9	16.1		11.5	18.7
	National	29.1		3.4			0.1		97.5	95.1	29.8				92.8		42.1						35.2	9.5		
	N/A			1.2				3.9			2.4			0.5					100.0	100.0	100.0	17.7		100.0	5.3	1.5

Source: SES data; wiiw calculations

Table B.2 / Shares in % in 2006

		BE	BG	CY	CZ	DE	EE	ES	FI	FR	EL	HR	HU	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
Gender	Male	58.8	49.0	53.4	56.3	56.8	46.7	59.2	47.4	55.2	57.4		49.7	57.6	48.0	63.8	45.1	54.0	58.5	51.4	51.2	53.0	48.9	50.6	50.2
	Female	41.2	51.0	46.6	43.7	43.2	53.3	40.8	52.6	44.8	42.6		50.3	42.4	52.0	36.2	54.9	46.0	41.5	48.6	48.8	47.0	51.1	49.4	49.8
Age	14-19	0.7	0.7	0.9	0.8	3.0	1.4	1.3	1.0	0.6	0.4		0.5	0.4	0.9	1.0	1.3	6.6	3.4	0.3	1.2	0.8	1.5	0.4	4.9
	20-29	19.8	17.9	22.3	20.7	16.4	19.2	24.4	16.1	16.6	18.6		17.9	13.0	18.3	21.4	19.1	21.9	18.8	20.5	21.6	18.0	16.4	18.4	20.1
	30-39	28.8	26.3	26.4	25.9	24.1	22.8	33.0	23.4	28.7	34.4		27.8	31.0	25.1	34.8	23.0	25.0	26.3	27.7	31.6	32.8	24.0	25.4	23.8
	40-49	30.6	26.1	27.8	24.0	31.0	24.9	23.9	28.4	30.5	27.5		25.1	32.1	29.0	29.0	26.0	25.0	24.4	28.9	26.3	26.9	25.7	28.2	26.1
	50-59	18.9	24.2	18.3	23.9	21.2	21.9	14.0	26.4	21.9	16.7		25.1	21.3	19.9	13.1	21.1	18.5	19.7	20.2	16.0	19.9	23.6	24.5	19.2
	60+	1.3	4.8	4.3	4.7	4.4	9.8	3.4	4.9	1.7	2.4		3.7	2.3	6.7	0.8	9.6	2.9	7.4	2.4	3.3	1.6	8.8	3.1	5.8
Education	Primary	7.9	1.1	12.1	0.7		0.6	26.2	14.9	8.5	11.0		0.5	5.0	0.4	13.2	0.4	6.9	5.7	7.2	40.0	0.7	3.5		
	Lower secondary	17.0	9.7	10.3	9.3	17.1	8.5	26.0		12.8	11.6		14.7	34.7	5.6	13.2	7.0	22.2	19.6	26.3	18.7	11.4	8.6	7.9	8.0
	Upper and post-secondary	39.1	60.4	47.4	73.4	67.4	58.2	18.3	43.9	46.2	35.6		61.3	40.6	49.1	47.8	58.4	43.0	44.0	36.6	19.7	65.4	49.5	70.5	56.6
	Short-cycle secondary	13.7	22.1	19.5	12.8	8.3	25.3	20.4	22.0	15.8	14.0		23.3	13.2	31.2	10.9	28.7	25.7	2.8	8.9	17.5	20.0	31.0	19.7	24.1
	Bachelor and Master	21.6	5.8	10.4	1.7	7.3	6.6	8.8	17.9	15.0	6.3		0.2	4.6	13.0	14.2	4.9	1.5	27.1	7.4	2.5	1.9	6.1	1.4	10.2
	Doctoral	0.6	0.9	0.3	2.1		0.7	0.3	1.3	1.6	21.5			2.0	0.7	0.6	0.6	0.6	0.7	13.6	1.7	0.5	1.3	0.4	1.1
Experience	0-1 years	20.6	41.4	26.8	28.1	20.1	32.1	40.0	24.6	14.5	28.7		27.7	15.1	38.3	29.7	39.2	27.4	30.0	19.9	23.3	29.5	21.8	26.0	30.4
	1-4 years	16.5	23.9	21.5	21.6	17.7	24.7	20.2	15.0	19.8	18.7		22.5	20.0	21.5	20.1	23.3	30.8	21.4	21.4	18.3	24.5	20.0	26.5	24.0
	5-14 years	29.9	22.4	30.0	36.0	33.4	33.6	24.1	29.1	31.8	31.3		32.5	34.0	27.7	33.2	29.7	27.8	30.4	35.0	34.3	27.4	33.4	32.8	29.2
	more than 14 years	33.0	12.3	21.6	14.3	28.7	9.6	15.7	31.3	33.9	21.4		17.3	30.9	12.5	16.9	7.9	14.0	18.2	23.7	24.2	18.6	24.9	14.6	16.4
Contract type	Indefinite duration	89.5	87.2	95.6	82.4	89.1	94.1	71.6	85.5	93.3	68.9		93.7	92.7	95.1	92.5	94.7	76.9	94.4	71.1	75.6	98.0		88.1	93.9
	Fixed term	10.4	12.8	4.4	17.6	6.5	5.9	28.4	13.6	5.4	31.0		6.3	6.1	4.9	6.4	5.3	23.1	4.7	28.9	24.4	2.0		11.9	6.1
	Trainee	0.1	0.0			4.3			0.9	1.3	0.1		0.0	1.2	0.0	1.1	0.1		0.9			0.0		0.0	
	N/A																						100.0		
Full-time/Part-time	Full-time	74.6	93.8	96.4	94.5	74.6	86.1	83.4	89.0	84.2	91.8		91.5	89.6	85.0	84.7	84.1	51.9	74.8	90.4	97.2	98.6	72.9	93.8	73.2
	Part-time	25.4	6.2	3.6	5.5	25.4	13.9	16.6	11.0	15.8	8.2		8.5	10.4	15.0	15.3	15.9	48.1	25.2	9.6	2.8	1.4	27.1	6.2	26.8
Occupation	Managers	3.0	4.8	3.1	7.8	1.8	11.1	2.3	3.9	7.2	2.5		10.4	1.4	13.0	5.5	13.8	6.5	8.8	6.7	3.2	4.7	5.4	5.8	14.6
	Professionals	16.2	13.1	12.9	12.4	11.6	14.6	10.3	17.1	15.1	19.8		14.2	14.0	24.6	10.4	17.6	16.8	14.5	23.5	14.7	14.7	19.4	13.4	14.4
	Technicians	15.2	10.6	16.0	22.8	19.5	17.4	14.7	22.3	20.7	11.5		16.9	13.3	9.7	18.3	14.1	16.9	19.3	12.7	11.7	12.3	19.5	22.3	13.0
	Clerical support	18.0	10.4	13.3	6.9	19.3	6.2	13.8	9.7	13.8	20.4		9.6	22.0	4.7	16.3	7.4	12.5	11.2	9.5	14.2	7.0	9.5	7.1	14.9
	Service and sales	9.3	15.7	18.9	8.3	9.6	12.5	14.9	17.0	11.6	14.0		10.4	11.8	10.0	10.7	13.8	13.0	17.9	8.6	13.2	11.2	20.9	9.3	18.0
	Skilled agricultural		0.2	0.3	0.2	0.3	0.1	0.3	0.3	0.2	0.1		0.4	0.0	0.1	0.0	0.4	0.8	0.1	0.1	0.2	0.3	0.4	0.2	0.4
	Craft and related trade workers	12.6	14.3	13.5	17.8	16.4	15.6	17.1	9.4	9.9	10.1		14.7	15.7	17.0	17.8	12.2	8.2	12.3	16.8	18.8	20.3	8.2	17.7	6.9
	Plant and machine operators	13.6	14.9	6.5	16.2	8.3	12.1	11.3	10.5	13.6	9.4		12.4	13.7	10.5	10.1	9.5	5.9	9.5	12.2	10.1	16.9	10.4	15.7	6.4
	Elementary occupations	12.0	16.1	15.5	7.5	13.3	10.5	15.3	9.1	7.9	12.1		11.0	8.2	10.4	10.9	11.2	18.8	6.4	9.8	13.8	12.6	6.3	8.6	11.5

Table B.2 (contd.) / Shares in % in 2006

		BE	BG	CY	CZ	DE	EE	ES	FI	FR	EL	HR	HU	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK	
NACE	10_14	0.2	1.3	0.2	1.3	0.4	1.0	0.4	0.3	0.1	0.4		0.3	0.3	0.3		0.3	0.1	2.1	2.1		2.3	0.2	0.8	0.2	
	15_16	4.1	5.1	4.9	3.1		2.9	2.7	2.0	2.8	5.4		3.3	2.4	4.1		3.4	1.7	2.9	5.3	3.4	4.3	1.6	3.7	1.8	
	17_19	1.7	8.2	1.3	2.0		3.6	1.3	0.5	0.9	3.1		2.2	4.0	3.9		2.0	0.2	0.3	2.8	7.7	10.8	0.2	4.2	0.4	
	20_22	2.2	2.0	2.4	2.2	3.4	4.4	2.1	4.8	1.9	2.5		1.8	2.3	3.4		4.2	1.5	2.9	2.7	2.5	2.3	2.8	2.2	1.7	
	23_25	6.7	2.3	1.2	3.8	2.1	1.7	2.1	2.0	3.1	3.0		2.8	3.7	1.5	2.7	0.9	1.4	1.2	3.2	1.8	2.1	1.8	2.6	1.8	
	26	1.5	1.3	1.4	1.9		1.0	1.4	1.1	0.8	1.4		0.9	1.6	0.9	1.3	0.6	0.4	0.6	1.5	1.9	1.1	0.4	1.4	0.4	
	27_28	4.2	2.7	1.3	5.3		2.3	3.0	2.8	2.7	2.3		2.7	5.2	1.5	4.6	1.1	1.5	1.9	3.6	2.6	3.1	2.8	4.7	1.5	
	29	2.3	2.9	0.4	4.7		0.9	1.1	3.4	1.9	1.1		1.8	4.3	0.8	1.0	0.8	1.2	1.3	2.2	1.4	2.3	2.6	2.9	1.3	
	30_33	2.7	1.5	0.3	4.7	4.2	2.5	1.2	3.8	2.5	1.0		3.6	2.8	1.1	1.4	0.7	1.0	1.1	2.2	0.8	2.5	2.0	4.9	1.4	
	34_35	4.6	0.6	0.1	3.2	4.3	0.8	1.7	1.2	2.6	0.9		1.9	2.3	0.8		0.5	0.6	2.5	2.0	1.5	2.7	2.9	2.2	1.4	
	36_37	0.6	1.5	0.8	1.8		2.0	1.1	0.7	1.0	1.1		0.9	1.8	2.2		1.5	1.9	0.7	2.1	1.4	2.7	1.2	1.6	0.5	
	40_41	1.4	2.5	0.9	1.5	1.4	1.5	0.6	0.8	1.4	2.5		2.9	1.1	2.1		1.4	0.3	0.8	2.6		3.2	0.8	2.3	0.6	
	45	4.3	7.8	9.4	6.2	4.4	7.6	14.2	5.1	5.5	4.9		4.8	5.2	9.0	14.1	7.6	5.0	8.4	4.7	10.2	8.2	4.7	6.0	4.0	
	50_51	4.9	8.4	10.0	8.7	7.8	8.7	8.9	5.2	8.9	10.7		7.2	5.5	9.0	6.6	8.7	7.5	10.6	7.2	7.9	6.8	5.5	7.4	5.8	
	52	3.8	7.8	9.2	5.5	6.3	7.6	10.1	5.5	5.1	7.2		5.9	5.3	8.1	6.3	11.0	9.0	9.4	6.9	6.9	4.6	5.1	5.3	9.5	
	55	1.1	4.3	11.4	2.1	2.1	2.8	6.8	2.8	3.0	7.5		2.3	3.5	2.8	3.8	3.5	4.1	4.0	1.4	4.9	1.4	2.0	2.2	3.9	
	60_62	3.7	3.8	2.3	4.3	1.9	4.5	3.6	2.2	3.7	2.6		4.9	3.6	4.9	7.1	5.1	3.1	4.8	3.4	2.4	3.6	2.7	4.1	2.3	
	63_64	4.6	3.5	4.2	3.0	3.1	3.6	2.5	4.3	6.0	5.4		3.3	5.3	2.9	3.4	3.5	2.9	4.2	2.7	2.4	3.3	3.2	3.1	3.7	
	65_67	5.9	1.7	5.9	1.9	4.5	1.7	3.2	2.5	4.3	4.8		2.1	4.3	1.5	17.7	2.2	3.9	2.8	3.0	3.2	2.0	2.5	1.7	4.6	
	70_73	11.4	6.7	7.5	9.6	12.4	11.1	15.0	11.1	15.1	6.3		6.6	11.6	7.3	16.6	10.3	19.6	13.6	7.7	12.1	6.1	10.3	7.8	12.1	
70_74		5.8	9.6	7.3		6.4		8.4				13.6		7.0		8.1	7.0		6.0		7.0	4.3	7.0	5.6		
74	6.4	8.2	6.8	7.4	6.7	10.4	4.5	7.1	7.2	13.9		12.1	12.0	13.1	0.9	11.0	6.5	8.2	13.8	12.4	9.2	9.2	9.3	15.1		
75	18.8	5.7	4.4	5.9	13.4	6.2	7.7	18.5	15.8	8.2		8.2	9.7	7.9	10.1	5.8	15.5	10.8	8.4	10.0	6.2	27.9	8.0	10.0		
80	2.7	4.7	4.1	2.5	4.1	4.9	4.8	4.0	3.6	3.6		4.0	2.4	4.1	2.6	5.7	4.3	4.8	2.5	2.4	2.2	3.0	4.5	10.4		
Size class	1_49	5.3	36.9		29.0	21.7	42.9	47.5	17.1	23.2	25.3		24.6	27.9	35.8		37.2	27.7	38.3	29.0	33.8	15.9	17.4	25.3	19.0	
	50_249	19.3	28.1		27.7	29.1		18.1	18.9	19.7	27.6		28.6	20.3	34.2		32.8	18.6	20.6	31.2	33.2	25.1	15.2	34.9	12.4	
	>250	72.5	35.0		43.3	49.2		32.5	63.9	57.1	47.1		46.9	51.6	30.0		30.0	53.7	41.1	39.8	33.0	59.0	67.4	39.8	68.6	
	N/A	3.0		100.0			57.1	2.0						0.1		100.0										
Public/Private	Public	13.5	29.2	23.4	26.3	7.7	27.2	7.3	39.3	9.4	26.8		42.7	24.6	35.0	11.8	35.6	30.1	21.2	40.9	17.4	33.1	44.1	29.9	26.9	
	Private	78.6	70.8	76.6	73.7	64.6	72.8	92.7	60.7	90.6	73.2		57.3	75.4	65.0	88.2	64.4	69.9	78.8	59.1	82.6	66.9	55.9	70.1	73.1	
	N/A	8.0				27.7																				
Pay agreement	Enterprise	28.7	23.7	6.4	31.7	7.5	10.7	14.3	1.1	1.6	7.9		18.8		23.4	19.0	32.0			97.3	6.7	66.8		46.4	21.9	
	None		62.2	59.1	58.0	53.7	84.8		1.2	5.7			75.9	0.1	76.6	35.9	65.5		38.7		23.2	2.1		41.3	49.8	
	Individual	53.0	14.1	34.4	10.3	38.6	4.5	85.5			77.2	40.1		3.1		43.6	2.6		47.1		25.3	10.7		12.3	25.7	
	National	18.3									97.7	40.2			99.9		1.6			14.2	2.7	33.1	20.1			
	N/A			0.0		0.3		0.2		15.5	11.7			2.3					100.0			11.7	0.4	100.0		2.6

Source: SES data; wiiw calculations.

**Table C.1 / Mean income levels (hourly wages), 2002**

		BE	BG	CY	CZ	DE	EE	ES	FI	FR	GR	HR	HU	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK	
Gender	Male	21.4	2.7	11.0	7.3		4.8	13.4	12.9	17.0	12.3		5.2	11.6	4.4	17.1	3.6	19.4	15.7	6.5	7.8	3.4	13.2	6.6	18.5	
	Female	16.0	2.2	7.5	5.6		3.5	10.5	10.5	14.2	9.2		4.3	9.4	3.8	14.0	2.9	15.1	12.5	6.2	6.2	2.8	11.1	4.8	13.0	
Age	14-19	8.4	1.2	5.0	3.6		2.6	6.6	7.6	6.5	5.9		3.0	6.2	2.4	6.5	2.2	5.8	8.1	2.6	3.5	1.3	8.3	3.3	7.1	
	20-29	13.5	1.9	7.1	5.8		4.3	9.1	10.3	12.5	7.5		4.2	8.3	3.8	12.4	3.3	12.6	11.9	4.8	5.8	2.3	10.3	5.1	12.9	
	30-39	18.9	2.4	9.5	6.9		4.9	12.3	12.5	15.9	10.5		4.8	10.4	4.1	16.6	3.4	17.7	15.2	6.6	7.6	3.0	12.9	5.8	17.6	
	40-49	21.4	2.6	10.9	6.7		4.2	14.2	12.7	17.0	13.0		4.8	11.8	4.2	17.8	3.2	19.4	16.4	6.5	7.8	3.3	13.6	5.8	17.9	
	50-59	23.7	2.7	11.5	6.6		3.8	15.5	12.4	18.7	15.4		5.3	13.2	4.1	19.0	3.2	20.9	15.9	7.3	8.6	3.8	13.3	5.9	16.4	
	60+	27.6	2.8	9.5	6.5		3.3	14.8	12.1	25.1	16.5		5.9	13.6	4.0	24.0	3.2	21.3	14.5	10.1	7.5	4.6	12.3	5.9	13.3	
Education	Primary	15.8	1.9	7.9	3.8		2.7	9.7	10.4	12.1	9.0		3.2	8.8	2.5	11.8	2.5	11.0	12.1	4.1	5.2	1.9	10.3			
	Lower secondary	15.2	1.9	7.6	4.4		3.0	9.7	11.4	13.8	8.9		3.3	9.0	2.7	10.6	2.5	12.7	12.3	4.4	6.7	2.0	10.4	3.7	12.0	
	Upper and post-secondary	16.5	2.1	8.7	5.8		3.7	12.5	10.9	14.1	10.1		4.2	11.8	3.1	15.4	2.8	16.2	13.6	5.5	8.6	2.6	11.8	5.0	13.4	
	Short-cycle secondary	26.5	3.6	10.6	11.3		7.1	18.7	17.3	28.4	19.0		8.1	18.1	6.1	28.5	5.3	23.7	20.1	9.0	18.9	5.7	18.8	9.0	23.4	
	Bachelor and Master	19.2	2.5	15.1	7.0		4.2	13.2	12.7	18.3	13.1		6.2	13.7	3.8	21.7	3.5	22.7	20.1		13.7	4.7	14.0	6.2	18.4	
	Doctoral	41.1	4.7	23.9	11.4		7.9	21.8	23.0	43.5	24.4			20.4	8.2	35.3	6.4	34.2	24.9	12.6		7.6	22.4	11.7	26.3	
Job duration	0-1 year	15.0	1.9	7.3	5.4		3.6	9.1	10.5	13.3	8.1		4.2	8.9	3.4	12.6	2.6	13.2	12.9	4.9	5.8	2.3		4.8	12.6	
	1-4 years	17.4	2.4	8.2	6.3		4.2	11.3	12.1	14.5	9.7		4.6	9.6	4.0	15.4	3.1	16.1	14.8	6.0	6.9	2.8		5.6	15.4	
	5-14 years	20.5	2.8	9.7	6.9		4.8	14.1	12.5	16.3	11.6		5.1	10.9	4.5	17.1	4.2	19.1	15.7	6.6	7.7	3.6		6.0	17.2	
	more than 14 years	22.3	3.0	14.4	7.0		4.5	17.6	12.7	18.2	17.0		5.6	12.9	4.7	22.2	4.9	21.4	16.1	7.3	8.9	3.7		6.1	19.7	
Contract type	Indefinite duration	19.6	2.5	9.6	6.6		4.3	13.6	12.2	16.3	11.4		4.8	11.0	4.1	16.5	3.3	18.4	14.7		7.8	3.1		5.8	15.9	
	Fixed term	12.1	2.0	8.9	5.2		3.4	8.8	9.4	13.8	8.6		4.2	8.6	3.7	11.1	3.0	12.1	11.3		5.3	2.2		5.2	13.8	
	Trainee	6.3	2.4					4.7	8.3	6.1	4.8			5.9		4.2	1.5		10.0						5.9	10.2
	N/A	13.7	2.0		8.3				8.1	15.6	9.4		4.7	10.7		11.7					6.3	5.4		12.4	5.0	
Full-time/Part-time	Full-time	20.0	2.5	9.7	6.6		4.3	12.6	12.2	16.2	11.3		4.8	11.0	4.3	16.5	3.5	19.2	15.6	6.3	7.2	3.1	12.8	5.8	17.5	
	Part-time	15.2	1.7	5.9	5.4		3.2	10.0	9.3	15.0	7.7		5.0	10.3	3.0	12.9	2.0	15.0	11.0		7.5	2.9	10.5	3.7	11.0	
Occupation	Managers	36.2	4.9	23.6	12.9		7.3	33.2	23.0	32.2	23.5		9.9	35.6	6.8	37.5	4.8	26.0	23.7	13.5	27.2	8.0	22.9	11.7	28.5	
	Professionals	24.5	3.4	15.4	8.6		7.0	19.5	17.5	28.8	17.8		6.6	33.4	5.6	26.3	4.8	23.0	21.5	10.9	16.1	4.9	17.9	7.2	24.6	
	Technicians	18.5	2.9	11.8	7.1		5.2	15.8	13.3	16.3	13.1		5.2	14.3	3.9	21.6	4.5	18.1	17.2	6.0	11.6	3.5	13.8	6.3	18.4	
	Clerical support	15.7	2.1	7.7	5.4		3.9	10.8	10.3	12.4	10.3		4.2	12.3	3.2	17.1	3.1	14.6	12.5	5.2	7.9	3.0	10.0	4.3	11.7	
	Service and sales	12.6	1.4	7.4	4.3		2.5	9.3	9.0	11.5	8.2		3.1	9.0	2.6	10.3	1.9	13.2	10.6	3.4	5.0	1.6	9.9	4.0	9.6	
	Skilled agricultural		1.6	8.1	4.2		2.8	8.5		13.4	7.5		3.1	9.3	2.2		2.1	11.5	12.2	3.7	4.9	1.7	9.7	3.3	10.3	
	Craft and related trade																									
	workers		2.2	9.3	5.5		3.6	10.2	11.0	12.4	10.6		3.9	8.9	3.3	12.3	2.8	14.8	13.3	4.7	5.0	2.6	10.8	5.1	13.4	
	Plant and machine operators		2.3	8.3	5.5		3.6	10.6	10.9	12.5	10.2		4.2	9.0	3.3	11.9	3.0	15.0	12.9	5.0	5.6	2.7	10.4	5.2	11.3	
	Elementary occupations		1.5	7.1	3.9		2.4	7.5	9.1	10.6	7.6		3.0	8.4	2.1	10.0	2.4	11.2	10.4	3.4	4.5	1.6	8.7	3.4	9.4	

Table C.1 (contd.) / Mean income levels (hourly wages), 2002

		BE	BG	CY	CZ	DE	EE	ES	FI	FR	GR	HR	HU	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
NACE	10_14	23.9	3.9	11.3	7.9		5.7	15.0	11.6	17.2	14.3		5.7	10.4	5.3		3.8	28.6	23.5	9.1		5.5	12.8	7.1	22.4
	15_16	20.0	2.2	7.8	6.1		3.9	11.4	10.9	13.9	10.1		4.9	10.6	3.8		3.1	19.1	12.8	4.9	6.0	2.3	11.0	5.0	14.0
	17_19	19.6	1.5	5.8	4.8		3.3	8.4	9.3	12.6	8.4		3.2	8.5	3.1		2.7	14.8	11.7	3.4	4.2	1.8	10.5	3.7	11.8
	20_22	18.9	2.0	8.9	6.3		4.2	12.4	13.0	16.3	10.3		4.4	10.6	3.3		3.2	20.0	14.4	5.4	7.4	2.0	12.3	5.7	16.9
	23_25	23.2	3.3	9.1	7.0		4.4	16.5	12.7	18.2	12.9		6.9	11.9	5.9	17.2	3.6	21.6	16.6	6.7	8.5	3.7	13.4	6.7	18.8
	26	22.0	2.5	11.6	7.0		4.9	11.9	11.3	15.1	11.0		5.4	10.4	4.0	14.4	3.4	17.5	14.0	5.5	6.8	2.8	11.7	6.0	14.3
	27_28	19.7	3.0	8.5	6.5		4.6	12.1	11.3	14.5	10.1		4.8	10.2	3.4	15.1	3.5	17.1	14.6	5.3	6.0	3.4	11.6	6.8	14.2
	29	20.4	2.5	9.4	6.2		4.0	12.8	12.6	16.1	10.4		5.0	11.1	4.1	15.6	3.1	18.1	14.8	5.5	6.9	3.1	11.9	5.8	15.7
	30_33	21.4	2.3	7.8	6.0		4.6	13.2	14.0	18.0	12.6		4.8	10.9	4.5	12.0	3.6	19.5	17.0	5.9	7.7	3.0	12.6	5.5	16.5
	34_35	19.7	2.5	8.5	7.1		5.4	14.1	11.6	18.3	11.1		6.6	11.0	5.3		3.3	18.1	14.8	5.9	7.6	3.4	12.3	7.0	17.9
	36_37	16.8	1.5	8.5	5.5		3.8	9.2	9.6	13.1	8.6		3.7	8.2	3.4		2.7	11.8	12.8	4.4	4.8	2.0	10.7	4.6	13.2
	40_41	26.2	4.0	12.9	7.5		4.8	18.4	13.3	18.0	20.3		6.1	13.4	5.4		5.4	22.4	15.4	7.1		4.4	13.9	8.4	18.8
	45	18.4	2.1	10.0	6.2		4.1	10.1	11.3	13.2	11.0		3.9	10.4	3.6	12.4	2.9	17.1	14.0	5.0	6.1	2.5	12.1	5.0	15.1
	50_51	19.8	1.7	9.4	7.2		4.9	12.0	13.0	16.1	10.2		4.7	10.3	4.2	14.3	3.0	17.6	15.5	5.8	7.9	3.2	13.4	6.6	16.9
	52	13.3	1.6	7.0	4.7		2.8	10.6	9.1	12.6	8.1		3.6	8.7	2.8	10.7	1.9	10.0	10.8	3.9	6.0	1.8	10.5	6.1	9.8
	55	11.0	1.6	7.7	6.6		2.6	8.7	9.3	11.4	8.5		3.6	8.2	2.5	9.5	2.1	11.2	10.4	4.6	5.2	2.2	9.2	4.1	8.7
	60_62	17.3	2.3	12.9	6.6		3.7	12.0	11.5	14.2	13.7		4.9	10.7	3.5	16.4	3.2	17.5	14.3	5.7	8.0	3.3	11.2	6.1	14.9
	63_64	16.1	3.7	10.7	7.5		5.6	15.0	11.3	16.8	14.2		6.4	11.5	5.1	18.5	5.0	15.8	14.5	7.5	11.7	5.3	12.1	5.3	16.0
	65_67	22.4	5.3	14.2	11.7		9.3	23.7	14.4	22.4	16.3		9.2	18.4	7.7	26.5	7.7	22.9	18.5	9.3	15.3	8.3	16.8	12.6	26.4
	70_74	17.9	2.2	9.8	6.9		4.5	10.7	12.9	18.3	10.6		5.6	10.5	4.1	14.3	3.6	16.1	16.5	6.4	9.6	3.0	13.7	7.0	18.5
	75		3.1		6.8											5.5		19.8		7.5		3.0		5.1	16.0
	80		2.5		5.9			15.2						4.4		4.5		19.8		10.7		3.5		4.6	16.2
	85		2.3		5.9			13.4						3.8		3.2		16.4		5.0		3.2		5.0	14.2
	90_93		2.0		5.5			11.9						4.7		3.3		17.9		5.6		2.8		4.9	15.2
	Size class	1_49	15.6	1.7		6.2		3.8	9.9	11.1	13.4	8.5		3.9	8.7	3.3		2.3	16.9	13.5	5.9	5.7	2.0	11.9	5.5
50_249		18.3	2.2		6.2			12.0	12.0	14.8	10.5		4.7	10.6	4.0		3.3	17.2	15.1	6.4	7.1	2.5	12.2	5.3	16.6
>250		19.5	3.0		6.8			14.5	12.3	17.9	13.6		5.5	12.5	4.7		4.6	17.4	15.5	6.6	9.3	3.6	12.8	5.9	16.2
N/A		23.1		9.5			4.6	12.2						11.1		16.1									
Public/Private	Public	15.9	2.8	13.4	6.5		4.8	15.4	11.6	18.1	17.0		4.5	13.0	4.4	22.5	4.4	17.9	15.8	7.4	12.5	3.8	11.8	4.9	15.9
	Private	18.9	2.1	9.2	6.5		4.2	12.0	12.0	15.8	10.4		5.0	10.8	3.8	15.7	3.1	16.8	14.5	5.5	6.8	2.6	12.5	6.2	15.8
	N/A	23.5																							
Pay agreement	Enterprise	22.0	2.9	9.1	6.6		4.6	15.2	13.4		14.3		5.5		4.6	16.6	4.3				12.6	3.0		5.6	15.4
	None		2.0	7.8	6.5		4.2		14.5	16.0	9.9		4.4	10.9	3.9	15.6	2.9				14.6	3.9		5.7	16.3
	Individual	18.0	2.7	10.9	5.8		3.7	11.6			11.0		5.9				3.9				6.7	3.3		6.1	15.6
	National	17.4		11.8			3.5		11.9	16.0	9.9			10.9		16.4					6.2	3.4			
	N/A			6.9				12.7			10.8		6.9					17.3	14.6	6.3	6.4		12.4	5.0	14.9

**Table C.2 / Mean income levels (hourly wages), 2006**

		BE	BG	CY	CZ	DE	EE	ES	FI	FR	GR	HR	HU	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
Gender	Male	18.4	3.0	13.5	8.7	19.8	6.7	13.7	15.6	18.5	13.3		7.2	14.8	6.0	18.7	5.4	17.2	18.1	7.7	10.5	4.1	14.6	7.1	21.2
	Female	16.3	2.7	10.4	6.7	15.1	5.0	11.1	12.0	14.8	10.7		6.3	13.8	5.0	16.6	4.7	13.6	14.8	7.3	9.5	3.9	12.0	5.2	15.4
Age	14-19	10.2	1.6	5.7	4.4	4.8	3.9	7.6	8.6	6.1	6.8		3.7	7.1	3.3	6.4	3.1	5.0	9.1	3.3	4.3	1.9	9.0	3.8	8.0
	20-29	13.6	2.3	8.2	6.7	12.2	6.0	9.6	11.1	12.3	8.3		5.4	9.6	5.2	12.9	5.0	11.3	13.1	5.5	6.9	3.2	10.8	5.4	14.2
	30-39	16.9	2.9	11.6	8.4	18.3	6.7	12.4	14.0	15.7	11.3		6.8	12.4	5.8	18.0	5.5	16.7	17.2	7.8	9.7	3.9	13.4	6.5	20.4
	40-49	18.6	3.0	13.3	8.3	19.6	5.9	14.0	14.4	17.6	13.9		6.8	14.8	5.5	20.0	5.0	18.1	18.7	7.9	11.3	4.1	14.2	6.3	21.0
	50-59	20.7	3.1	15.5	7.9	20.1	5.2	15.2	14.3	19.2	15.8		7.2	18.1	5.5	21.7	4.8	18.8	18.3	8.1	12.7	4.8	14.0	6.2	19.4
	60+	24.4	3.0	12.9	8.3	21.2	4.6	16.9	15.0	28.4	17.7		8.8	22.2	5.5	27.4	4.5	18.2	17.6	10.2	12.2	5.8	13.6	6.6	16.2
Education	Primary	13.1	2.1	9.1	4.7		3.6	10.2	11.9	11.6	10.0		4.4	10.6	3.2	12.4	3.7	10.0	14.0	4.7	6.1	2.0	11.1		
	Lower secondary	13.6	2.1	8.6	5.4	10.8	4.1	10.1		13.4	9.6		4.2	10.7	3.8	12.0	3.2	11.5	13.2	4.9	7.5	2.4	11.5	3.6	11.3
	Upper and post-secondary	14.9	2.3	10.1	7.0	17.2	5.0	12.4	12.0	14.8	10.8		5.4	13.8	4.1	16.1	3.8	14.6	16.0	6.1	9.7	3.1	12.0	5.3	15.0
	Short-cycle secondary	28.0	4.6	19.8	13.5	30.2	8.2	18.6	17.8	22.5	12.9		11.8	23.2	8.0	31.8	7.6	21.5	22.5	10.0	19.6	7.6	15.3	10.2	26.4
	Bachelor and Master	19.9	3.0	12.2	8.4	25.7	5.9	12.8	13.9	17.1	10.7		6.9	19.2	5.0	23.3	5.3	21.4	20.2	10.0	15.6	4.6	15.3	6.1	21.9
	Doctoral	36.3	7.0	33.3	12.6		12.3	19.8	24.2	24.9	19.5			25.7	11.3	38.3	13.4	29.0	25.3	14.6	26.5	11.5	21.3	11.4	30.6
Job duration	0-1 year	14.2	2.3	8.2	6.4	12.1	5.3	9.8	11.5	13.7	9.3		5.3	11.0	4.6	13.8	4.2	12.2	14.7	5.5	7.0	3.0	12.2	5.1	14.8
	1-4 years	15.8	2.7	9.5	7.6	15.2	5.7	11.6	13.3	14.9	10.4		6.3	12.0	5.6	15.8	4.9	15.2	16.5	6.7	8.3	3.7	13.3	5.9	17.4
	5-14 years	17.4	3.5	12.6	8.7	18.5	6.3	13.7	14.7	16.5	12.8		7.3	13.6	6.2	20.1	5.7	17.3	18.1	8.1	10.2	4.6	13.9	6.9	20.3
	more than 14 years	20.5	3.9	18.5	8.9	22.5	6.1	18.4	14.8	19.0	17.1		8.4	18.0	6.4	23.6	6.6	19.3	18.3	8.9	13.8	5.2	13.3	6.8	22.5
Contract type	Indefinite duration	17.7	2.9	12.1	8.2	18.8	5.8	13.6	14.2	17.1	11.5		6.8	14.6	5.4	18.4	4.9	16.9	16.9	8.3	10.8	4.0		6.3	18.5
	Fixed term	16.0	2.3	10.0	6.3	13.5	6.3	10.2	11.3	14.3	14.2		5.2	11.5	6.3	13.3	6.1	11.1	14.4	5.4	7.4	3.3		5.0	15.1
	Trainee	8.2	1.7			4.1			9.3	7.5	8.9			6.8	3.0	5.1	3.0		12.9						5.1
	N/A																						13.3		
Full-time/Part-time	Full-time	17.4	2.9	12.2	7.9	18.6	6.0	13.0	14.0	17.1	12.2		6.7	14.7	5.6	18.0	5.0	17.1	17.9	7.5	9.9	4.0	14.0	6.3	20.0
	Part-time	17.8	2.0	8.5	6.3	15.5	4.4	10.7	11.5	15.2	12.2		6.7	11.4	4.7	17.6	4.9	13.8	13.5	7.2	12.6	3.5	11.4	4.6	13.6
Occupation	Managers	36.4	6.8	31.9	15.0		9.3	33.2	26.2	28.9	26.9		13.2	36.2	9.1	45.2	7.7	24.5	26.5	15.4	31.2	11.1	23.2	14.6	32.5
	Professionals	27.1	4.6	21.0	10.6		8.1	19.6	17.9	20.6	18.7		10.3	22.8	6.9	27.1	7.1	21.8	20.5	11.3	19.5	6.8	16.2	8.2	28.0
	Technicians	17.8	3.7	14.1	8.7		6.2	15.6	13.9	16.5	13.4		7.1	15.8	5.3	23.1	5.5	17.4	18.8	7.4	13.5	4.4	14.2	6.6	20.3
	Clerical support	16.0	2.5	8.7	6.4		4.7	11.0	11.6	12.6	11.0		5.4	14.2	4.4	15.8	4.3	13.8	14.1	5.6	8.6	3.7	11.0	5.0	13.0
	Service and sales	13.0	1.7	8.3	4.9		3.7	9.3	10.0	11.2	9.2		4.1	10.6	3.3	11.2	2.9	11.5	12.4	3.8	5.9	2.2	10.6	3.8	10.6
	Skilled agricultural		1.8	10.7	6.0		4.1	10.4	9.4	9.9	9.1		3.6	10.7	2.7		2.9	10.8	13.1	4.8	5.1	2.1	9.8	3.7	11.4
	Craft and related trade workers	14.0	2.6	10.5	6.4		5.4	11.0	13.3	13.5	11.7		4.7	10.4	4.7	12.4	4.0	14.8	14.9	5.4	5.8	3.2	12.0	5.1	15.2
	Plant and machine operators	15.0	2.5	9.8	6.3		5.0	11.2	13.3	13.0	11.2		5.0	11.4	4.4	13.0	3.9	14.8	14.8	5.6	6.7	3.1	11.9	5.3	12.8
	Elementary occupations	11.9	1.7	8.1	4.4		3.1	8.6	10.0	10.4	8.5		3.7	9.4	3.0	10.1	2.8	9.8	12.1	4.0	5.6	2.0	9.6	3.5	10.4

Table C.2 (contd.) / Mean income levels (hourly wages), 2006

		BE	BG	CY	CZ	DE	EE	ES	FI	FR	GR	HR	HU	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
NACE	10_14	16.0	5.0	14.7	9.5	18.6	6.8	14.7	14.9	15.0	11.7		6.1	16.4	6.6		5.6	26.0	27.5	10.6		6.7	15.5	6.4	27.5
	15_16	15.8	2.4	9.1	7.6		5.0	11.9	13.9	14.2	11.2		5.6	11.8	4.7		4.3	16.9	14.5	5.7	7.3	2.8	12.7	5.4	16.0
	17_19	14.3	1.9	7.4	5.3		4.0	9.1	12.1	12.9	9.3		3.7	9.4	3.7		3.4	14.8	13.6	4.0	4.9	2.3	12.0	3.9	15.2
	20_22	16.7	2.3	9.2	6.6		5.7	12.6	15.8	16.3	11.5		5.3	12.0	4.3		4.3	17.6	16.8	6.5	8.6	2.7	14.0	6.3	19.2
	23_25	21.0	3.3	10.0	8.1	25.0	5.8	16.3	16.0	18.3	14.4		8.9	13.8	7.0	17.1	5.3	21.4	18.8	7.4	11.2	4.4	15.8	7.5	21.2
	26	15.3	2.7	12.1	7.5		7.9	12.8	14.1	15.9	12.5		6.6	11.6	5.9	15.1	5.1	16.7	16.2	6.7	8.2	3.7	13.2	6.8	18.0
	27_28	17.1	3.2	9.7	7.5		6.0	12.5	14.3	16.9	10.9		5.8	10.9	5.3	18.1	4.7	15.5	16.0	6.7	7.4	4.1	13.0	7.8	16.7
	29	16.3	3.1	10.6	7.6		6.3	13.8	15.9	17.6	11.6		6.0	13.1	6.1	16.9	4.6	17.9	17.6	6.8	7.9	3.8	14.0	6.2	18.2
	30_33	18.5	2.8	9.1	7.3	21.7	5.5	14.3	17.4	17.3	11.7		5.9	12.7	6.0	13.1	6.3	19.3	18.7	6.9	8.6	3.5	16.8	5.7	20.3
	34_35	16.5	4.1	9.4	8.5	25.2	7.6	15.5	14.6	17.7	13.1		7.7	15.1	6.6		5.1	17.8	17.5	7.1	9.4	4.2	14.4	7.5	20.9
	36_37	12.7	1.7	10.0	6.2		5.3	9.7	12.1	13.6	8.9		4.3	9.3	4.7		3.7	12.4	15.0	4.8	5.3	2.6	10.5	5.1	15.8
	40_41	21.6	5.0	15.9	9.8	23.8	6.2	19.8	16.4	20.8	17.7		8.5	17.8	7.3		6.6	21.4	18.7	8.5		5.4	15.6	9.0	21.6
	45	14.4	2.4	11.4	7.5	14.1	6.5	10.9	14.0	15.7	10.7		4.6	11.4	6.5	12.4	4.7	17.2	15.8	6.2	7.8	3.4	13.6	5.6	18.3
	50_51	18.3	2.5	10.7	9.2	17.7	6.9	12.5	15.1	19.2	11.0		6.2	12.3	5.2	15.2	5.2	15.6	18.1	6.7	10.2	3.9	14.6	6.8	18.8
	52	13.7	1.8	7.3	5.7	13.6	4.4	9.8	10.5	13.4	8.6		4.5	10.7	4.1	10.7	3.2	9.7	12.6	4.6	7.3	2.5	11.7	4.7	11.5
	55	11.5	1.7	8.0	5.1	9.9	3.8	9.6	10.4	12.4	9.3		4.3	9.4	3.0	9.9	3.0	8.9	11.9	4.7	6.3	2.6	10.0	4.4	10.1
	60_62	15.7	2.4	16.9	7.6	14.9	5.2	13.1	13.1	15.0	14.5		6.6	14.4	4.1	17.5	4.5	15.3	16.2	6.2	8.9	3.9	12.6	6.4	16.4
	63_64	16.6	4.4	12.7	9.5	16.4	7.3	14.2	13.4	17.1	14.6		8.3	14.0	6.5	20.2	6.0	15.7	17.0	8.5	16.4	5.1	13.8	7.0	19.0
	65_67	23.5	6.5	18.7	14.7	24.1	10.5	21.8	17.1	22.1	17.5		13.3	22.2	11.2	27.5	11.0	22.5	24.1	12.1	22.1	10.1	21.9	11.4	32.1
	70_74	16.8	3.1	11.3	8.4	16.9	5.8	11.2	14.7	19.3	11.7		6.9	13.6	5.4	16.2	5.3	15.0	18.4	6.8	9.8	4.0	15.1	7.8	23.2
75		4.1	15.1	8.5		6.8		14.2				8.8		7.8		6.6	18.9		9.2		5.0	13.3	6.5	18.2	
80	29.8	3.1	21.4	7.3	20.4	5.3	16.7	13.5	16.7	19.4		7.2	22.1	5.7	38.6	5.7	18.1	16.7	11.3	15.9	5.0	11.8	5.3	19.5	
85	14.4	3.3	13.3	7.3	16.0	5.5	14.4	11.9	14.3	12.6		6.0	13.7	5.5	20.3	4.8	15.2	15.7	6.6	10.3	4.6	11.9	5.0	18.9	
90_93	15.6	2.3	10.2	6.4	16.4	4.8	11.8	12.2	14.8	11.4		5.9	13.7	4.7	16.8	4.4	15.9	16.8	6.6	11.6	3.8	13.0	5.2	12.7	
Size class	1_49	14.3	2.1		7.2	14.2	5.4	10.3	13.0	15.8	9.5		5.0	10.2	4.3		3.8	13.7	15.7	7.1	7.2	2.6	13.1	5.9	16.3
	50_249	15.9	2.7		7.7	15.8		13.1	14.1	15.9	11.2		6.7	11.9	5.7		5.2	15.8	17.4	7.5	10.5	3.4	13.9	6.0	19.0
	>250	18.2	3.8		8.3	20.6		14.9	13.8	17.3	13.8		7.7	17.0	6.7		6.2	16.4	17.4	7.7	12.6	4.6	13.2	6.5	18.7
	N/A	17.8		12.0			6.1	11.3						19.8		17.9									
Public/Private	Public	22.6	3.5	17.6	7.9	18.3	5.8	17.3	12.8	17.5	15.6		7.5	19.1	6.1	23.3	5.7	16.5	17.3	9.0	16.5	5.1	12.2	5.9	18.7
	Private	16.7	2.6	10.3	7.8	18.0	5.8	12.2	14.4	16.7	11.4		6.1	12.7	5.2	17.2	4.6	15.1	16.6	6.4	8.6	3.5	14.1	6.3	18.2
	N/A	16.9				17.3																			
Pay agreement	Enterprise	17.9	3.8	11.0	8.3	19.2	6.1	15.9	14.6	20.5	14.8		7.7		5.8	17.8	5.7			7.4	17.4	3.7		6.3	16.5
	None		2.4	11.7	7.7	16.5	5.8		16.8	14.8			6.4	11.5	5.4	17.1	4.6		17.2		14.5	3.6		6.0	19.0
	Individual	16.1	3.1	12.7	7.2	19.4	6.2	12.0		16.9	12.0		7.8			18.6	6.0		16.4		8.2	4.5		6.2	18.7
	National	21.1							13.7		11.9			14.3		18.8			16.8	9.2	7.7	4.7			
	N/A			17.9		7.2		11.9		16.9	12.4		7.1					15.5			8.0	3.0	13.3		16.0

Source: SES data; wiiw calculations.

Table D.1 / Mean income levels relative to reference group (hourly wages), 2002

		BE	BG	CY	CZ	DE	EE	ES	FI	FR	EL	HR	HU	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
Gender	Male	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	Female	0.75	0.83	0.68	0.76		0.73	0.79	0.81	0.83	0.74		0.83	0.81	0.87	0.82	0.79	0.78	0.79	0.94	0.79	0.83	0.84	0.74	0.70
Age	14-19	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	20-29	1.61	1.55	1.42	1.60		1.65	1.38	1.36	1.91	1.27		1.41	1.33	1.56	1.90	1.46	2.18	1.46	1.82	1.65	1.73	1.24	1.53	1.83
	30-39	2.26	1.96	1.91	1.91		1.86	1.86	1.65	2.44	1.77		1.63	1.67	1.72	2.54	1.51	3.06	1.87	2.48	2.17	2.26	1.54	1.75	2.49
	40-49	2.56	2.14	2.19	1.84		1.60	2.14	1.68	2.60	2.19		1.63	1.90	1.74	2.73	1.45	3.36	2.02	2.46	2.24	2.49	1.63	1.73	2.54
	50-59	2.83	2.16	2.30	1.84		1.47	2.35	1.64	2.86	2.60		1.77	2.13	1.72	2.91	1.45	3.62	1.95	2.76	2.46	2.87	1.60	1.77	2.33
	60+	3.30	2.24	1.90	1.80		1.28	2.24	1.60	3.84	2.79		1.98	2.19	1.67	3.68	1.42	3.69	1.79	3.81	2.14	3.46	1.48	1.77	1.89
Education	Primary	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	Lower secondary	0.96	0.96	0.96	1.18		1.08	0.99	1.10	1.14	0.99		1.05	1.02	1.10	0.90	0.98	1.16	1.01	1.07	1.29	1.05	1.00		
	Upper and post-secondary	1.04	1.09	1.10	1.55		1.34	1.29	1.05	1.17	1.12		1.34	1.34	1.25	1.31	1.09	1.48	1.12	1.34	1.64	1.37	1.14		
	Short-cycle secondary	1.68	1.86	1.34	2.99		2.58	1.92	1.66	2.34	2.11		2.57	2.06	2.46	2.41	2.09	2.16	1.66	2.22	3.61	3.01	1.82		
	Bachelor and Master	1.21	1.28	1.91	1.85		1.54	1.36	1.23	1.51	1.46		1.96	1.56	1.53	1.84	1.37	2.06	1.66		2.61	2.46	1.35		
	Doctoral	2.60	2.42	3.03	3.03		2.90	2.24	2.22	3.59	2.71			2.33	3.32	2.99	2.52	3.11	2.06	3.12		4.02	2.16		
Job duration	0-1 year	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	1-4 years	1.16	1.25	1.13	1.16		1.17	1.24	1.15	1.09	1.19		1.11	1.08	1.19	1.23	1.22	1.23	1.15	1.23	1.20	1.24		1.16	1.22
	5-14 years	1.37	1.51	1.34	1.27		1.34	1.55	1.19	1.22	1.43		1.22	1.22	1.32	1.36	1.64	1.45	1.21	1.36	1.33	1.57		1.24	1.37
	more than 14 years	1.49	1.58	1.99	1.29		1.26	1.93	1.20	1.37	2.10		1.33	1.45	1.39	1.77	1.90	1.63	1.25	1.49	1.53	1.61		1.28	1.56
Contract type	Indefinite duration	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	Fixed term	0.62	0.80	0.93	0.80		0.79	0.65	0.77	0.85	0.75		0.86	0.78	0.90	0.67	0.92	0.66	0.77		0.68	0.69		0.90	0.86
	Trainee	0.32	0.94					0.34	0.67	0.37	0.42			0.54		0.26	0.44		0.68					1.03	0.64
	N/A	0.70	0.78		1.25				0.66	0.96	0.83		0.98	0.97		0.71					0.70			0.86	
Full-time/Part-time	Full-time	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	Part-time	0.76	0.70	0.61	0.81		0.73	0.79	0.76	0.92	0.68		1.05	0.94	0.71	0.78	0.56	0.78	0.70		1.05	0.91	0.82	0.64	0.63
Occupation	Managers	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	Professionals	0.68	0.69	0.65	0.66		0.96	0.59	0.76	0.89	0.76		0.67	0.94	0.81	0.70	1.00	0.88	0.91	0.81	0.59	0.61	0.78	0.62	0.86
	Technicians	0.51	0.59	0.50	0.55		0.70	0.48	0.58	0.51	0.56		0.53	0.40	0.57	0.58	0.93	0.69	0.72	0.44	0.43	0.43	0.60	0.54	0.65
	Clerical support	0.43	0.43	0.32	0.41		0.53	0.32	0.45	0.38	0.44		0.43	0.34	0.47	0.46	0.64	0.56	0.53	0.38	0.29	0.37	0.44	0.36	0.41
	Service and sales	0.35	0.30	0.31	0.34		0.34	0.28	0.39	0.36	0.35		0.31	0.25	0.38	0.28	0.39	0.51	0.45	0.26	0.18	0.20	0.43	0.34	0.34
	Skilled agricultural		0.32	0.34	0.32		0.38	0.26		0.41	0.32		0.31	0.26	0.33		0.43	0.44	0.51	0.27	0.18	0.21	0.42	0.28	0.36
	Craft and related trade workers		0.46	0.39	0.43		0.49	0.31	0.48	0.38	0.45		0.40	0.25	0.49	0.33	0.58	0.57	0.56	0.35	0.18	0.33	0.47	0.43	0.47
	Plant and machine operators		0.47	0.35	0.42		0.49	0.32	0.47	0.39	0.43		0.42	0.25	0.49	0.32	0.63	0.58	0.54	0.37	0.21	0.33	0.45	0.44	0.40
	Elementary occupations		0.30	0.30	0.30		0.33	0.23	0.39	0.33	0.32		0.30	0.24	0.30	0.27	0.49	0.43	0.44	0.25	0.17	0.20	0.38	0.29	0.33

Table D.1 (contd.) / Mean income levels relative to reference group (hourly wages), 2002

		BE	BG	CY	CZ	DE	EE	ES	FI	FR	EL	HR	HU	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
NACE	10_14	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
	15_16	0.84	0.56	0.69	0.77		0.69	0.76	0.94	0.80	0.70		0.86	1.02	0.71		0.82	0.67	0.54	0.53		0.42	0.86	0.70	0.63
	17_19	0.82	0.39	0.51	0.60		0.58	0.56	0.80	0.73	0.59		0.56	0.82	0.59		0.72	0.52	0.50	0.38		0.33	0.82	0.53	0.53
	20_22	0.79	0.52	0.78	0.79		0.73	0.83	1.12	0.95	0.72		0.77	1.02	0.63		0.85	0.70	0.61	0.59		0.36	0.96	0.81	0.76
	23_25	0.97	0.85	0.81	0.88		0.77	1.10	1.10	1.06	0.90		1.20	1.15	1.12		0.94	0.75	0.71	0.73		0.67	1.05	0.94	0.84
	26	0.92	0.64	1.02	0.88		0.85	0.79	0.97	0.88	0.77		0.94	1.00	0.76		0.91	0.61	0.60	0.60		0.51	0.91	0.84	0.64
	27_28	0.82	0.77	0.75	0.82		0.80	0.81	0.97	0.84	0.70		0.83	0.98	0.64		0.93	0.60	0.62	0.58		0.63	0.91	0.96	0.63
	29	0.85	0.65	0.83	0.78		0.70	0.85	1.08	0.94	0.73		0.87	1.07	0.77		0.82	0.63	0.63	0.60		0.56	0.93	0.81	0.70
	30_33	0.89	0.58	0.69	0.75		0.80	0.88	1.21	1.05	0.88		0.85	1.05	0.85		0.95	0.68	0.72	0.65		0.54	0.99	0.77	0.74
	34_35	0.82	0.65	0.75	0.89		0.94	0.94	1.00	1.06	0.77		1.15	1.06	1.01		0.87	0.63	0.63	0.64		0.62	0.96	0.99	0.80
	36_37	0.70	0.39	0.75	0.69		0.67	0.61	0.82	0.76	0.61		0.66	0.79	0.65		0.72	0.41	0.54	0.48		0.36	0.84	0.64	0.59
	40_41	1.10	1.03	1.13	0.95		0.85	1.22	1.15	1.05	1.42		1.07	1.29	1.03		1.44	0.78	0.65	0.78		0.80	1.09	1.18	0.84
	45	0.77	0.55	0.88	0.78		0.71	0.68	0.97	0.77	0.77		0.68	1.00	0.68		0.77	0.60	0.60	0.55		0.45	0.95	0.71	0.68
	50_51	0.83	0.44	0.83	0.90		0.85	0.80	1.12	0.93	0.71		0.82	0.99	0.80		0.81	0.61	0.66	0.63		0.58	1.05	0.93	0.75
	52	0.55	0.41	0.62	0.60		0.49	0.71	0.78	0.73	0.57		0.64	0.84	0.53		0.51	0.35	0.46	0.43		0.32	0.82	0.85	0.44
	55	0.46	0.40	0.68	0.83		0.45	0.58	0.80	0.66	0.59		0.63	0.79	0.47		0.55	0.39	0.44	0.51		0.40	0.72	0.57	0.39
	60_62	0.72	0.58	1.14	0.83		0.65	0.80	0.99	0.82	0.96		0.85	1.03	0.67		0.86	0.61	0.61	0.63		0.60	0.88	0.87	0.67
	63_64	0.67	0.94	0.95	0.94		0.98	1.00	0.97	0.97	0.99		1.13	1.11	0.96		1.33	0.55	0.62	0.82		0.97	0.95	0.75	0.71
	65_67	0.94	1.36	1.25	1.48		1.63	1.58	1.24	1.30	1.14		1.62	1.77	1.46		2.05	0.80	0.79	1.02		1.51	1.32	1.77	1.18
	70_74	0.75	0.56	0.86	0.87		0.78	0.71	1.11	1.06	0.74		0.98	1.01	0.78		0.95	0.56	0.70	0.70		0.55	1.08	0.99	0.83
75		0.80		0.86										1.05			0.69		0.82		0.55		0.72	0.72	
80		0.63		0.74			1.01					0.77		0.85			0.69		1.18		0.64		0.65	0.73	
85		0.60		0.75			0.89					0.67		0.61			0.57		0.55		0.58		0.70	0.63	
90_93		0.50		0.69			0.79					0.82		0.63			0.62		0.62		0.50		0.68	0.68	
Size class	1_49	1.00	1.00		1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	50_249	1.18	1.27		1.00			1.21	1.07	1.11	1.24		1.22	1.22	1.22		1.48	1.02	1.12	1.09	1.25	1.24	1.02	0.96	1.17
	>250	1.26	1.75		1.09			1.46	1.11	1.33	1.59		1.42	1.44	1.40		2.05	1.03	1.15	1.13	1.64	1.81	1.07	1.08	1.14
	N/A	1.48					1.20	1.23							1.27										
Public/Private	Public	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	Private	1.18	0.75	0.68	1.01		0.87	0.78	1.04	0.87	0.62		1.11	0.83	0.85	0.70	0.70	0.94	0.91	0.74	0.54	0.70	1.06	1.28	0.99
	N/A	1.47																							
Pay agreement	Enterprise	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00		1.00		1.00	1.00	1.00				1.00	1.00		1.00	1.00
	None		0.68	0.86	0.98		0.90		1.08		0.69		0.81		0.87	0.94	0.68				1.16	1.27		1.01	1.06
	Individual	0.82	0.91	1.21	0.87		0.79	0.76			0.77		1.06				0.89				0.53	1.07		1.09	1.01
	National	0.79		1.31			0.76		0.89		0.69					0.99					0.49	1.11			
	N/A			0.77				0.84			0.75		1.25									0.51		0.89	0.96

Source: SES data; wiiw calculations.

Table D.2 / Mean income levels relative to reference group (hourly wages), 2006

		BE	BG	CY	CZ	DE	EE	ES	FI	FR	EL	HR	HU	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
Gender	Male	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	Female	0.89	0.89	0.77	0.76	0.76	0.74	0.81	0.77	0.80	0.81		0.88	0.93	0.84	0.89	0.88	0.79	0.82	0.95	0.90	0.94	0.82	0.73	0.73
Age	14-19	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	20-29	1.33	1.44	1.44	1.51	2.52	1.52	1.27	1.29	2.02	1.22		1.45	1.36	1.57	2.03	1.60	2.26	1.44	1.68	1.62	1.65	1.21	1.43	1.78
	30-39	1.66	1.80	2.04	1.89	3.80	1.71	1.63	1.62	2.57	1.66		1.82	1.75	1.74	2.84	1.76	3.33	1.88	2.39	2.29	2.02	1.49	1.72	2.56
	40-49	1.83	1.92	2.33	1.87	4.06	1.50	1.84	1.67	2.87	2.04		1.83	2.09	1.66	3.14	1.59	3.62	2.05	2.42	2.65	2.14	1.59	1.66	2.63
	50-59	2.03	1.94	2.72	1.78	4.17	1.33	2.00	1.65	3.14	2.33		1.93	2.56	1.67	3.42	1.52	3.75	2.01	2.46	2.99	2.49	1.56	1.65	2.43
	60+	2.39	1.90	2.26	1.89	4.40	1.16	2.22	1.74	4.64	2.60		2.36	3.14	1.66	4.31	1.43	3.64	1.93	3.10	2.87	3.02	1.52	1.73	2.03
Education	Primary	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	Lower secondary	1.04	1.01	0.95	1.15		1.14	0.99		1.16	0.96		0.94	1.00	1.19	0.97	0.88	1.15	0.95	1.04	1.23	1.21	1.04		
	Upper and post-secondary	1.14	1.09	1.11	1.49		1.38	1.22	1.01	1.28	1.08		1.22	1.30	1.31	1.30	1.04	1.45	1.15	1.29	1.60	1.58	1.08		
	Short-cycle secondary	2.14	2.22	2.18	2.86		2.27	1.83	1.50	1.95	1.29		2.65	2.18	2.54	2.57	2.08	2.15	1.61	2.13	3.23	3.84	1.39		
	Bachelor and Master	1.51	1.44	1.34	1.79		1.65	1.26	1.17	1.48	1.08		1.56	1.80	1.59	1.89	1.45	2.14	1.45	2.13	2.57	2.33	1.38		
	Doctoral	2.77	3.35	3.67	2.68		3.41	1.95	2.04	2.15	1.96			2.41	3.57	3.09	3.65	2.89	1.81	3.09	4.36	5.84	1.93		
Job duration	0-1 year	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	1-4 years	1.12	1.20	1.16	1.19	1.26	1.09	1.18	1.16	1.09	1.12		1.18	1.08	1.21	1.15	1.16	1.25	1.12	1.21	1.19	1.21	1.09	1.16	1.18
	5-14 years	1.23	1.55	1.53	1.36	1.54	1.20	1.39	1.28	1.20	1.38		1.37	1.23	1.35	1.46	1.36	1.42	1.23	1.48	1.46	1.51	1.14	1.34	1.37
	more than 14 years	1.45	1.74	2.26	1.40	1.86	1.15	1.87	1.29	1.38	1.83		1.57	1.63	1.39	1.71	1.56	1.59	1.25	1.62	1.98	1.72	1.09	1.31	1.52
Contract type	Indefinite duration	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	Fixed term	0.90	0.80	0.82	0.77	0.72	1.09	0.75	0.80	0.84	1.23		0.76	0.79	1.16	0.72	1.24	0.66	0.85	0.66	0.69	0.82		0.79	0.81
	Trainee	0.46	0.57			0.22		0.66	0.44	0.77				0.47	0.56	0.28	0.61		0.77					0.81	
	N/A																								
Full-time/Part-time	Full-time	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	Part-time	1.02	0.69	0.70	0.80	0.84	0.73	0.82	0.82	0.89	1.00		0.99	0.78	0.84	0.98	0.97	0.81	0.75	0.96	1.27	0.88	0.82	0.73	0.68
Occupation	Managers	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	Professionals	0.74	0.68	0.66	0.71		0.88	0.59	0.68	0.71	0.69		0.78	0.63	0.76	0.60	0.92	0.89	0.77	0.73	0.63	0.61	0.70	0.56	0.86
	Technicians	0.49	0.54	0.44	0.58		0.67	0.47	0.53	0.57	0.50		0.54	0.44	0.58	0.51	0.72	0.71	0.71	0.48	0.43	0.40	0.61	0.45	0.62
	Clerical support	0.44	0.36	0.27	0.43		0.51	0.33	0.44	0.43	0.41		0.41	0.39	0.49	0.35	0.56	0.56	0.53	0.37	0.27	0.33	0.47	0.35	0.40
	Service and sales	0.36	0.24	0.26	0.33		0.40	0.28	0.38	0.39	0.34		0.31	0.29	0.36	0.25	0.38	0.47	0.47	0.25	0.19	0.19	0.46	0.26	0.33
	Skilled agricultural		0.26	0.33	0.40		0.45	0.31	0.36	0.34	0.34		0.27	0.29	0.30		0.38	0.44	0.49	0.31	0.16	0.19	0.42	0.25	0.35
	Craft and related trade workers	0.39	0.37	0.33	0.43		0.58	0.33	0.51	0.47	0.44		0.36	0.29	0.52	0.28	0.52	0.60	0.56	0.35	0.19	0.29	0.52	0.35	0.47
	Plant and machine operators	0.41	0.37	0.31	0.42		0.54	0.34	0.51	0.45	0.42		0.38	0.31	0.49	0.29	0.51	0.60	0.56	0.36	0.22	0.28	0.51	0.36	0.39
	Elementary occupations	0.33	0.24	0.25	0.30		0.33	0.26	0.38	0.36	0.31		0.28	0.26	0.33	0.22	0.37	0.40	0.46	0.26	0.18	0.18	0.41	0.24	0.32

Table D.2 (contd.) / Mean income levels relative to reference group (hourly wages), 2006

		BE	BG	CY	CZ	DE	EE	ES	FI	FR	EL	HR	HU	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SK	UK
NACE	10_14	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	15_16	0.99	0.48	0.62	0.80		0.73	0.81	0.93	0.95	0.96		0.92	0.72	0.71		0.77	0.65	0.53	0.53		0.41	0.82	0.85	0.58
	17_19	0.89	0.37	0.50	0.56		0.58	0.62	0.81	0.86	0.79		0.60	0.58	0.55		0.60	0.57	0.50	0.38		0.34	0.77	0.61	0.55
	20_22	1.05	0.47	0.63	0.69		0.84	0.86	1.06	1.09	0.98		0.87	0.73	0.66		0.76	0.68	0.61	0.62		0.40	0.90	0.99	0.70
	23_25	1.31	0.65	0.68	0.85	1.34	0.85	1.11	1.07	1.22	1.22		1.47	0.84	1.07		0.95	0.82	0.69	0.70		0.66	1.02	1.19	0.77
	26	0.96	0.53	0.83	0.79		1.16	0.87	0.95	1.06	1.06		1.09	0.71	0.89		0.91	0.64	0.59	0.63		0.55	0.85	1.07	0.65
	27_28	1.07	0.64	0.66	0.78		0.88	0.85	0.96	1.13	0.93		0.95	0.67	0.79		0.84	0.60	0.58	0.63		0.62	0.84	1.23	0.61
	29	1.02	0.62	0.72	0.80		0.92	0.93	1.06	1.17	0.99		0.98	0.80	0.93		0.82	0.69	0.64	0.65		0.57	0.90	0.98	0.66
	30_33	1.16	0.56	0.62	0.77	1.17	0.80	0.97	1.17	1.15	1.00		0.97	0.78	0.90		1.13	0.74	0.68	0.65		0.52	1.08	0.89	0.74
	34_35	1.03	0.81	0.64	0.89	1.36	1.11	1.05	0.98	1.18	1.12		1.26	0.92	0.99		0.90	0.69	0.64	0.67		0.63	0.93	1.18	0.76
	36_37	0.79	0.34	0.68	0.65		0.77	0.66	0.81	0.91	0.76		0.71	0.57	0.72		0.66	0.48	0.54	0.45		0.38	0.68	0.80	0.57
	40_41	1.35	0.99	1.08	1.03	1.28	0.91	1.35	1.10	1.39	1.51		1.40	1.09	1.11		1.18	0.82	0.68	0.81		0.81	1.01	1.41	0.79
	45	0.90	0.48	0.77	0.79	0.76	0.96	0.74	0.94	1.05	0.91		0.76	0.70	0.99		0.83	0.66	0.58	0.59		0.50	0.88	0.88	0.67
	50_51	1.15	0.50	0.73	0.97	0.95	1.02	0.85	1.01	1.28	0.94		1.01	0.75	0.79		0.92	0.60	0.66	0.63		0.58	0.94	1.08	0.68
	52	0.86	0.37	0.50	0.60	0.73	0.65	0.67	0.70	0.90	0.73		0.74	0.65	0.62		0.58	0.37	0.46	0.44		0.38	0.76	0.74	0.42
	55	0.72	0.33	0.54	0.54	0.53	0.56	0.65	0.70	0.83	0.79		0.70	0.57	0.45		0.54	0.34	0.43	0.45		0.39	0.65	0.70	0.37
	60_62	0.98	0.48	1.15	0.80	0.80	0.77	0.89	0.88	1.00	1.24		1.08	0.88	0.62		0.81	0.59	0.59	0.59		0.58	0.81	1.01	0.60
	63_64	1.04	0.87	0.86	1.00	0.88	1.06	0.96	0.90	1.14	1.24		1.36	0.86	0.99		1.07	0.60	0.62	0.80		0.76	0.89	1.11	0.69
	65_67	1.47	1.31	1.27	1.55	1.30	1.54	1.48	1.14	1.48	1.49		2.20	1.36	1.69		1.97	0.87	0.88	1.14		1.50	1.41	1.79	1.17
	70_74	1.05	0.63	0.77	0.88	0.91	0.86	0.76	0.99	1.28	1.00		1.14	0.83	0.81		0.95	0.58	0.67	0.65		0.60	0.97	1.23	0.84
	75		0.82	1.03	0.90	0.81	1.00		0.95				1.44		1.18		1.17	0.73		0.87		0.75	0.86	1.02	0.66
	80	1.86	0.63	1.46	0.77	1.09	0.78	1.14	0.91	1.12	1.65		1.18	1.35	0.86		1.02	0.70	0.61	1.07		0.75	0.76	0.83	0.71
	85	0.90	0.65	0.90	0.77	0.86	0.80	0.98	0.80	0.96	1.07		0.98	0.83	0.83		0.86	0.58	0.57	0.62		0.68	0.77	0.80	0.69
	90_93	0.98	0.46	0.70	0.67	0.88	0.71	0.80	0.82	0.99	0.97		0.97	0.83	0.70		0.79	0.61	0.61	0.62		0.56	0.84	0.82	0.46
	Size class	1_49	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
50_249		1.11	1.28		1.08	1.12		1.27	1.08	1.01	1.18		1.32	1.17	1.33		1.38	1.16	1.11	1.07	1.46	1.30	1.06	1.01	1.16
>250		1.27	1.83		1.17	1.45		1.45	1.06	1.10	1.45		1.52	1.67	1.56		1.65	1.20	1.11	1.09	1.74	1.77	1.01	1.10	1.15
N/A		1.24					1.13	1.10						1.94											
Public/Private	Public	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	Private	0.74	0.74	0.59	0.99	0.98	1.00	0.71	1.12	0.95	0.73		0.82	0.66	0.84	0.74	0.80	0.91	0.96	0.71	0.52	0.68	1.16	1.08	0.97
	N/A	0.75				0.94																			
Pay agreement	Enterprise	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	None		0.63	1.07	0.93	0.86	0.94		1.15	0.72			0.84		0.92	0.96	0.82				0.83	0.96		0.94	1.15
	Individual	0.90	0.82	1.16	0.87	1.01	1.01	0.76		0.82	0.81		1.02			1.04	1.05				0.47	1.22		0.98	1.13
	National	1.18							0.94		0.80						1.05			1.24	0.44	1.26			
	N/A			1.63		0.38		0.75		0.83	0.84		0.92								0.46	0.82			0.97

Source: SES data; wiiw calculations.

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