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Frozen in time:

Gender pay gap
unchanged for 10 years

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ITUC report

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Foreword by ITUC

As part of its global campaign on equal pay between men and women, the ITUC has produced several reports on the global gender pay gap (GPG). This study is an attempt to gain further information on that issue in 2012. It looks at the situation in 43 countries around the world but, and for the first time, it also looks at wage differentials in 15 sectors. Like for any other research on equal pay, the main limitation is the availability of reliable data comparable across countries. Taking into consideration this limitation, the ITUC draws four main conclusions out of this research:

1. No significant progress has been made in closing the global gender pay gap for over a decade:

Despite a sharp narrowing of the global gender pay gap between the 60s until the end of the 90s, we have now observed a stagnation for over a decade. The pay gap remains frozen in time almost everywhere. Asia is the continent with the greatest wage differential between men and women. This situation requires more and better public policies to tackle wage inequality and more collective agreements between workers' and employers' organisations that focus on narrowing the gender pay gap.

2. Workers in unionised sectors are better protected against gender pay gaps and against poor compliance with minimum wage regulation:

The research indicates significant variation in the gender pay gap in the 15 sectors studied. Sectors that are traditionally unionised tend to have lower pay gaps, such as the public sector. Those with low unionisation rates and low wage levels, such as retail, hotels and restaurants, and agriculture, tend to have relatively higher gender pay gaps. This suggests that these sectors suffer from low levels of compliance with minimum wage regulation. Male-dominated sectors such as construction have the smallest gender pay gaps. This is mainly attributed to the low numbers of women working in this sector combined with a relative higher level of education. Across all the countries under study, domestic workers show the lowest level of earning and the largest average gender pay gaps. This is mainly due to their low level of unionisation and the fact that many female workers live in the house of their employers, with an average wage in cash much lower than the one of their male colleagues.

3. Discriminatory practices at the workplace persist:

A considerable part of the gender pay gap cannot be explained by objective factors such as level of qualification, of responsibilities, size of the company, years of service, etc. This unexplained part indicates a wide range of discriminatory practices. The lowest unexplained gender pay gaps are found in countries as diverse as Kazakhstan, Indonesia and the Netherlands, and the largest ones in Chile, South Africa and Argentina.

4. The existence of a "child penalty" on women's wages is confirmed:

In many of the countries under study, childrearing is much more detrimental to female wages compared to male wages, thereby contributing to increasing the gender pay gap. This indicates a "child penalty" on women's wages and points out the urgent need to implement policies facilitating caring tasks for both men and women in order to increase wage equity.

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Summary of findings

Introduction

Reducing inequality is one of ITUC's goals, among others with respect to women's wages. This report reviews the latest trends and figures for the Gender Pay Gap (GPG) for a range of countries in all five continents. This report is based on country-level wage data from ILO, Eurostat and other statistical agencies as well as on individual-level wage data from the multi-country *WageIndicator* web-survey. The following seven studies have been undertaken:

- A study of the GPG in 43 countries, leading to an estimate of the overall GPG of these countries
- A study of the GPG by industry in 18 countries, leading to a ranking of industries
- A study of the changes in GPG over time for 26 countries, leading to a judgement of the GPG development in the 1990s and 2000s
- A study of trade union activities towards gender equality in 2010 and 2011 for 11 European countries
- A study of the impact of education on male and female wages for 28 countries
- A study of the impact of children on male and female wages for 28 countries
- A study of the adjusted GPG for 16 countries

The GPG in 43 countries

The GPG overview reveals that Zambia (2005) has the largest GPG with almost 46%, followed by South Korea (ROK) (2007) with 43% and Azerbaijan (2008) with 37%. In contrast, the smallest GPGs are found in Slovenia (2010), with a GPG of only 4%, and in Paraguay (2008) and Italy (2009) with GPGs of 5%. The years refer to the most recent year data is available. In the second half of the 2000s the overall GPG for the 43 countries, controlled for the sizes of the national labour forces, is 18%.

The GPG by industry in 18 countries

The overview of 18 countries contains statistics of GPGs by industries for 15 of them. Across countries, three industries with small shares of women employed have the lowest GPGs: transport, storage and communication; construction, and fishing. Public administration also has on average a low GPG, and this sector notably in Latin American countries does not show up any longer as a male bulwark. In a number of countries three industries with wage levels close to the national minimum wage have considerable GPGs: wholesale and retail, hotels and restaurants, and agriculture. This suggests low levels of compliance with minimum wage regulation. By contrast, finance shows the combination of relatively high wage levels and considerable GPGs. Manufacturing turns out to have on average the fourth largest GPG, combined with a rather low relative wage level (10th of 15 industries). Overall, the health and social work sector even shows the third largest GPG, though its relative earnings level is slightly better than that of manufacturing.

The changes in GPG over time for 26 countries

The patterns over time do not reveal a steady decline of the GPG across 26 countries studied, in contrast to the expected trend. The countries showing a GPG decline are as many as the ones showing an increase. Moreover, a substantial number of countries shows hardly any changes in GPG between the mid-1990s and the late 2000s. Obviously, the GPG is highest in the Asian countries under study, with GPGs in the bracket between 30 and 40%. The majority of countries under study finds itself in the bracket between 10 to 30%. Four of the 26 countries manage to have a GPG under 10%, namely Belgium, Costa Rica, Italy, and Poland.

Weichselbaumer and Winter-Ebmer found that from the 1960s to the 1990s the GPG worldwide has fallen substantially from around 65 to 30% and the OECD found for the period 1980 - 2004 that the GPG declined in OECD countries. However, our study cannot conclude to a further narrowing of the GPG in the 26 countries under study for the period 1996 to 2010. This seems to indicate that no progress has been made in closing the GPG for over a decade. Two nuances should nevertheless be mentioned: One is that our total GPG covers predominantly countries with a relative low GPG. The other one is that for no country apart from the United States data points were available for all years and that for some countries only few points were available, indicating that our study may suffer from measurement problems. But from our study we must conclude that the GPG in the 26 countries has hardly changed in the late 1990s and the 2000s.

The gender equality trade union activities for 11 European countries

The review shows firstly that many trade unions directly take action for equal pay, as messages from Austria, Belgium, Finland, Spain, Sweden, Switzerland and UK show. Another line of messages highlights actions to increase wages in low-paid female dominated areas, like happened in Finland and in Norway. A third line of messages regards actions involved with rules and legislation concerning equality, such as undertaken in Sweden and the UK.

The impact of education on male and female wages for 28 countries

In these 28 countries both the highly educated men and women have higher earnings than low educated men and women respectively: In the age group under 30 the highly educated women show higher earnings compared to the low educated women; a similar outcome applies to the men, though the wage differentials across the women are smaller than those across the men. In the age group of 30 years and over, a similar pattern can be noticed, though the wage differentials across the age groups are larger for both women and men. This study concludes that in most countries men profit more from having a higher education than women.

The impact of childcaring on male and female wages for 28 countries

Studies have revealed a 'child penalty' for women. Our study for 28 countries showed that in all age groups the majority of men receive a child premium and in the age group 40 and over, the majority of them even receive a large child premium. In contrast, in all age groups the majority of women receive a child penalty. In the age group 30-39, almost all female groups receive a wage penalty and almost half of them receives a large wage penalty. This indicates that in many countries childrearing is much more detrimental to female wages compared to male wages, thereby contributing to the GPG. Policies to facilitate women in their childrearing tasks will decrease the GPG.

The adjusted GPG for 16 countries

The results of the analyses for 16 countries show overwhelmingly that the GPG remains, even when controlled for other characteristics, such as years of service, occupation, firm size, and household composition. It shows that the smallest adjusted GPG is found in Kazakhstan (6%), followed by Indonesia (9%) and the Netherlands (10%). In contrast, the largest adjusted GPG is found in Chile (22%), followed by South Africa and Argentina (both also 22%), and Spain and Mexico (both 21%). GPGs in the remaining countries are as follows: 18% for Russian Federation and Brazil, 17% for Colombia, 15% for the United Kingdom, 14% for Sweden, 13% for China, 12% for India, 11% for Belarus, and 10% for Belgium and Ukraine. This adjusted GPG is *not* the raw GPG, but the GPG controlled for a number of relevant characteristics; it is often referred to as the unexplained GPG, which means that the available explanatory factors cannot fully explain the raw GPG. Sometimes this unexplained GPG is referred to as discrimination. This may refer to a wide range of discriminatory practices, not solely to wage discrimination of an individual employer towards an individual employee, as defined in the Equal Pay Legislation.

A note on global wage information

GPG analyses require wage data across many countries and this data needs to be comparable and reliable. ILO has undertaken major efforts to collect and standardize global wage data and this data has been used in this report. However, in many countries collecting data by means of surveys is difficult and administrative records covers only parts of the labour force. In addition, concepts such as paid and unpaid overtime, benefits, non-financial remuneration, informal labour markets, and own-account or self-employed workers may not fully be harmonised and reported consistently. Finally, for detailed analyses aggregate country-level data are not sufficient and individual level data are needed, which are simply not available for global wage comparisons. To solve this problem, in this report we used data of the multi-country, continuous *WageIndicator* survey. Though for an overall view and a limited number of research, national statistics data reflect reality better than the *WageIndicator* data, we nevertheless use the latter data for analyses about the impact of education and childcaring on male and female wages.

1 Introduction

1.1 Outline of this report

This report studies the GPG for a wide range of countries, and the following seven studies have been undertaken.

1. A study of the GPG in 43 countries, leading to an estimate of the overall GPG of these countries
2. A study of the GPG by industry in 18 countries, leading to a ranking of industries
3. A study of the changes in GPG over time for 26 countries, leading to a judgement of the GPG development in the 1990s and 2000s
4. A study of trade union activities towards gender equality in 2010 and 2011 for 11 European countries
5. A study of the impact of education on male and female wages for 28 countries
6. A study of the impact of children on male and female wages for 28 countries
7. A study of the adjusted GPG for 16 countries

Chapter 2 reviews the GPG studies 1-5, based on publicly available data sources about wages for a wide range of countries, predominantly from the International Labour Organisation (ILO). Section 2.1 presents GPG figures by industry for Africa, the Americas, Asia and Australia, and Europe, using the most recent data available. It summarizes the industry and country patterns of the GPG. Section 2.2 focuses on understanding the changes in the GPG over time. It also provides a kaleidoscope of trade union actions to promote equal pay in 2010 and 2011, focusing on European countries: a limitation because this kind of information from countries on other continents was not systematically available.

Chapter 3 reviews the GPG studies 6-7. The focus is on the impact of education and childrearing on the GPG for 28 countries, using data from the worldwide *WageIndicator* surveys on work and wages.¹ Section 3.1 introduces the reasons for conducting GPG analyses about the impact of education and children. Section 3.2 and 3.3 investigate the impact of education on male and female wages respectively the impact of having children on these wages, also based on data from the *WageIndicator* survey for 28 countries. For 16 of these countries, Section 3.4 presents an overview of the GPG when controlled for a range of factors. For a better understanding of the *WageIndicator* survey data, Section 3.5 provides an overview on how the GPG figures of *WageIndicator* compare to data from national Labour Force Surveys or similar official surveys.

1.2 A note on global wage information

Wages are central to the world of work, because living standards of wage earners and their families depend on the wage level and on when and how they are adjusted and paid. In this context, it becomes obvious that wages are key for socio-economic research, but collecting information on wages is however not an easy undertaking. Before detailing the data sources used in this report, the five main data-collection methods are discussed here.

- Establishment surveys; these surveys may include information about the establishments' labour costs, average wages of the workforce, average wages of groups of workers (occupations, gender),

¹ The independent non-profit Wage Indicator Foundation aims for transparency of the labour market by sharing and comparing wage data through its network of national websites, currently in 65 countries. The Foundation was established in the Netherlands in 2003, is based in Amsterdam, and has regional offices in Ahmabad, Bratislava, Buenos Aires, Cape Town/Maputo and Minsk. See <http://www.wageindicator.org>.

or the wages paid to individual workers; in these surveys however the earnings of informal workers or own account workers typically are not included; data from establishment surveys are difficult to compare across countries;

- Surveys of individual workers, e.g. labour force surveys or censuses, surveys of households, or worldwide surveys such as the *WageIndicator* survey discussed later in this report; these surveys need survey questions about wages, non-financial remuneration and working hours; in these surveys however substantial rates of people may not want to provide an answer when asked about their wages (Plasman et al 2002) ; it takes huge efforts to make data about wages and working hours from individual surveys comparable across countries;
- Administrative records, e.g. employers' personnel records, insurance records, or tax records; this source provides detailed and reliable information; this type of data source however does not cover employers without computerized administrative records; data from these sources are difficult to compare across countries;
- Collective agreements, e.g. the agreed wages of occupational groups in the establishment or industry; this type of data source however is only available for a limited set of agreements and a limited set of countries;
- Country surveys, asking for the average wages paid in a range of occupations, e.g. the October Inquiry of ILO; this data collection however faces problems concerning the lack of comparability of wage concepts across countries (Oostendorp 2009).

This overview shows that collecting information about wages on a worldwide scale is not an easy undertaking. In its Laborsta database, ILO has collected aggregate wage information for a wide range of countries, using the sources mentioned here. In Chapter 2, we will use predominantly data from the Laborsta database. The aggregate Laborsta data, however, does not allow to analyse the GPG beyond the classifications used in Laborsta. For example, no breakdowns by education level or by the presence of children can be made. For the purpose of calculating effects of education or children on the GPG, individual level data is needed. No other dataset than the *WageIndicator* provides such data, because no other datasets provide information about many countries. Therefore, Chapter 3 will use this data source.

In the GPG analyses two concepts of wages are used: the median and the average or mean wage. The median wage is the middle of all observations within a defined category, e.g. all female workers. The average or mean is the sum of all wages of the individuals in this category divided by the number of observations in the category at stake. Mostly, in national data collections mean wages are reported. However, for international comparisons the median is more commonly used (Leaker 2008). The median has the advantage that it is not overly influenced by small numbers of high earners. In this report Chapter 2 mostly uses mean wages, whereas Chapter 3 reports the median wages.

In the GPG analyses, as in other wage analyses, the pay gap is typically based on hourly pay. Hence, comparisons across countries are based on the same entity. Thus, when wages are recorded as weekly or monthly wages, on behalf of the analyses they are computed into hourly wages wherever that was possible.

However a calculation of the GPG based on hourly wages hides another type of discrimination faced by women. In many countries women's reduced working hours compared to men is not the result of a free choice but rather an illustration of the difficulty they face in finding full time employment. This is the reason why a certain number of trade unions do not refer to hourly wages but to monthly wage differentials.

1.3 The data sources used and the countries covered

For this report several data sources have been used, and for each section in the report the country coverage is indicated. These are detailed below.

- Section 2.1 uses the Laborsta database and data from Eurostat; additionally journals and working papers have been searched for up-to-date information about the gender pay gap, among these the country reports from ITUC's Decisions For Life Project form an important part
 - o It provides national GPG information for 43 countries
 - o It provides industry-based information for 18 countries: Australia, Azerbaijan, Brazil, Botswana, Costa Rica, Egypt, India, Indonesia, Japan, Kazakhstan, Mexico, Mozambique, Paraguay, Philippines, South Africa, South Korea, USA, and Zambia
- Section 2.2.1 analyses changes in GPG over time and uses data from Laborsta as well as from Eurostat and other sources; it extends the information from ITUC's 2008 Global Gender Pay Gap Report (ITUC/IDS 2008)
 - o It provides national GPG information from 1996 to 2010 for 26 countries: Australia, Belgium, Botswana, Brazil, Costa Rica, Czech Republic, Denmark, Egypt, Finland, France, Germany, Hungary, Italy, Japan, Kazakhstan, Mexico, Netherlands, Norway, Poland, Portugal, Slovakia, South Korea (ROK), Spain, Sweden, UK, USA
- Section 2.2.2 uses information from the 2010 and 2011 monthly Collective Bargaining Newsletter of the University of Amsterdam/ AIAS and the European Trade Union Institute (ETUI),
 - o It covers 10 European countries: Austria, Belgium, Finland, France, Germany, Norway, Spain, Sweden, Switzerland, and UK
- Section 3 uses the 2010 and 2011 data of the multi-country, continuous *WageIndicator* survey (see Appendix 2 for a methodological explanation).
 - o It covers 28 countries in Sections 3.2. and 3.3: Argentina, Azerbaijan, Belarus, Belgium, Brazil, Chile, China, Colombia, Czech Republic, Finland, Germany, Hungary, India, Indonesia, Kazakhstan, Mexico, Mozambique, Netherlands, Pakistan, Russian Federation, South Africa, Spain, Sweden, Ukraine, United Kingdom, United States, Zambia, and Zimbabwe.
 - o It restricts the analyses to 16 of these 28 countries in Section 3.4: Argentina, Belarus, Belgium, Brazil, Chile, China, Colombia, India, Indonesia, Kazakhstan, Mexico, Netherlands, Russian Federation, South Africa, Spain, and Ukraine.

2 The Gender Pay Gap by country, industry and time

2.1 The GPG by country and industry

2.1.1 The size of the Gender Pay Gap

How large is the Gender Pay Gap (GPG) in countries around the globe? Using the most recent available data from published sources, such as from ILO, United Nations, OECD, Eurostat, national statistical bureaus, trade unions, and other sources, this section starts with an overview of the size of the GPG for 43 countries.

How do countries compare with respect to their national GPG? Graph 1 summarizes the figures. The country labels refer to the most recent year for which data is available. The Graph reveals that Zambia 2005 has the largest GPG with almost 46%, followed by South Korea (ROK) 2007 with 43% and Azerbaijan 2008 with 37%. In contrast, the smallest GPG are found in Slovenia 2010 with a GPG of only 4%, and in Paraguay 2008 and Italy 2009 with GPGs of 5%. When relating the GPG to women's employment participation rates² in these 43 countries, no strong correlation is found.³ This indicates that large GPGs are found in countries with high participation rates of women as well as in countries with low participation rates. The overall GPG for 43 countries, controlled for the size of the national labour forces, results in a GPG of 18.4%. This is slightly higher than the 16.5% gap calculated by IDS in 2008, using information from 62 countries (ITUC/IDS, 2008).⁴

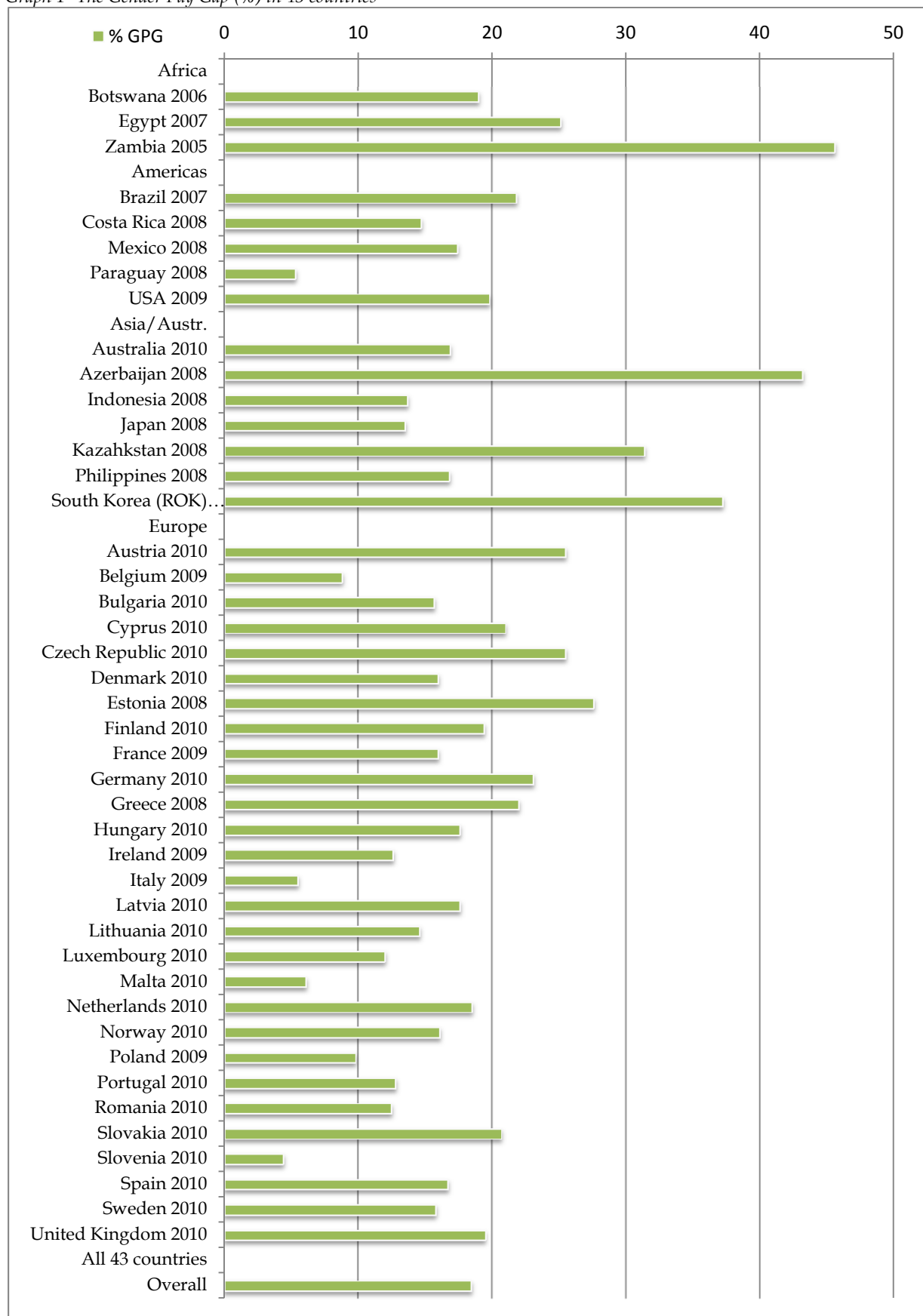
The following sections detail the GPG by industry for 18 countries outside Europe. Industry-level information are of particular relevance for trade unions. We cover 14 developing countries: Azerbaijan, Botswana, Brazil, India, Indonesia, Kazakhstan, Mozambique, South Africa, Zambia, Costa Rica, Egypt, Mexico, Paraguay, and Philippines, and four high-income countries (Australia, Japan, South Korea, and the USA). For 15 of the 18 countries in total, the GPG has been detailed by industry; this was not possible for India, Mozambique and South Africa, though interesting information has been included for these three countries. In these sections no European countries have been included: the GPGs for Europe are detailed in Section 2.2, focusing on changes in GPGs over time.

² The participation rates are taken from the employment projections in ILO's Laborsta E5 database, extracted on 20/09/2011

³ Pearson Correlation $R = .292$, sign = .057, $N=43$

⁴ The initial calculations showed a GPG of 15.6%, based on 63 countries, but excluding Bahrain which a positive gap of 40% the GPG changed to 16.5%.

Graph 1 The Gender Pay Gap (%) in 43 countries



Source: Sources referred to in Section 2.1 for countries outside Europe and Eurostat, accessed 01/02/2012, for European countries; the overall GPG is weighted for the relative size of the national labour forces.

2.1.2 The size of the GPG in Africa, with breakdown by industry

Botswana

Decomposing the GPG in Botswana for 1995-96, Siphambe and Thokweng-Bakwena (2001) found for the public sector wage discrimination to be quite small. By contrast, in the private sector more than two thirds of the GPG was due to discrimination against women or favouritism towards men. In Table 1 we present the GPG based on national statistics on average monthly earnings by industry. As the statistics for Botswana do not provide average weekly or monthly working hours for 2005-06, we are not able to compare hourly wages. With 19%, the total GPG is relatively small.

Table 1 Average monthly earnings by industry and by gender, Botswana, 2005-06, in BWP (rounded at BWP 20)

	total	female	male	m/f gap
Agriculture	880	860	900	4.4%
Mining	8,200	8,620	7,640	-12.8%
Manufacturing	1,640	1,060	2,200	51.8%
Utilities (gas, water, electricity)	9,320	9,160	9,360	2.1%
Construction	2,340	2,060	2,380	13.4%
Wholesale, retail	2,080	1,600	2,500	36.0%
Restaurants, hotels	1,540	1,280	1,920	33.3%
Transport, storage, communication	5,340	4,880	5,540	11.9%
Finance, insurance	7,980	6,780	9,880	31.4%
Real estate	6,060	5,500	6,320	12.9%
Education	5,900	4,700	7,360	36.1%
Health, social work	4,400	3,780	5,880	35.6%
Other community services	2,060	1,660	2,420	31.4%
Total	3,600	3,160	3,900	19.0%

Sources: Authors' calculations based on CSO (Botswana) 2008a, 2008b

Egypt

In Table 2 we calculate, based on official statistics on hourly earnings, the GPG in Egypt for 2007. With 25%, the total gap turns out to be in the middle range across countries. The overall wage disadvantage for women is mainly caused by considerable GPGs in manufacturing and in health and social work. By contrast, six of 14 industries show a negative GPG i.e. a wage advantage for women. This mainly is the case for industries with small shares of women employed.

Table 2 Average hourly earnings by industry and by gender, Egypt, 2007, in EGP

	total	female	male	m/f gap
Agriculture	2.51	2.50	2.53	1.7
Fishing	3.53	3.80	2.92	-30.1
Mining	11.40	3.18	11.41	72.1
Manufacturing	3.93	2.68	4.13	35.1
Utilities (gas, water, electricity)	6.52	6.80	6.52	-4.5
Construction	5.59	6.27	5.51	-13.8
Wholesale, retail	4.42	4.00	4.49	10.9
Hotels, restaurants	3.07	3.47	3.04	-14.1
Transport, storage, communication	5.28	6.19	5.18	-19.5
Finance	9.42	10.00	9.20	-8.7
Real estate, renting, business	4.47	4.53	4.47	-1.3
Public administration, defense				
Education	2.18	2.14	2.25	4.9
Health, social work	2.40	2.05	2.85	28.1
Other community and personal services	2.49	2.43	2.56	7.3
Total	4.58	3.56	4.75	25.1

Source: Authors' calculations based on ILO Laborsta database

Mozambique

Calculations of the World Bank for the Mozambican formal sector showed for the mid-2000s a considerable GPG. Wage-regression analysis revealed strong signs of sex discrimination, with women earning 28% less income than men, even when controlling for differences in education levels, marital status, and industry (World Bank 2008).

South Africa

Observations on trends in the GPG in South Africa vary. Hlekiso and Mahlo (2006) found that between 2001 and 2005 gender inequality persisted and the difference between male and female wages even grew, from 31 to 38%. Based on Statistics South Africa data on average wages, Burger and Yu (2006) observed that the GPG increased over 1995-2005, though since 2000 the gap narrowed somewhat. By contrast, calculations of real mean earnings based on Department of Labour (DOL) data suggest that the GPG has fallen from 41% in 1995 to 25% in 2005 (derived from Ndungu 2008). Based on earlier *WageIndicator* data, for 2007-08 the average GPG in South Africa was calculated at 33.5%, an outcome fitting in with the first two research outcomes. There was a collective bargaining premium: the GPG proved to be on average 9% points smaller for those covered by collective agreement than for those who were not (ITUC 2009). A surprising finding was that part-time workers earned per hour considerably more than full-timers. In 2003, controlled for individual and job characteristics and working conditions, this hourly premium to working part-time was calculated on 34 to 40%; the premium for *female* part-timers was with 33 to 40% about the same. It is likely that the prevailing higher hourly minimum wages for those working less than 28 hours a week play a role here (Posel and Muller 2008). Unfortunately, over recent years no detailed official statistics by gender and industry are available for South Africa.

Zambia

Researchers have concluded that education for Zambia is the most important determinant of wages, among men and women as well as between them. In the 1990s, an international survey revealed the GPG in the country's formal sector to be relatively modest compared with other African countries: women earned on average 19-20% less than men. The effect of education on this gap was relatively strong (Fafchamps *et al* 2009). For 1995, it has been estimated that the average hourly wages of women with medium and high education in Zambia were 95% of the wages of their male counterparts, thus indicating a GPG of about 5%. Yet, the hourly average wages of low-educated women were only 59% of those of low-educated men, pointing at a GPG of 41% among the low-educated (Fontana 2004: 56). But education is not the only relevant factor; outright discrimination of women is another one. In the 1990s about one-third of the Zambian GPG could be attributed to discrimination. That was most experienced by full-time working women that had only completed primary school or junior secondary school (Nielsen 2000).

Table 3 Average hourly earnings by industry and by gender, Zambia, 2005, in ZMK (rounded at ZMK 20)

	total	female	male	m/f gap
Agriculture, fishing etc.	540	360	680	47.1%
Mining	5,700	2,760	5,840	52.7%
Manufacturing	2,240	1,200	2,660	54.9%
Electricity, gas, water supply	5,820	2,980	6,340	53.0%
Construction	2,680	4,220	2,560	-64.9%
Wholesale, retail	1,680	1,180	2,100	43.8%
Restaurants, hotels	1,580	1,560	1,620	3.7%
Transport, storage, communication	3,240	2,720	3,280	17.1%
Finance, insurance, real estate	7,040	6,680	7,120	6.2%
Community, social, personal services	4,740	4,240	5,180	18.1%
Total	1,700	1,140	2,060	45.6%

Source: Authors' recalculations based on CSO (Zambia), 2007

In Table 3, we present hourly wages by industry in Zambia's formal sector and by gender, for 2005. We recalculated these wages based on monthly earnings and average weekly hours' statistics for that year. The outcomes indicate massive GPGs at industry level, resulting in an overall gap of over 45%. An exception is construction, where women (most likely mostly office workers) earn on average considerably more than men. It is also remarkable that the GPG in finance is small, which fits in with the research results of both Fontana and Nielsen mentioned above.

2.1.3 The size of the GPG in the Americas, with breakdown by industry

Brazil

Until in the 1980s the Brazilian GPG was extremely large. In urban Brazil, for example, men earned on average about twice what women earned. Clearly, gender discrimination was widespread. Elimination of discrimination might decrease wage differences by one-fifth to one-third (Tiefenthaler 1992; Winter 1994). Based on national surveys various authors found that in the course of the 1980s and in the 1990s the GPG in Brazil rapidly diminished, according to some to about 25%, mainly because of reduced discrimination (for an overview: Arabsheibani *et al* 2003). However, Lovell (2006) in her detailed study for São Paulo, found that wage discrimination had increased between 1960 and 2000. Also other recent studies show the unexplained component in GPGs to increase, likely pointing at the continuous large influence of discriminatory practices in wage formation, though they confirm the persistent decrease of the gap as such too (for an overview: Marques Garcia *et al* 2009). For example, based on National Household Sample Surveys (PNAD), Scorzaface and Pazello (2007) found a strong decline of the country's GPG, from 47.5% in 1988 to 21.6% in 2004.

For Brazil, wage and working hours statistics based on the ILO Laborsta division in 14 to 16 industries are missing. Based on the PNAD of 2007, Madalozzo (2010) calculated hourly GPG figures by industry; we put these in Table 4, though this only covered eight industries. We added the overall GPG (excluding domestic workers) that we calculated based on the PNAD itself (IBGE 2008). With 21.8% for 2007, the gap we calculated was 0.2% higher than that found for three years earlier, suggesting that the long-term downward trend stagnated. Yet, statistical problems in comparing 2004 and 2007 make that we cannot present this last outcome as 'hard'.

Table 4 Average hourly earnings by industry and by gender, Brazil, 2007, in RS

	female	male	m/f gap
Agriculture	0.91	3.10	70.6
Fishing			
Mining	4.33	7.12	39.2
Manufacturing	11.02	10.45	-5.5
Utilities (gas, water, electricity)			
Construction	?	4.72	?
Wholesale, retail	3.56	7.65	53.5
Hotels, restaurants			
Finance			
Real estate, renting, business			
Transport, storage, communication	7.45	7.28	-2.3
Public administration, defense	10.99	12.02	8.6
Education			
Health, social work			
Other community and personal services	8.26	13.45	38.6
Other activities	7.04	9.12	22.8
Total	5.57	7.12	21.8

Source: Madalozzo 2010, Table 3; authors' calculations based on IBGE 2008

Costa Rica

In Table 5, we present hourly earnings by industry and by gender for Costa Rica, for 2008. After correcting for incorrectly calculated total male and female wages in the ILO Laborsta data, we found an overall GPG of slightly below 15%. Five of 16 industries show a negative GPG, in other words a wage advantage for women.

Table 5 Average hourly earnings by industry and by gender, Costa Rica, 2008, in CRC

	total	female	male	m/f gap
Agriculture	784.7	703.3	798.8	11.9
Fishing	596.5	686.8	595.0	-15.5
Mining	1,042.2	853.3	1,075.3	20.7
Manufacturing	1,272.1	1,091.4	1,345.6	18.8
Utilities (gas, water, electricity)	2,063.2	2,605.2	1,943.8	-34.0
Construction	964.7	1,153.6	959.3	-20.3
Wholesale, retail	1,145.6	995.8	1,215.9	18.1
Hotels, restaurants	940.9	888.5	1,006.1	9.9
Transport, storage, communication	1,449.4	1,498.1	1,438.9	-4.1
Finance	2,380.1	2,071.9	2,686.7	22.9
Real estate, renting, business	1,370.1	1,329.5	1,390.3	4.4
Public administration, defense	2,178.5	2,353.5	2,081.8	-13.1
Education	2,118.3	2,030.9	2,340.8	13.2
Health, social work	2,114.3	1,974.5	2,371.5	16.8
Other community and personal services	1,444.3	1,088.6	1,621.5	39.0
Employed in households	557.5	543.5	726.4	25.1
Total	1,336.3	1,249.9	1,465.3	14.7

Source: Authors' recalculations based on ILO Laborsta database

Mexico

In Table 6 we present the GPG based on official statistics of Mexico for *monthly* earnings. Though statistics on weekly hours are available, we decided to stick to monthly wages as we found some anomalies in those statistics. The overall wage gap of 17.4% for 2008 is of about the same size as found in earlier research (Cf. ITUC/IDS 2008). As for industries, the GPGs for manufacturing, hotels/restaurants and health/social work are considerable, as we will see also in international perspective.

Table 6 Average monthly earnings by industry and by gender, Mexico, 2008, in MXN

	total	female	male	m/f gap
Agriculture	2,691	2,511	2,675	6.1
Fishing	4,379	3,656	4,444	17.7
Mining	10,580	10,534	10,586	0.5
Manufacturing	4,679	3,715	5,172	28.2
Utilities (gas, water, electricity)	7,152	6,741	7,233	6.8
Construction	4,751	6,574	4,670	-40.8
Wholesale, retail	4,236	3,686	4,530	18.6
Hotels, restaurants	3,893	3,313	4,529	26.8
Transport, storage, communication	5,855	5,934	5,844	-1.5
Finance	8,976	8,205	9,782	16.1
Real estate, renting, business	5,181	4,534	5,662	19.9
Public administration, defense	6,565	5,990	6,887	13.0
Education	6,641	6,142	7,392	16.9
Health, social work	6,741	6,000	8,542	29.8
Other community and personal services	4,556	3,855	5,027	23.3
Employed in households	2,401	2,297	3,578	35.8
Total	4,801	4,239	5,132	17.4

Source: Authors' calculations based on ILO Laborsta database

Paraguay

Table 7 shows the size of the GPG in Paraguay, on a *monthly* basis as national statistics on weekly or monthly hours are lacking. Unfortunately, only seven industries could be covered. The outcomes are remarkable: a small overall GPG, and a negative GPG or a wage advantage for women in four industries. Notably the negative GPG in manufacturing may seem remarkable, though neighbouring Brazil showed a similar outcome.

Table 7 Average monthly wages by industry and by gender, Paraguay, 2008, in PYG

	total	female	male	m/f gap
Agriculture				
Fishing				
Mining				
Manufacturing	5,907	6,303	5,827	-9.8
Utilities (gas, water, electricity)	23,815	17,592	24,945	27.5
Construction	4,396	7,385	4,370	-69.0
Wholesale, retail	5,902	5,615	6,030	6.9
Hotels, restaurants				
Transport, storage, communication	8,204	8,788	8,012	-9.7
Finance	10,209	10,269	10,184	-0.8
Real estate, renting, business				
Public administration, defense	7,796	6,625	10,440	36.5
Education				
Health, social work				
Other community and personal services				
Total	6,872	6,641	7,011	5.3

Source: Authors' calculations based on ILO Laborsta database

USA

In Table 8 we show the GPG for the USA over 2009, calculated according to one of the yardsticks most used in that country i.e. the *median weekly* earnings of men and women, divided by industry. The GPG of 19.8% is the preliminary outcome of a long process during which the gap nearly halved: from 38.7% in 1970, via 35.8% in 1980, 28.1% in 1990 and 23.1% in 2000, to the current level. Recent years showed a fluctuating pattern, with the low point of 19.0% in 2005. After that year, the GPG increased slowly to 20.1% in 2008, as to decrease again somewhat to 19.8% in 2009. The other GPG yardstick often used in the USA, the one based on median annual earnings of full-time working men and women, followed a quite similar pattern over time but remained some 3 to 4 percentage points higher than the yardstick we use (Drago and Williams 2010).

The reader may have noted that the 1990s marked a slowdown in the decline of the GPG in the USA. In investigating that slowdown, Blau and Kahn (2006) found that changes in human capital did no longer contribute. The biggest factor was a much faster reduction of the unexplained gender wage gap in the 1980s than in the 1990s. This may be partly due to improved statistical measurement, partly to labour market discrimination, and partly to changes in labour demand that were unfavourable for women, like the expansion of finance and the IT industry, with their highly segmented labour markets.

Table 8 *Median weekly earnings by industry and by gender, USA (full-time workers of 16 years and older), 2009, in USD*

	total	female	male	m/f gap
Agriculture	477	413	488	15.4
Fishing				
Mining	1,048	873	1,096	20.3
Manufacturing	768	618	837	26.2
Utilities (gas, water, electricity)	989	780	1,029	24.2
Construction	748	696	755	7.8
Wholesale, retail	612	523	688	24.0
Hotels, restaurants	472	421	504	16.4
Transport, storage, communication	791	662	828	20.0
Finance	883	738	1,186	37.8
Information technology, real estate, professional and business services	855	741	950	22.0
Public administration, defense	904	783	998	21.5
Education	852	808	957	15.6
Health, social work	692	648	902	28.2
Other community and personal services	627	531	702	24.4
Employed in households	398	399	-	-
Total	739	657	819	19.8

Source: Authors' calculations based on US Department of Labor / US Bureau of Labor Statistics 2010, Table 19.

2.1.4 The size of the GPG in Asia and Australia, with breakdown by industry

Australia

In Table 9 we present hourly earnings by industry and by gender for Australia, based on data for August 2010 of ABS, the country's national statistical office, and subsequently the GPG. ABS calculated a GPG based on average weekly hours for full-time working adults; by definition this outcome is equivalent with the hourly GPG for this category. As the table shows, the resulting total GPG is 16.9%. During the last decades this value fluctuated between 15 and 17%, without a clear direction. The low point fell, with 15.1%, in 2005, the high point was 17.0% in 2009 (Cassells *et al* 2009), followed by a minor decrease.

Table 9 *Average weekly earnings by industry and by gender, Australia, August 2010, in AUD*

	female	male	m/f gap
Agriculture			
Fishing			
Mining	1,649	2,131	22.6
Manufacturing	999	1,186	15.8
Utilities (gas, water, electricity)	1,239	1,483	16.4
Construction	1,075	1,311	18.0
Wholesale, retail	889	1,069	16.8
Restaurants, hotels	846	967	12.5
Transport, storage, communication	1,197	1,273	6.0
Finance	1,219	1,796	32.1
Real estate, renting, business	1,165	1,551	24.9
Public administration, defense	1,285	1,402	8.3
Education	1,290	1,425	9.5
Health, social work	1,061	1,457	27.2
Other community and personal services	944	1,128	16.3
Total	1,116	1,343	16.9

Source: Authors' calculations based on: Australian Bureau of Statistics (ABS) (2010) *Equal Pay Statistics Factsheet* (Based on ABS Average Weekly Earnings, August 2010)

Azerbaijan

Table 10 shows the magnitude of the GPG in Azerbaijan, on a *monthly* basis. As the labour market statistics for Azerbaijan show hardly any gender differences in hours worked, the table may be regarded as allowing for reasonable indications of the *hourly* GPG. With over 43%, the overall gap was quite large in international perspective.

Table 10 Average monthly earnings by industry and by gender, Azerbaijan, 2008, in AZN

	total	female	male	m/f gap
Agriculture	114.7	93.0	118.9	21.8
Fishing	104.6	87.4	104.9	16.7
Mining	1,011.4	826.0	1,029.0	19.7
Manufacturing	251.6	191.6	253.9	24.5
Utilities (gas, water, electricity)	287.4	232.6	293.3	20.7
Construction	371.9	220.7	406.1	45.7
Wholesale, retail	211.3	199.1	214.3	7.1
Restaurants, hotels	257.8	241.9	265.4	8.9
Transport, storage, communication	329.4	210.1	355.8	40.9
Finance	812.6	573.8	877.5	34.6
Real estate, renting, business	527.9	269.2	643.8	58.2
Public administration, defense	288.0	231.1	296.4	22.0
Education	214.4	186.0	257.0	27.6
Health, social work	130.9	112.6	167.8	32.9
Other community and personal services	182.7	126.4	238.6	47.0
Total	274.4	184.5	324.6	43.2

Source: Authors' calculations based on ILO Laborsta database

India

Official wage information is for India scarce and rather outdated. The Annual Survey of Industries (ASI, CSO 2007), covering nearly 8.5 million organized (formal) workers in 2004-05, indicates very large wage differentials. Whereas the average wage per "man day worked" for regular male workers was Rs. 212.30, for female workers that was only Rs. 91.00, implying a GPG of 57%. This figure may also indicate hourly differences, as (for 2006) the average hours worked in the formal sector were exactly the same for men and women (data: ILO Laborsta). According to calculations on the broader household survey data for 2004-05, male casual workers employed in the formal sector earned on average Rs. 73.00 per day, whereas male casual workers in the informal sector earned an average Rs. 51.30; for female casual workers these amounts were respectively Rs. 47.40 and Rs. 32.40, indicating GPGs of respectively 35% and 37% (NCEUS 2009).

Based on India's NSSO household surveys, Menon and Van der Meulen Rodgers (2009) found between 1983 and 2004 a fluctuating GPG for India, with over 32% in 2004 nearly returning to the very large gaps of the 1980s, after GPG values of 23-24% were registered in the 1990s. These authors also found that in all years surveyed more than half of the total gap remained unexplained by education, experience, and other human capital characteristics. From 1987-88 to 2004, the residual gap grew even, from 53% to 78%. Based on data covering 1983-1999, Reilly and Dutta (2005) found widely varying developments of GPGs in India across industries.

Regarding the construction sector, it is estimated that there are 31 million unskilled and informal workers, the majority of which (51%) are women. Studies have shown that the daily wages of informal women workers are substantially lower than of male workers (Barnabas et al, 2009). In data collected by SEWA (Self Employed Women's Association) in 2000, the average monthly income of women workers was Rs 1,815 compared to Rs 3,842 for male workers. In some cases the wages of women workers were below the minimum wage.

Indonesia

We calculated hourly wages and GPGs by industry and gender for 2008, based on official monthly earnings and average weekly hours' statistics. The outcome suggests a GPG of less than 14% for 2008 in the economy at large. Due to the shorter average hours worked by women, this outcome is lower than the GPG based on monthly wages (22.8%). Calculated on an hourly base in six of 16 industries women have a wage advantage over men.

Table 11 Average gross hourly earnings by industry and by gender, Indonesia, 2008 (August), in IDR (rounded at IDR 20)

	female	male	m/f gap
Agriculture	3,060	3,960	22.7
Fishing	4,660	3,890	-19.8
Mining	6,400	9,220	30.6
Manufacturing	3,880	4,940	21.5
Utilities	7,580	9,780	22.5
Construction	5,680	4,400	-29.1
Wholesale, retail	4,200	4,660	9.9
Hotels, restaurants	3,620	4,480	19.2
Transport, storage, communication	6,640	5,700	-16.5
Finance	9,980	9,680	-3.1
Real estate, renting, business	9,640	8,160	-18.6
Public administration, defence	10,100	10,200	1.0
Education	9,520	9,660	1.4
Health, social work	8,360	9,760	14.3
Other community, social and personal services	4,660	4,340	-7.4
Private households	2,180	3,700	41.1
Total	4,920	5,700	13.7

Source: Authors' recalculations based on ILO Laborsta database

Japan

In Table 12 we present hourly earnings by industry and by gender in Japan, for 2008. We recalculated these figures as in the official statistics they were based on monthly earnings and monthly hours' statistics. Due to the much shorter average hours worked by women (in 2008 34.4 hours weekly, against on average 45.3 hours for men), the hourly GPG is with 13.5% much lower than the monthly gap of 34.3%. With in 2000 about the same distance between hours worked for men respectively women and a month-based GPG of 34.5%, there seems to have been hardly any change in the Japanese GPG across the 2000s (all data: ILO Laborsta).

Table 12 Average hourly earnings by industry and by gender, Japan, 2008, in JPY

	female	male	m/f gap
Agriculture			
Fishing			
Mining	1,160	1,622	28.5
Manufacturing	1,267	1,646	23.0
Utilities (gas, water, electricity)			
Construction	1,534	1,651	7.1
Wholesale, retail	1,496	1,699	11.9
Hotels, restaurants	1,363	1,367	0.3
Transport, storage, communication	1,850	1,769	-4.4
Finance	1,628	2,318	29.3
Real estate, renting, business	1,561	1,793	12.9
Public administration, defense			
Education	1,990	2,359	15.6
Health, social work	1,596	1,900	16.0

Other community and personal services			
Total	1,526	1,765	13.5

Source: Authors' calculations based on ILO Laborsta database

Kazakhstan

In Table 13 we present the GPG based on official statistics of Kazakhstan on *monthly* earnings. As the (scarcely available and rather outdated) official statistics showed hardly any gender differences in hours worked, the table allows for reasonable indications of the country's *hourly* GPG, i.e. more than 31% in 2008.

Table 13 Average monthly earnings of employees by industry and by gender, Kazakhstan, 2008, in KZT

	total	female	male	m/f gap
Agriculture	31,407	24,698	34,084	27.6
Fishing	28,894	22,428	30,714	27.0
Mining	109,933	82,517	117,867	30.0
Manufacturing	65,874	48,764	73,457	33.6
Utilities (gas, water, electr.)	55,955	46,423	60,346	23.6
Construction	81,573	61,985	83,407	25.7
Wholesale, retail	59,330	51,208	66,094	22.5
Restaurants, hotels	64,382	52,137	90,832	42.6
Transport, storage, communication	83,012	73,749	87,342	15.6
Finance	138,544	116,749	178,649	34.7
Real estate, renting, business	93,557	84,616	97,807	13.5
Public administrat., defense	47,276	40,540	51,670	21.5
Education	34,454	33,506	37,255	10.1
Health, social work	35,775	34,952	39,384	11.2
Other community and personal services	61,369	47,914	75,816	36.8
Total	54,514	43,501	63,441	31.4

Source: Authors' calculations based on ILO Laborsta database; website Statistics Agency of Kazakhstan (SAK)

Philippines

In Table 14 we present hourly earnings by industry and by gender in Philippines, for 2008. We recalculated these figures as in the official statistics they were based on daily earnings and hours' statistics (and, again, corrected for incorrect total male and female wages in the ILO Laborsta data). The total GPG comes at nearly 17%. Remarkably, calculated in hours seven of 16 industries women show up with a wage advantage over men. Yet, except for education these are industries with small shares of women employed.

Table 14 Average hourly earnings by industry and by gender, Philippines, 2008, in PHP

	total	female	male	m/f gap
Agriculture	136.7	122.0	141.0	13.4
Fishing	166.2	151.9	166.8	8.9
Mining	242.3	301.8	238.8	-26.4
Manufacturing	289.6	275.8	299.1	7.8
Utilities (gas, water, electr.)	457.4	480.1	453.5	-5.9
Construction	267.8	387.4	265.6	-45.9
Wholesale, retail	249.9	238.4	258.8	7.9
Hotels, restaurants	251.3	222.4	278.9	20.3
Transport, storage, communication	357.1	502.1	328.6	-52.8
Finance	495.8	501.8	487.7	-2.9
Real estate, renting, business	412.3	474.3	381.5	-24.3
Public administration, defense	415.5	413.0	416.9	0.9
Education	487.5	491.2	476.4	-3.1

Health, social work	417.3	409.3	436.1	6.1
Other community and personal services	287.9	272.9	299.9	9.0
Employed in households	122.6	111.1	188.0	40.9
Total	261.1	232.1	278.8	16.8

Source: Authors' recalculations based on ILO Laborsta database

South Korea

Table 15 shows the GPG for South Korea based on official figures on *monthly* earnings for 2007. As the labour market statistics for this country show hardly any gender differences in hours worked, the table may be regarded as allowing for reasonable indications of the South Korean *hourly* GPG. With only one exception (transport etc.), industry GPGs are quite high, resulting in the overall very high GPG of 37.2% in 2007.

Table 15 Average monthly earnings by industry and by gender, South Korea (Republic of Korea), 2007, x 1,000 KRW

	total	female	male	m/f gap
Agriculture				
Fishing				
Mining	2,768	1,596	2,866	44.3
Manufacturing	2,688	1,742	3,026	38.9
Utilities (gas, water, electricity)	4,649	2,723	4,896	44.4
Construction	2,437	1,536	2,587	40.6
Wholesale, retail	2,693	1,894	3,089	38.7
Hotels, restaurants	1,622	1,351	1,993	32.2
Transport, storage, communication	2,520	2,248	2,568	12.5
Finance	4,403	3,103	5,251	40.9
Real estate, renting, business	2,424	1,634	2,761	40.8
Public administration, defense				
Education	2,893	2,126	3,659	41.9
Health, social work	2,544	2,114	3,731	43.3
Other community and personal services	2,362	1,690	2,643	36.1
Total	2,683	1,908	3,039	37.2

Source: Authors' calculations based on ILO Laborsta database

2.1.5 The industry pattern of the GPG

Charting the industry pattern of GPGs is quite relevant for the trade union movement as collective bargaining often takes place at the sector or branch level. Yet, only few publications cover such patterns, and hardly any do so through international comparison. By contrast, the country statistics presented above allowed us to compare the size of the GPG by industry for 15 countries in four continents: in alphabetical order Australia, Azerbaijan, Botswana, Costa Rica, Egypt, Indonesia, Japan, Kazakhstan, Mexico, Paraguay, Philippines, South-Korea (ROK, Republic of Korea), US, and Zambia. In Table 16 we have ranked the industries at stake, starting with 1 for the industry with the lowest GPG, and finishing with 15 for the highest GPG. Table 24, in Appendix 1, includes the corresponding percentages. For 11 countries, the first six industries with the lowest ranking have been coloured orange in Table 16. In the four countries with in total less than 12 industries covered, we coloured the top-5 industries (Japan and Zambia), the top-4 (Brazil), or the top-3 (Paraguay). As to support our GPG analysis, we present in Table 17 a similar ranking of the average earnings levels by industry, with 1 for the industry with the highest average earnings, and so on. Like in Table 16, we have coloured the first six (or five, four, three) industries orange.

In Table 16 two industries stand out with on average the lowest GPG ranking: transport, storage and communication, and construction. Transport etc. takes the no. 1 position, with an average GPG ranking of 3.9 (over 15 countries), followed by the construction industry with an average of 4.1 (over 14 countries). In 12 of 15 countries, transport is among the top industries with the lowest ranking as

indicated above, whereas this is the case for construction in 10 of 14 countries. The two industries are characterized by relatively small shares of women employed: nearly everywhere less than one in five of the employed, with a few exceptions: in Botswana 36% women in transport etc., and in Azerbaijan 30%, as well as 24% women among construction workers in Kazakhstan (2008 figures, derived from ILO Laborsta). The women in question may in majority have office jobs and be relatively high-skilled.

With regard to the construction sector, it is however important to note that when one compares the wages of women to men in specific occupations (plumbing, electricity, architecture etc.) or as general labourers in sites, the wages of women tend to be less. The notion that construction is a male dominated industry that requires “extensive physical strength” is a dominant factor hindering women’s access to jobs in that sector. Further women employed in construction are prone to other forms of employment and work-site discrimination such as glass-ceiling, sexual harassment, and lack of access to formal and informal skills training. Women workers find it challenging to break into the male dominated informal training and mentoring programmes on work sites. Finally it is worth mentioning that women workers often do not have access to separate changing, washing, and sanitation facilities at the construction site level, e.g. in India (SEWA Academy, 2000).

This will likely be the case in the fishing industry as well. This industry takes the no. 3 position, with an average GPG ranking of 5.6 (be it over only seven countries). In all three industries quite often a negative GPG or a wage advantage for women shows up: in transport in eight of 15 countries, in construction in seven of 14 countries, and in fishing in three of seven countries. Such a negative GPG may be quite large, in construction up to 69% in Paraguay or 65% in Zambia, in transport etc. up to 53% in Philippines, and in fishing up to 30% in Egypt. Table 17 learns that the overall wage rankings of the three industries vary: here, transport etc. ranks 6th, construction 7th, but fishing only 13th.

The GPG in public administration and defense joins the third position, with an average ranking of 5.6, over 10 countries. Up till recently public administration in quite some developing countries could well be characterized as a male bulwark, with (relatively few) women employed mainly in subordinate and low-paid ranks. A classical example in this respect has been, and likely is, India (Cf. Van Klaveren *et al* 2010). Adequate wage and GPG figures for public administration are lacking for that country. The same is true for a number of African and Asian countries, including five of our 15-countries’ sample. Yet, this is clearly not the full picture. Notably the outcomes for the American countries Costa Rica, Brazil and Mexico concerning the GPG in public administration correspond with the findings of Panizza and Qiang (2005). They found for the majority of 13 Latin American countries studied a wage premium associated with working in the public sector. This premium was often higher for women than for men though it did not compensate for the wide GPG. For women relatively low GPGs in public administration open up perspectives as they often imply relatively good pay: Table 17 indicates that, except for Kazakhstan, concerning the overall wage level public administration is in the top (or at least middle) ranks across industries. The relatively high unionisation of the public sector and high numbers of workers covered by collective agreements may to a large extent explain both the relative good earning level and lower GPG.

A similar conclusion can be drawn for utilities (gas, water and electricity supply): no. 5 in the GPG ranking and no. 2 in the earnings level ranking. However, it should be noted that utilities is a small industry with limited employment opportunities, in all 15 countries contributing less than 1.5% to total and female employment alike.

With the no. 3 position in the earnings level ranking, mining in most countries may also offer interesting employment opportunities for women, but, besides its limited size (in all 15 countries less than 2% of total and female employment), with an 8th position on the ranking the GPG here is on average substantially larger than in utilities (employment data: ILO Laborsta).

Table 16 allows us to trace a category of five industries positioned in the middle ranks of industries according to average GPG size: education (average ranking 6.9); real estate, renting and other business (7.0); hotels and restaurants (7.2); wholesale and retail (also 7.5); and agriculture. Yet, in the five industries these average rankings are hiding a wide variety of national rankings; for example, in

hotels and restaurants from the no. 2 position in Azerbaijan, Japan and South Korea, till the 15th position in Kazakhstan and Philippines. Second, besides the similar GPG ranking there are many mutual dissimilarities across these five industries, also concerning relative earnings. Whereas in that respect in Table 17 real estate etc. is positioned 5th and education 8th, the other three industries are found at the low-wage end: wholesale and retail on average ranked 12th, hotels and restaurants 13th, and agriculture ranked 14th. The latter outcomes show striking similarities with our earlier *WageIndicator*-based research for nine EU countries, where agriculture, wholesale and retail, and hotels and restaurants overall were found in the lowest ranks with the highest shares of low paid workers (Van Klaveren and Tjzens 2008). If the official minimum wages were effectively complied with, the low earnings in these three industries, with averages often near the minimum wage rates, would not leave room for large GPGs (Cf. Van Klaveren and Tjzens 2011). However, Table 16 indicates relatively large GPGs in all three industries: for example, in Brazil in both agriculture and in wholesale and retail; in Philippines and Mexico in wholesale and retail and in hotels and restaurants alike, and in Indonesia and Kazakhstan in the hotels and restaurant industry.

A combination of low pay levels and high GPGs points at considerable numbers of women earning less than the minimum wage, suggesting the existence of low levels of compliance with minimum wage regulation in the countries and industries at stake.

Also, five industries share the doubtful honour to be in the ranks with the largest average GPGs: finance, in 12th position (average ranking 8.7), manufacturing as no. 13 (average 9.2), health and social work as no. 14 (average 9.9), other community and personal services as no. 15 (average 10.2), with working in private households (domestic workers) showing the largest average gap (13.4). This category is even more heterogeneous than that in the middle ranks. It contains the industry with by far the highest average earnings across countries (finance) and that with the lowest earnings (private households). In the latter case, female domestic workers make up the vast majority; as they are likely to be more often live-in workers (living and working in their employer's home), their average wage in cash may be much lower than that of their male colleagues – a major explanation for the large GPG for domestic workers (Cf. Tjzens and Van Klaveren 2011b). The majority of domestic workers worldwide are not allowed to form or join a trade union.

The mostly considerable average GPG in finance cannot be separated from the high salaries and benefits of notably male employees in this industry. Yet, women's wages are also at rather high levels, though with a reservation. In three high-income countries with overall rather moderate GPGs the gaps in finance are that large that the industry's position is lower in the national rankings of *female* wages: in Australia finance ends on rank 5 instead of 2, in Japan on no. 3 instead of no. 1, and in the USA on no. 6 instead of no. 4. In four countries (Egypt, Indonesia, Paraguay and Philippines), the presence in finance of a small share of well-educated, relatively high-paid women results, in the near-absence of low-paid women, in a negative GPG.

Maybe rather unexpected for many readers, the manufacturing industry in both our rankings shows up in rather unfavourable positions: in the average GPG ranking in 13th position, with the fourth largest GPG, but also in the earnings ranking, at no. 10. This is not in accordance with our outcomes for the nine EU countries, where in 2005-2006 concerning the incidence of low pay manufacturing ranked 5th of 13 industries (Van Klaveren and Tjzens 2008). These outcomes suggest that in manufacturing, wage pressure worldwide has been sharper than in Europe. This may be explained by the higher unionization level in Europe compared to other regions. It is also possible that such pressure has been sharpened recently around the globe, including in Europe, stimulated by foreign direct investment in search of cheap labour (cf. Van Klaveren *et al* 2012). Such outcomes may have serious consequences for collective bargaining strategies of trade unions. Like in the typical low-pay industries, in manufacturing, efforts to strengthen compliance with minimum wage regulation may be (re)considered as a viable option for union activity. An exception is Brazilian manufacturing, with a no. 1 position (and a negative GPG) in the country's GPG ranking and the no. 2 position (of 8 industries) in the earnings ranking.

Disappointing for in particular humanitarian and political reasons may well be both low rankings for the health and social work sector: besides its no. 14 ranking according to GPG, thus the third largest GPG across industries, they hold an 8th position in the earnings ranking. It may be added that in four countries (Costa Rica, Mexico, Japan and Philippines) relative earnings of health and social work staff are, with no. 4 rankings, better than average, though from these four in Mexico the GPG remains large. A major explanation is most likely the strong segmentation in health high paid male specialists and female workers mainly in assistant position.

Finally, the “other community and social services” industry has the character of a statistical rest group. National statistical offices may have treated a number of occupations relevant here differently, which may at least partly explain the different positions of this industry in both rankings, with positive outliers in some countries.

Table 16 The industry pattern of the Gender Pay Gap in 15 of 18 countries, most recent years available

RANKING (smallest = 1)	AUS	AZE	BOT	BRA	CRI	EGY	INDO	JAP	KAZ	MEX	PAR	PHI	ROK	USA	ZAM
Agriculture		6	3	8	8	8	14		10	4		14		2	7
Fishing		3			3	1	2		9	9		12			
Mining	10	4	1	6	13	14	15	9	11	3		3	11	6	8
Manufacturing	5	8	13	1	12	13	12	8	12	14	2	10	5	12	10
Utilities	7	5	2		1	6	13		7	5	6	5	12	10	9
Construction	9	13	6		2	4	1	3	8	1	1	2	6	1	1
Wholesale, retail	8	1	11	7	11	11	4	4	6	10	5	11	4	9	6
Hotels, restaurants	4	2	8		5	3	11	2	15	13		15	2	4	2
Transport, storage, commun.	1	12	4	2	7	2	10	1	4	2	3	1	1	5	4
Finance, insurance	13	11	7		14	5	6	10	13	7	4	7	8	14	3
Real estate, renting, other bus.	11	15	5		6	7	3	5	3	11		4	7	8	
Public admin., defense	2	7		3	4		7		5	6	7	8		7	
Education	3	9	12		9	9	8	6	1	8		6	9	3	
Health, social work	12	10	10		10	12	9	7	2	15		9	10	13	
Other comm. and pers.serv.	6	14	9	5	16	10	5		14	12		13	3	11	5
Private households				4	15		16			16		16			

Sources: see Sections 2.1.2 - 2.1.4

Table 17 The industry pattern of average earnings in 15 of 18 countries, most recent years available

Period Year	AUS hour 2010	AZE month 2008	BOT month 2005-06	BRA hour 2007	CRI hour 2008	EGY hour 2007	INDO hour 2008	JAP hour 2008	KAZ month 2008	MEX hour 2008	PAR month 2007	PHI month 2008	ROK month 2008	USA week 2009	ZAM hour 2005
Agriculture		14	13	8	14	11	15		14	14		15		13	10
Fishing		15			15	9	14		15	15		12			
Mining	1	1	2	5	11	1	7	8	3	13	4	1		1	3
Manufacturing	10	9	11	2	9	8	10	9	6	8	6	10	5	8	7
Utilities	3	7	1		5	3	3		10	3	1	3	1	2	2
Construction	7	4	8	7	12	4	9	6	4	10	9	9	7	9	6
Wholesale,retail	12	11	10	6	10	7	12	7	9	12	5	13	6	12	8
Hotels,restaurants	13	8	12		13	10	13	10	7	11	12	14		14	9
Transport,storage,commun.	9	5	6	4	6	5	8	3	5	7	8	7	3	7	5
Finance, insurance	2	2	3		1	2	2	1	1	1	2	2	2	4	1
Real estate,renting,other bus.	4	3	4		8	6	5	5	2	6	10	8		5	
Public admin.,defense	5	6		1	2		1		11	5		6	4	3	
Education	6	10	5		3	14	4	2	13	2	3	5		6	
Health, social work	8	13	7		4	13	6	4	12	4	7	4		10	
Other comm. and pers. serv.	11	12	9	3	7	12	11		8	9	11	11		11	4
Private households					16		16			16		16		15	

Sources: see Sections 2.1.2 - 2.1.4

2.2 The changes in GPG over time

2.2.1 Understanding changes in the GPG over time

A decline of the global GPG from 1960's to the end of 90's

A wide ranging meta-analysis by Weichselbaumer and Winter-Ebmer (2005) of more than 260 published adjusted pay gap studies for over 60 countries has found that, from the 1960s to the 1990s, raw wage differentials worldwide have fallen substantially from around 65 to 30%. The bulk of this decline, however, was due to better labour market endowments of women. The 260 published estimates show that the unexplained or discriminatory component of the gap has not declined over time. Using their own specifications, the authors found that the yearly overall decline of the gender pay gap would amount to a slow 0.17 log points, implying a slow level of convergence between the wages of men and women. A study of the OECD countries for the period 1980 - 2004 revealed that the size of the GPG tended to decline in all countries for which data are available (OECD 2007). Since the early 1980s, the OECD notices that the largest decline has occurred in the USA and that in Japan and the United Kingdom the gap is also steadily narrowing. Some countries show fluctuating trends. In Sweden, for example, the gender pay gap was 14.5 % in 1980, increased to 19.6% in 1990, and decreased again to 14.8% in 2004.

A stagnation of the GPG since 2000

Taking into account the ITUC/IDS estimate for the mid 2000s of 16.5% and our 2006-2010 estimate of 18.4%, one may conclude to a narrowing of the GPG in the 2000's compared to the 1960s - 1990s. However, one should take into account that in the ITUC/IDS report and in our study, the European countries are heavily overrepresented and that these countries jointly have a lower GPG compared to notably the Asian countries. In addition, data for many African countries is missing, so their contribution to the overall GPG cannot sufficiently be taken into account.

Our study indicates that the GPG in the 26 countries studied has hardly changed between the late 1990s and the 2000s. The countries showing a GPG decline are as many as the ones showing an incline. Moreover, a substantial number of countries shows hardly any changes in the GPG between the mid 1990s and the late 2000s. Obviously, the GPG is highest in the Asian countries under study with a GPG in the bracket between 30 and 40%. The majority of countries under study is in the bracket between 10 to 30%. Four of the 26 countries manage to have a GPG under 10%, namely Belgium, Costa Rica, Italy, and Poland

For the European countries, one should note that hardly any country shows a gradual decrease or increase, and that GPGs tend to fluctuate over the years. For example, between 2002 and 2010 no single European country produced a steady decline of its GPG. Within the time frame of eight years, each country had at least one year in which the GPG was larger than in the year before. Two explanations arise for this, likely unexpected, phenomena. First, many factors influence the GPG, though not all do so in the same direction, as will be discussed hereafter. Second, measurement errors are likely. Baring in mind that the USA and the European countries are among the countries with the best measurement of wages earned in their labour forces, one should certainly be careful in interpreting the changes in the GPG over time across many countries in all continents.

In the case of Belgium, it should be noted however that some trade unions use the monthly wage as a reference for the calculation of the pay gap, hence highlighting that the overrepresentation of women in part-time jobs is less the result of a choice than of the difficulties in finding full time positions.

The impact of the crisis on the GPG cannot yet be predicted. Table 18 shows that for most countries the GPG has little decreased between 2008, the year most European economies were still booming, and 2010, the year that most of these countries were seriously hit by the economic crisis. Sound analyses would require data over a longer time frame and covering more countries.

Factors affecting changes over time:

To understand changes in GPG over time, one must realise that the factors influencing the GPG are diverse, some of which tend to increase the pay gap while others may decrease it. The impact of each factor may differ strongly across countries. Factors can be clustered into individual characteristics, establishment and industry characteristics, and institutional characteristics. Education, for example, is an individual factor. In most countries workers with higher education have on average higher earnings. Thus, if in a country the share of high-educated women in the female labour force increases faster compared to the share of high-educated men in the male labour force, the GPG will decrease. Firm size, to take another example, is an establishment factor. In general, workers in larger firms have on average higher earnings. Thus, if in a country the share of women working in large firms increases faster compared to the share of men doing so, the GPG will decrease. Minimum wages are an institutional factor. Assuming compliance with minimum wages regulation, it can be assumed that these raise the wage floor. As more women compared to men are paid low wages, minimum wage-setting is assumed to decrease a country's GPG. (In Section 2.5 we have already noted that lack of compliance can frustrate this mechanism).

The GPG is in a complex way related to women's labour market participation rates. In countries with low participation rates, the GPG may be low because the participating women might be highly educated, gaining financially most from participating as their earnings are relatively high. However, in countries with low participation rates, the participating women might be the ones with low education and low earnings because they need to work to make ends meet. In these latter countries the GPG is expected to be large, because concentration in low-paid jobs suppress women's average wages. Depending on the initial situation, if participation rates of women increase different groups of women will enter the labour market. If relatively large groups of low educated women enter the labour market, the GPG will increase, assuming a stable stock of male workers. If relatively large groups of high educated women enter the labour market, the GPG will decrease.

According to Eurostat, in the countries with the lowest GPG in 2009, the employment rate of women aged 15-64 years is low in comparison to the EU-27 average of 58.6%, e.g. 46.4% in Italy, 37.5% in Malta or 52.8% in Poland. This reflects mainly the particularly low share of low- or unskilled women in the labour force. However, the situation of EU countries with a relatively high GPG, as observed for Germany, the Netherlands, Austria and the United Kingdom, may be explained to some extent by their high female employment rates, in particular achieved by returning to part-time employment.

In most countries, the increase in women's participation rates is predominantly due to the employment growth in the services sector and in the public sector. As our GPG industry analysis in Chapter 2.1 has shown, in many countries the average wages in these sectors are higher compared to average wages in notably agriculture and manufacturing. Thus, countries witnessing these changes can expect a decrease of the GPG, assuming all other factors remaining constant. However, a strong occupational segregation may allocate women into the low paid jobs within these industries and as a consequence, the GPG may increase.

Child rearing has a large impact on women's average wages. In some countries, women withdraw from the labour market when marrying or giving birth while returning after a couple of years. A re-entry mostly goes along with an allocation into lower paid jobs than women had before their career break, with an allocation into part-time jobs, or into dead-end jobs. This is called 'women's child-penalty'. If the share of re-entering women grows, the GPG is likely to increase. However, in some countries women withdraw from the labour market and do not re-enter: in such countries the GPG is likely to decrease. Finally, a few countries have institutional arrangements allowing women to take a long leave when giving birth and caring for their young children. When these women return to work,

mostly they take up their previous jobs. In these countries, no effect of child rearing on the GPG is noticed.

Changes over time in Africa

Graph 2 presents the changes over time for two African countries, Botswana and Egypt. For other African countries unfortunately no time series are available. The GPGs in Botswana and Egypt reveal a fluctuating pattern over time. This pattern may be due to fluctuations in the composition of the labour force or in wage-setting policies, but it may also partly be due to measurement errors.

Changes over time in the Americas

Graph 3 presents the changes over time for four American countries, Brazil, Costa Rica, Mexico, and United States. Between 1997 and 2009, the GPG in Mexico hardly changed, whereas the USA faced a slow but continuous decrease in its GPG until 2005, with small fluctuations afterwards. From the mid-1990s to 2004, Brazil faced a decline of the GPG, which changed into a small increase between 2004 and 2007. Costa Rica shows a relatively low GPG, though the 2008 GPG shows an increase.

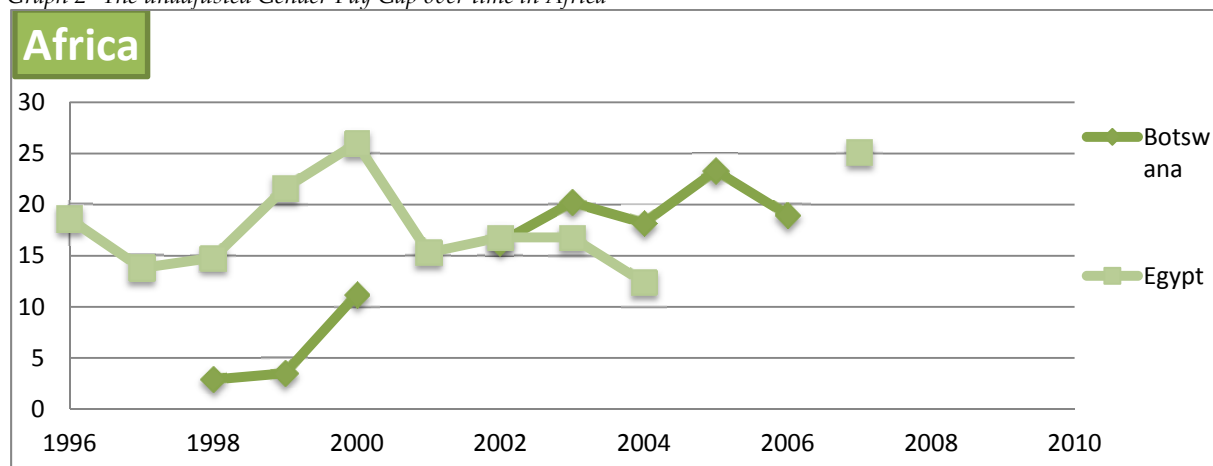
Changes over time in Asia and Australia

Graph 4 presents the changes over time for Australia and for three Asian countries, Japan, Kazakhstan, and South Korea (ROK). Whereas the GPG in Australia is relatively low and fluctuates between narrow margins, the GPGs in the three Asian countries are relatively high and, with a few exceptions, fluctuating between 30 and 40% in the 1990s and 2000s. Japan reveals an extremely strong drop in its GPG from 33% to 13% between 2006 and 2008. This is due to changes in the measurement of the GPG. In the ITUC/IDS figures, the GPG was based on monthly wages, whereas after 2006 they are computed on the basis of hourly wages. Taking into account that Japanese women have substantial shorter working hours than men, this change of definition leads to a substantial drop in the GPG.

Changes over time in Europe

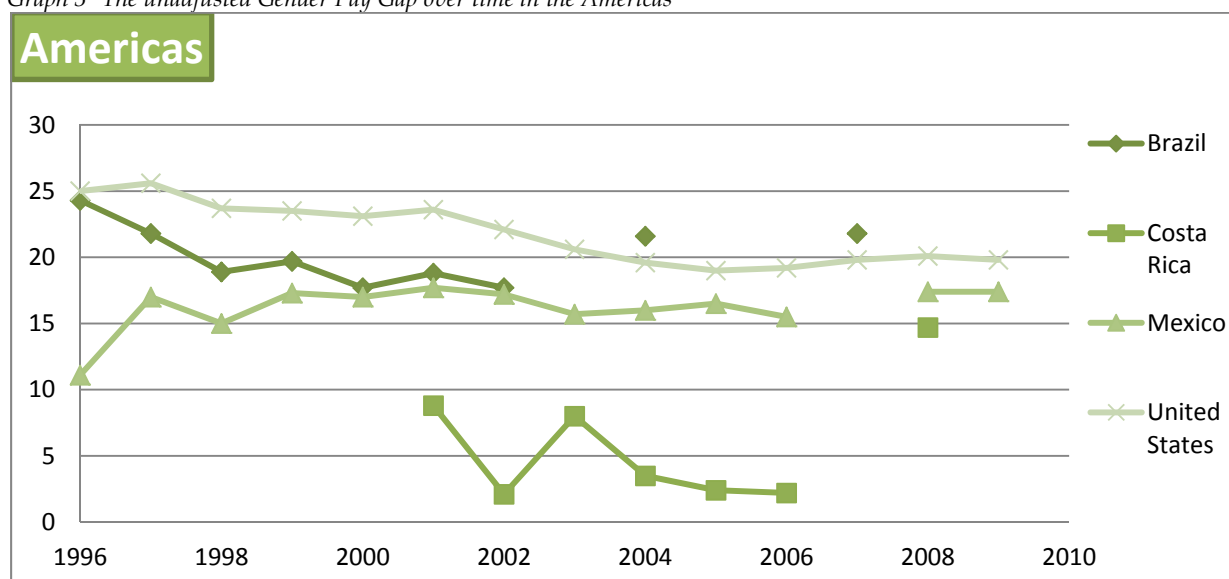
Graph 5 - 8 present the changes over time for sixteen European countries. In the four Eastern European countries the GPG is remarkably low in Poland and in the second half of the 2000s it is falling below the 10%. Until the mid 2000s, the GPG in Hungary shows a steady decline, but the second half of the 2000s an increase can be noticed to almost 18%. The GPG levels in the Czech Republic and in Slovakia reveal similar patterns over time with a GPG of 19% or higher, but in the second half of the 2000s the GPG in the Czech Republic tends to increase to 25%, whereas in Slovakia a decrease to 20% can be noticed. In the four Scandinavian countries, the GPG fluctuates slightly between 12 and 20% in the years between 1996 and 2010, revealing little changes over time. In the four Southern European countries, the GPG is relatively low, with Italy as the champion. In 2010, its GPG is around 5%. Portugal used to have a GPG under 10%, but in the second half of the 2000s the GPG passes the 10%-mark. Spain and France reveal similar patterns with a the GPG slightly above 10%, though in the second half of the 2000s their GPGs are above 15%. In the four Western European countries, the GPG in Belgium is remarkably low and in most years below 10%. The German GPG, in contrast, is relatively high and fluctuates around 22% in the period under study. Moreover, it shows a slight increase in recent years. In 1996, the GPG in the UK was higher than that in Germany, but in 2010 the reverse holds. By then, the GPG in the UK has decreased to less than 20%. The Netherlands reveals a similar pattern and shows also a slight decrease over this one-and-a-half decade, falling below 20% in 2008.

Graph 2 The unadjusted Gender Pay Gap over time in Africa



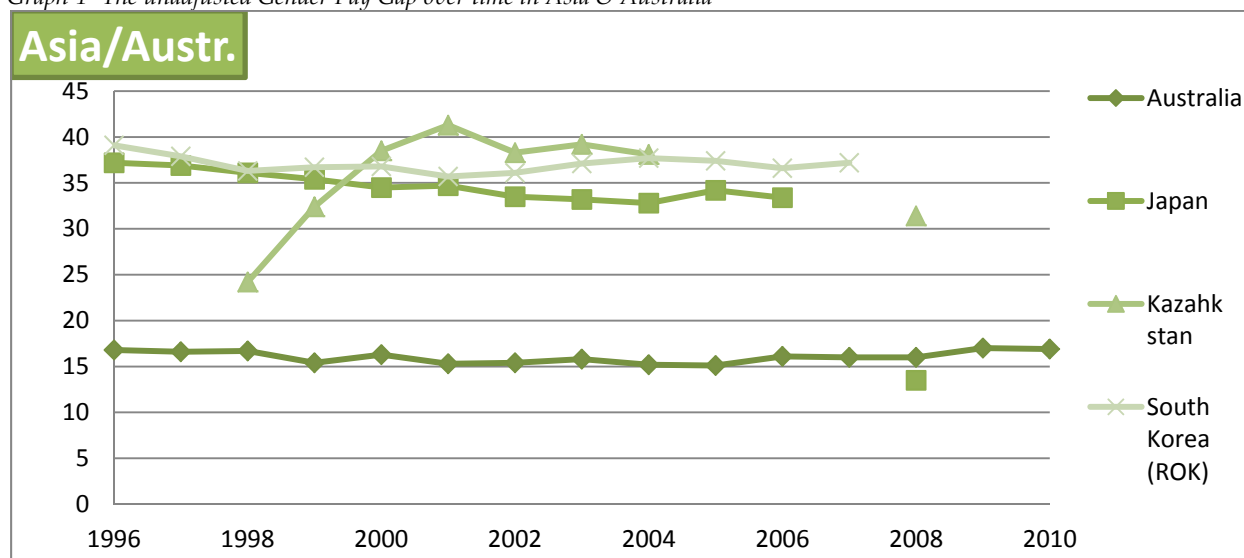
Source: ITUC/IDS (2008) for data until 2006 and sources referred to in Section 2.1 of this report for data after 2006

Graph 3 The unadjusted Gender Pay Gap over time in the Americas



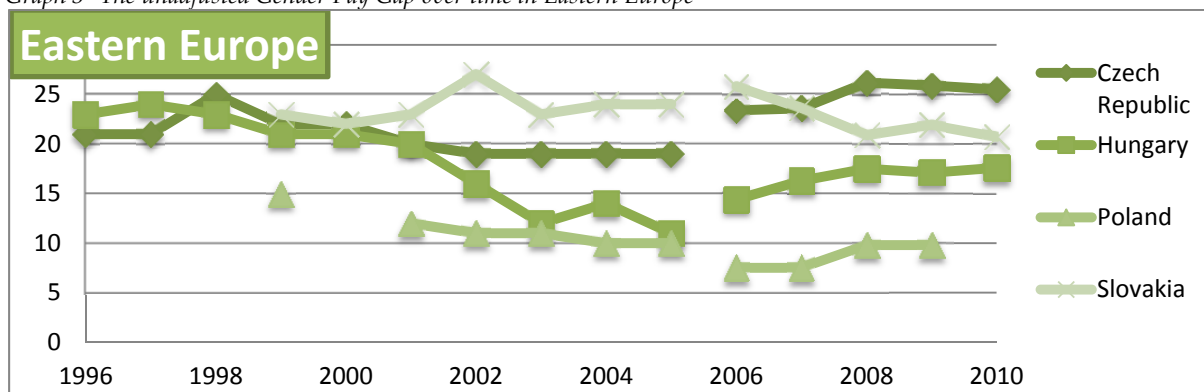
Source: For USA Drago and William (2010) and for other countries ITUC/IDS (2008) for data until 2006 and sources referred to in Section 2.1 of this report for data after 2006 (Brazil also 2004)

Graph 4 The unadjusted Gender Pay Gap over time in Asia & Australia



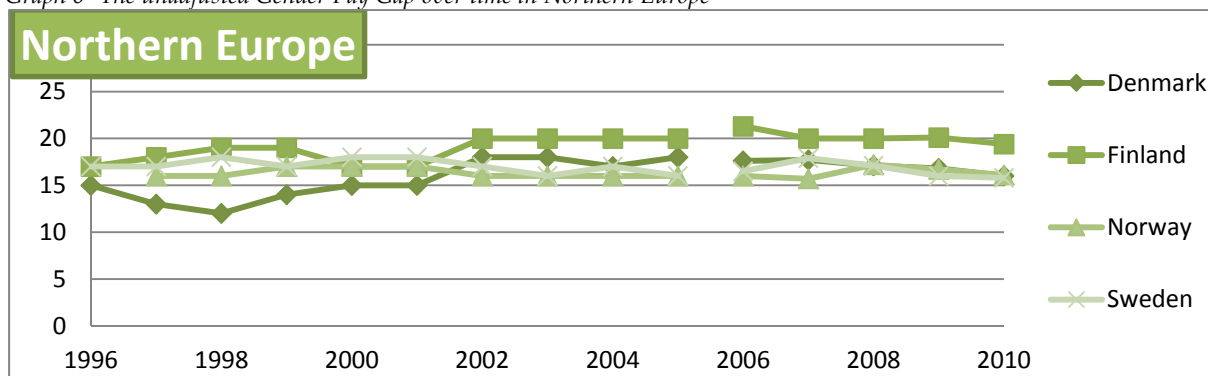
Source: For Australia ABS (2010) and for other countries ITUC/IDS (2008) for data until 2006 and sources referred to in Section 2.1 of this report for data after 2006

Graph 5 The unadjusted Gender Pay Gap over time in Eastern Europe



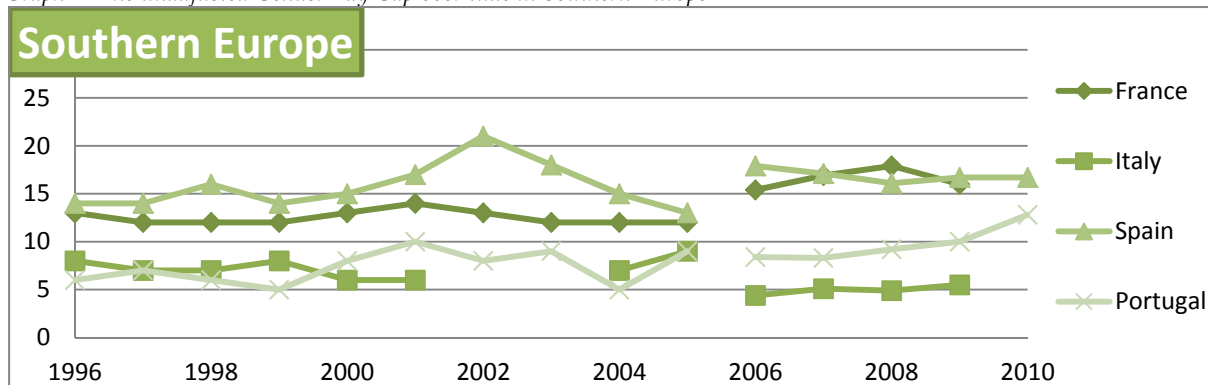
Source: ITUC/IDS (2008) for data until 2005 and Eurostat, accessed 01 Feb 2012, for data from 2006 on

Graph 6 The unadjusted Gender Pay Gap over time in Northern Europe



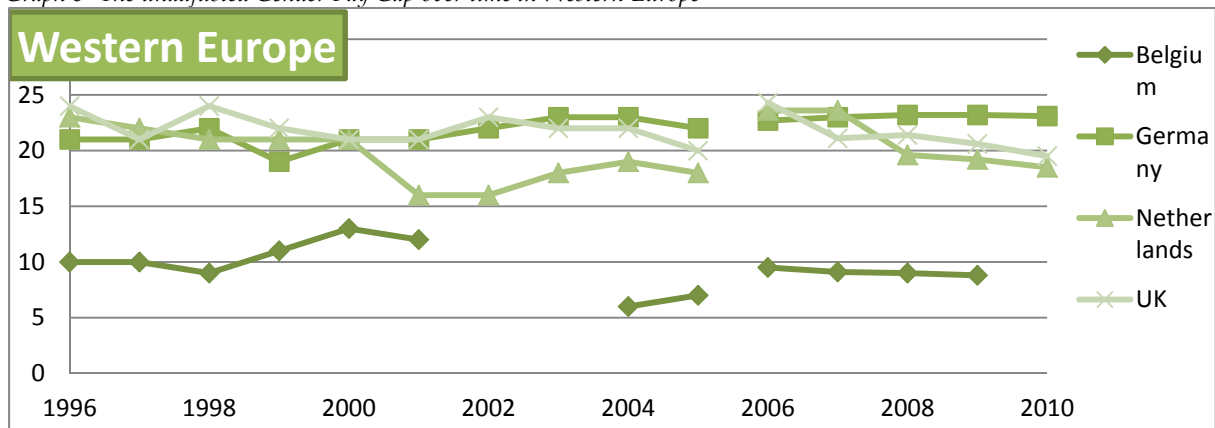
Source: ITUC/IDS (2008) for data until 2005 and Eurostat, accessed 01 Feb 2012, for data from 2006 on

Graph 7 The unadjusted Gender Pay Gap over time in Southern Europe



Source: ITUC/IDS (2008) for data until 2005 and Eurostat, accessed 01 Feb 2012, for data from 2006 on

Graph 8 The unadjusted Gender Pay Gap over time in Western Europe



Source: ITUC/IDS (2008) for data until 2005 and Eurostat, accessed 01 Feb 2012, for data from 2006 on

2.2.2 Trade union actions to promote equal pay

For long, trade unions have campaigned for equal pay for women. This section reviews 22 messages on actions undertaken by trade unions in 10 European countries in 2010 and in 2011 as to promote gender equality, including equal pay. The overview is based on the monthly AIAS/ETUI Collective Bargaining Newsletter issues for 2010 and 2011.

The review shows firstly that many trade unions directly take action for equal pay, as messages from Austria, Belgium, Finland, Spain, Sweden, Switzerland and UK show. Another line of messages highlights the actions to increase wages in low-paid female dominated areas, such as catering in Finland and the low-pay private sector in Norway. A third line of messages regards actions involved with rules and legislation concerning equality, such as about a Mediation's Office narrow view on wages in Sweden or about the tribunal ruling backs union's equal pay claim in the UK.

AUSTRIA: Major agreement provides 5.3% extra for lowest paid (October 24, 2011)

In the early morning hours of 18 October, the joint negotiating team of the unions in the metal, mining, gas and heating sectors, GPA-djp und PRO-GE, could finally conclude a major new collective agreement for about 165,000 employed that provides an average pay increase of 4.2%. However, with a minimum guaranteed increase of €80 a month, this means that those on the lowest pay rates will get an increase up to 5.3%. The previous counted off parental leave time of 10 months has been extended to 16 months, a step regarded by the unions as important to narrow the gender pay gap: female workers get fewer promotions because of periods away from employment, such as on maternity or parental leave. The agreement runs for 12 months from 1 November 2011. It was reached after the failure of two bargaining rounds and industrial action: large-scale warning strikes and work stoppages took place in 200 companies, involving more than 100,000 workers. According to union negotiators, in particular important were strategic and early strikes on 13 and 14 October that moved third-round bargaining up from 20 October to 17 October.

AUSTRIA: Unions support extra effort to reduce gender pay gap (September 14, 2011)

The GPA-DJP and VIDA trade unions have expressed support for the idea of having a special round of collective bargaining to address the persistently large gender pay gap in Austria. Figures from 2009 show that female salaried workers had annual gross earnings of €17,639, 40% less than the €29,181 average for male salaried staff. The GPA-DJP says that special negotiations could take place perhaps three times over a 10-year period, where employers and trade unions discuss detailed pay figures for their sector and come up with concrete measures to reduce pay inequality between men and women.

BELGIUM: Less benefit entitlements enlarge gender pay gap (August 16, 2011)

The fact that male workers have more chances to be entitled to additional social benefits (pension plan, additional sickness insurance, et cetera) enlarges the gender pay gap. This is a main conclusion of recent research for the trade unions by the HIVA institute and the Faculty of Economics of the Catholic University Leuven. Based on the vacancy and salary survey 2008, the researchers calculated the "net" pay gap at 14.3%. If the additional social benefits are included, the gap increases to 18.0%. The FGTB/ABVV has been running an "equal pay day" campaign for 6 years aimed at sensibilizing the whole population on gender wage differentials.

FINLAND: Main public sector negotiations to start (January 24, 2011)

The JHL union is preparing for negotiations in the state and municipal sectors and is concerned to secure pay increases for its members, arguing that workers' salaries should be increased in line with general labour market developments and not be used as the way of tackling the public sector deficit. The union will also be looking to continue moves to reduce the gender pay gap and to ensure equal treatment for temporary workers. Concerning negotiations in the state sector JHL's President Tuire

Santamäki-Vuori wishes to make it clear that employees must not be forced to foot the bill for the “sustainability deficit” in state finances, and that pay rises must match rises in other sectors. Concerning the municipal sector, JHL insists that the parties must come to an agreement, at the very minimum, on pay rises for the first half of 2011.

FINLAND: Union reports slow progress on equal pay (March 22, 2011)

A review of progress by the JHL public and welfare sector union towards closing the gender pay gap reveals that reforming pay structures has had some impact in this respect but mainly for higher paid workers. Progress towards the common goal of government and social partners set, as to bring down the gender pay gap from 19.1% in 2006 to 15% in 2015, is stagnating as the pay gap in 2009 was still 18.2%. The union review points to the heavily gendered segmentation of the Finnish labour market. It also shows that equality plans have been positive in terms of work-life balance and issues like discrimination and harassment, but have not made much difference in terms of pay. The key challenge set by the union is to be able to compare pay across different collective agreements.

FINLAND: Agreement in paper industry cuts gender pay gap (May 23, 2011)

On 18 May, bitter strikes by 4,000 members of the Ammattiliitto Pro union against Finnish paper producers came to an end. After six weeks of tension, the union and the Finnish Forest Industries Federation (FFIF) came to terms over a second-year wage renewal. The white-collar union won an across-the-board national wage increase, but most importantly the pay gap among the clerical, technical, and front-line managerial ranks of the pulp and paper industry was narrowed. Effective 19 May there is a 1.5% pay increase, or €48-per-month minimum, whichever is higher. The effect is to weight the package toward lower-wage clerical workers in order to narrow the pay gap. The settlement, mediated by national mediator Esa Lonka, calls for an additional 1% to be negotiated at the local level by 17 June. If talks on local issues such as training, development, skill requirements, and work tasks do not conclude by then, the 1% will be awarded on 1 July.

FINLAND: Gender pay gap narrowed in industrial sector (December 29, 2011)

In the second quarter 2011 the average hourly wage for female workers in the Finnish manufacturing industry was €13.70, against an average €16.14 for men, implying a gender wage gap of 15.1%. In one year the gap has slightly narrowed: in the second quarter of 2010 it was 15.6%, though with 15.0% it was already lower in the fourth quarter of 2006. Across industries, in 2011 the largest gender pay gaps were in the chemical industry (17.4%) and in energy supply (16.5%), the smallest in the paper industry (8.3%), the rubber industry (7.7%), and the paper&board product industry (5.0%). With 14.1%, the gap in the large technology industry was somewhat below average.

FRANCE: Unions organise joint action on 23 November (November 25, 2010)

Following the repeated mobilisations in September, October and on 8 November against the government’s pensions legislation, five union organisations organised a national day of action on 23 November. They challenged the government’s statement that the question of pensions was now settled and also raised further issues such as employment, working conditions and gender inequality about which they want to make their voices heard both to the government and employers. The unions also announced their support for a further day of action on 15 December, joining other unions around Europe in protest against austerity measures.

GERMANY: Collective agreements pay off for German MBA’s (March 29, 2010)

“Diplomkaufleute” (a German business administration degree, similar to MBA) covered by collective agreements earn on average Euro 4,434 monthly, that is Euro 410 more than their colleagues in companies without such agreements. This is a striking result of a recent on-line survey through the

continuous *WageIndicator* web survey (in Germany called *Lohnspiegel*), in which about 3,000 German MBA's participated. While their monthly average salary stands at Euro 4,210, average earnings across industries are highest in banking (Euro 4,713). Other striking results in the *Lohnspiegel* survey are that experience also pays off (with salaries of those with over 20 years experience averaging Euro 5,283, as against Euro 3,254 for starters), and that female MBA's with an average Euro 3,705 earn 18% less than their male colleagues (Euro 4,506). At the very start of their career, female MBA's experience a gender pay gap of 14%.

NORWAY: Municipal strike ends with 3.5% increase (June 21, 2010)

An agreement has been reached in the municipal sector after two weeks of strike action of 45,000 workers, the most significant industrial action in the country for over 30 years. Overall the increase is around 3.5% and includes amounts for local agreements as well as provisions for tackling the gender pay gap - a key element of the unions' demands. The basic general increase is 2.1% or 7,100 NOK.

NORWAY: Private sector deal targets low paid (April 6, 2011)

Negotiations between unions and the NHO private sector employers' organisation have delivered a NOK 6,000 (€ 768) per year increase for lower paid workers – those workers who are paid less than 90% of the average wage in the manufacturing sector. The average yearly wage in manufacturing is currently NOK 378,573 (€ 48,430) and so the 90% threshold is NOK 340,715 (€ 43,600). The deal also includes improvements to severance pay for older workers and an agreement that unions, employers and the government will work together on a seven-point plan on gender equality. The private sector deal includes companies involved in the utilities and health and social care.

SPAIN: Unions sign equality agreement with water company (January 1, 2010)

The FSC-CCOO and FIA-UGT trade union federations have signed a new agreement on gender equality with Aqualia, one of the biggest water companies in Spain that provides services for 850 municipalities. The agreement requires the unions and employer to work together on a range of issues, including employment, training, promotion and pay. It also covers sexual harassment, an issue on which the company already had an agreement.

SPAIN: Confederations call for action against gender pay gap (July 25, 2011)

Both the CCOO and UGT union confederations are calling for increased action to deal with gender inequality at work. The latest data show an increase in the gender pay gap in Spain. The statistics also reveal that women make up just over 64% of all low-paid workers and predominate in low-paying sectors like health and social services where they make up 69% of the workforce. The CCOO wants to see action to deal with discrimination in terms of job classification, recruitment, promotion and training. The UGT emphasizes the importance of tackling gender inequality through collective bargaining and ensuring that there is an increase in the number of women negotiators.

SWEDEN: Municipal union calls for higher pay and greater equality (January 1, 2010)

Municipal union Kommunal calls for a pay increase of at least SKr 620 (€61, 2.6%) a month this year along with higher pay increases (SKr 745 or €73) in sectors where women predominate to help close the gender pay gap. The union also wants to see a strong central agreement backed up with local collective agreements to ensure that there is a clear link between the main pay negotiations and bargaining at local level. The other main bargaining issues include the need to reduce the use of temporary workers, improvements to working conditions and greater equality in terms of gender, race, age, religion and sexual orientation.

SWEDEN: New agreements in manufacturing and mining (April 19, 2010)

The IF Metall union has concluded new collective agreements in manufacturing (engineering, steel, and chemicals) and mining. These agreements cover 22 months, from 1 April 2010 to 31 January 2012. Pay increases will be 0.9% by 1 June 2010 and 2.3% by 1 June 2011, implying 1.7% increase on an annual basis. In those sectors where companies still have problems due to the crisis, temporary agreements as of March 2009 are prolonged until 31 October 2010. This means that local parties can negotiate a temporary reduction of working hours with 20% and reduced wages, in order to avoid losing skilled workers. In order to be prepared for a new recession, parties agreed to create a training system within the agreement period. Concerning gender issues, it was agreed to take further steps to diminish the gender pay gap, through common information, training, common recommendations for wage analysis, and finding common measurement instruments. Parties also agreed to expand the extra benefit of 10% for one more month for workers on parental leave, thus up to six instead of five months.

SWEDEN: Union leader puts pressure on employers to act on equality (April 29, 2010)

With pay negotiations underway, the President of the Kommunal municipal workers' union, Ylva Thorn, has called on local government employer organisations SKL and SALAR to put words into action and tackle the gender pay gap. Writing in the *Dagbladet* national newspaper, Thorn argues that employees working in female-dominated professions face higher levels of part-time work, job insecurity, work-related ill health and above all lower pay. She points out that local authority workers, the vast majority of them women, are among the lowest paid among workers represented by the LO-affiliated unions. She asks in particular the SKL how this squares with their claims to be delivering equality.

SWEDEN: Union report reveals large gender pay gap (March 22, 2011)

The SKTF white-collar local government union has produced a new report demonstrating how workers doing the same job are on very different salaries, depending on whether they work in a sector dominated by women or men. Taking the example of an economist, the union shows that on average the monthly salary for this occupation is SEK 29,500 (€ 3,310) in the municipal sector (dominated by women) but SEK 41,000 (€ 4,600) in the private sector (dominated by men). The union argues that on a life-time basis massive differences result between female and male earnings. SKTF is calling for a major initiative, involving employers, trade unions and the government, to address the problem.

SWEDEN: Union again defends pay in local government (May 19, 2011)

Having already responded to government projections for future pay increases, municipal union Kommunal has criticised finance minister Anders Borg for saying that starting salaries in local government are too high. General secretary Annelie Nordström said it was hard to believe that anyone could say a gross monthly salary of SEK 16,070 (€ 1,788) was too high and furthermore, with so many women workers on part-time hours, many were earning much less than this. Earlier, Kommunal had shown anger about the fact that wage moderation in the public sector would mean that a sector dominated by women will be getting lower increases than sectors dominated by men and so will increase the gender pay gap.

SWEDEN: Union challenges Mediation's Office narrow view on wages (October 10, 2011)

The Kommunal municipal union has criticized the National Mediation Office for its narrow view of the scope for pay bargaining and failure to acknowledge the need for action to close the gender pay gap. The union agrees that wage developments should take into account the pressures facing the manufacturing and export industries, but emphasizes that there has to be scope for some flexibility: otherwise the lower paying sectors that are dominated by women workers will never catch up with other sectors and the gender pay gap will never be closed.

SWITZERLAND: National action day for wage equality (June 14, 2011)

On 14 June, thousands of workers around the country participated in a day of action and a national strike, demanding equal rights for women workers as well as a legal minimum wage. Various trade unions, like VPÖD-SSP and UNIA, played a leading role among the more than 45 organisations that held the event. The complaint was repeated that in Switzerland women earn on average 19.8% less than men while performing the same job, despite the gender equality article in the Constitution. The actions featured breakfasts, numerous workplace events and protests at public sites in major cities, culminating in collective whistle blowing and the release of thousands of purple balloons around the country at 14:06. Later in the day, Geneva's famous water jet fountain was coloured purple as part of the action.

UNITED KINGDOM: Tribunal ruling backs union's equal pay claim (August 17, 2010)

Healthcare assistants, domestic supervisors and reception staff, overwhelmingly women, working at a National Health Service Trust (St Helen's and Knowsley), have won an Employment Appeal Tribunal case on equal pay. The case, backed by UNISON, argued that the women were paid lower rates for unsocial hours working on Saturdays and Sundays when compared to men in comparable jobs. The ruling could be important for women working in other NHS Trusts where there are gender differences in unsocial hours payments.

UNITED KINGDOM: Growing gap between rich and poor (November 23, 2011)

Growing discontent about the gulf between rich and poor was underlined on Wednesday 23 November by official figures showing the gap between Britain's highest and lowest paid workers has widened dramatically over 2011. The Office for National Statistics (ONS) revealed that workers in the worst paid jobs – such as dinner ladies, hairdressers and waiters – have seen their pay fall sharply in real terms, fanning fears about families' ability to cope with soaring food and energy bills. The bottom tenth of earners saw their pay creep up just 0.1% between 2010 and 2011 while the top tenth saw their pay grow 18 times faster. The number of people being paid less than the national minimum wage of UKP 6.08 rose in 2010 and there was a big divergence in earnings between London and the rest of the country, according to the ONS annual survey of earnings. However, there was a slight narrowing in the gender pay gap. Overall pay growth for UK workers hit a record low. Pay was up just 0.4% on a year ago in terms of gross weekly earnings, meaning that incomes are tumbling in real terms given that inflation stands at 5%.

3 Women's wages by household and socio-demographic characteristics

3.1 Introduction

As discussed in the previous chapter, a wide range of explanatory factors influence the gender pay gap. These factors can be clustered in human capital factors, household composition factors, and market factors. The cluster of human capital factors refers to explanations related to education and years of service. In general, the higher the education and the more years of service, the higher an individual's wage, all other things equal. Similarly, the higher the skill level of the occupation, the higher an individual's wage. The cluster of household composition factors includes explanations related to the presence of children and the presence of a partner in the household. These factors have a different impact for men and women. In general, women with a partner have lower earnings compared to women without a partner, whereas men with a partner have higher earnings compared to men without a partner, all other things equal. Similar patterns can be noticed for the presence of children. This is most likely due to diverging labour market behaviour of women and men once children are born in their households as well as to employer's behaviour anticipating these changes. The cluster of market factors include explanations related to industries, because due to different skill levels, competitive factors and workers' countervailing power earnings in some industries are higher than in others. This cluster also refers to the impact of collective bargaining coverage, trade union membership and trade union presence at the workplace on wages.

The remaining part of this Chapter details the impact of two explanatory factors on the gender wage gap, namely the impact of education on male and female wages (section 3.2) and the impact of the presence of children in their households on male and female wages (section 3.3). Using data of the continuous, comparable *WageIndicator* survey in 2010 and 2011, analyses have been performed for 28 countries. The *WageIndicator* survey is a web-survey but in addition data is collected through face-to-face surveys. For this report, the data of the face-to-face surveys in China, Hungary⁵, Indonesia and Pakistan have been added to the web-survey data, whereas in Zambia only the data from the face-to-face survey in 2011 has been used. In the latter country the web-survey generated too few observations.

The reader should note that the *WageIndicator* data are not representative for the respective labour forces of the countries under study. In countries with low Internet access rates, the young and higher educated workers are overrepresented whereas the older and lower educated workers are underrepresented. Appendix 1 provides an overview of the over- and underrepresentation in the *WageIndicator* database. This Chapter reports the findings for the population in the survey, findings that cannot be generalised to the population at large. We nevertheless report them as no other sources allow for the breakdowns aimed for in this chapter.

The *WageIndicator* surveys ask in detail about respondents' wages. A procedure has been applied to harmonize the hourly wages in the national currencies across countries and across survey years. First, using the World Bank's purchasing power parity indexes, the wages in the database have been converted into standardized US dollars (USD). Hence, the earnings data becomes comparable across countries. In the data cleaning procedure, the standardized hourly wages lower than 1 standardized USD or higher than 400 standardized USD have been considered outliers (Tijdens *et al* 2010). The wage levels of 2011 have been considered equal those of 2010, because no country-specific information

⁵ Note that the Hungarian survey was conducted on behalf of Marmor Research Budapest, Hungary, and not on behalf of WageIndicator Foundation (Barreto and Borbely, 2011)

is available about wage increases across these two years.⁶ This procedure results in wage information in standardized USD allowing for cross country comparisons, using wage data from several years.

Graph 9 to Graph 16 present the median wages, earned in the age/education/child categories. Note that in the Graphs the scales of the vertical axes vary across countries. The maximum values are 5, 10, 15, 20, 25 or 30 standardized US dollars.

3.2 The impact of education on male and female wages

In most countries, men profit more from having a higher education than women.

In many countries an evident relationship between higher education and higher earnings exists. For 28 countries in the Americas, Africa, Asia and Europe,

Graph 9 to Graph 12 present the median earnings by educational group for men and women, with a breakdown in two groups, namely under and above 30 years of age. The reader should note again that the *WageIndicator* data are not representative for the labour force in the countries. This chapter reports the findings for the survey sample. The findings cannot be generalised to the population at large. We nevertheless report them because no other sources allow to study the impact of education on male and female wages. To prevent reporting unreliable wage information, all groups with less than 10 observations are not included in the graphs. The graphs show the median hourly wages, expressed in PPP-standardized US dollars, for male and female workers with a breakdown by age group and education.

Graph 9 to Graph 12 reveal substantial GPGs. When comparing the low educated male and female workers under 30 years of age, the GPGs range from -7% in Finland to 36% in India. Next to Finland women younger than 30 in South Africa have slightly higher earnings than their male counterparts, but in all other countries men have higher earnings than women in this category. When comparing the low educated male and female workers in the age group of 30 years and over, GPGs range from -57% in Indonesia to 60% in the Russian Federation. Next to Indonesia women 30+ in Chile and Zambia also have slightly higher earnings than their male counterparts, but in all other countries men have higher earnings than women.

When comparing the middle educated male and female workers under 30 years of age, GPGs range from -35% in India to 48% in the United States. Next to India, the women younger than 30 in Azerbaijan and Zambia have slightly higher earnings than their male counterparts, but in all other countries their male counterparts have higher earnings. When comparing the middle educated male and female workers in the age group of 30 years and over, the GPGs range from -55% in Mozambique to 49% in the Russian Federation. Next to Mozambique, the women above 30 in Pakistan and Zambia have slightly higher earnings than their male counterparts, but in all other countries men have higher earnings than women.

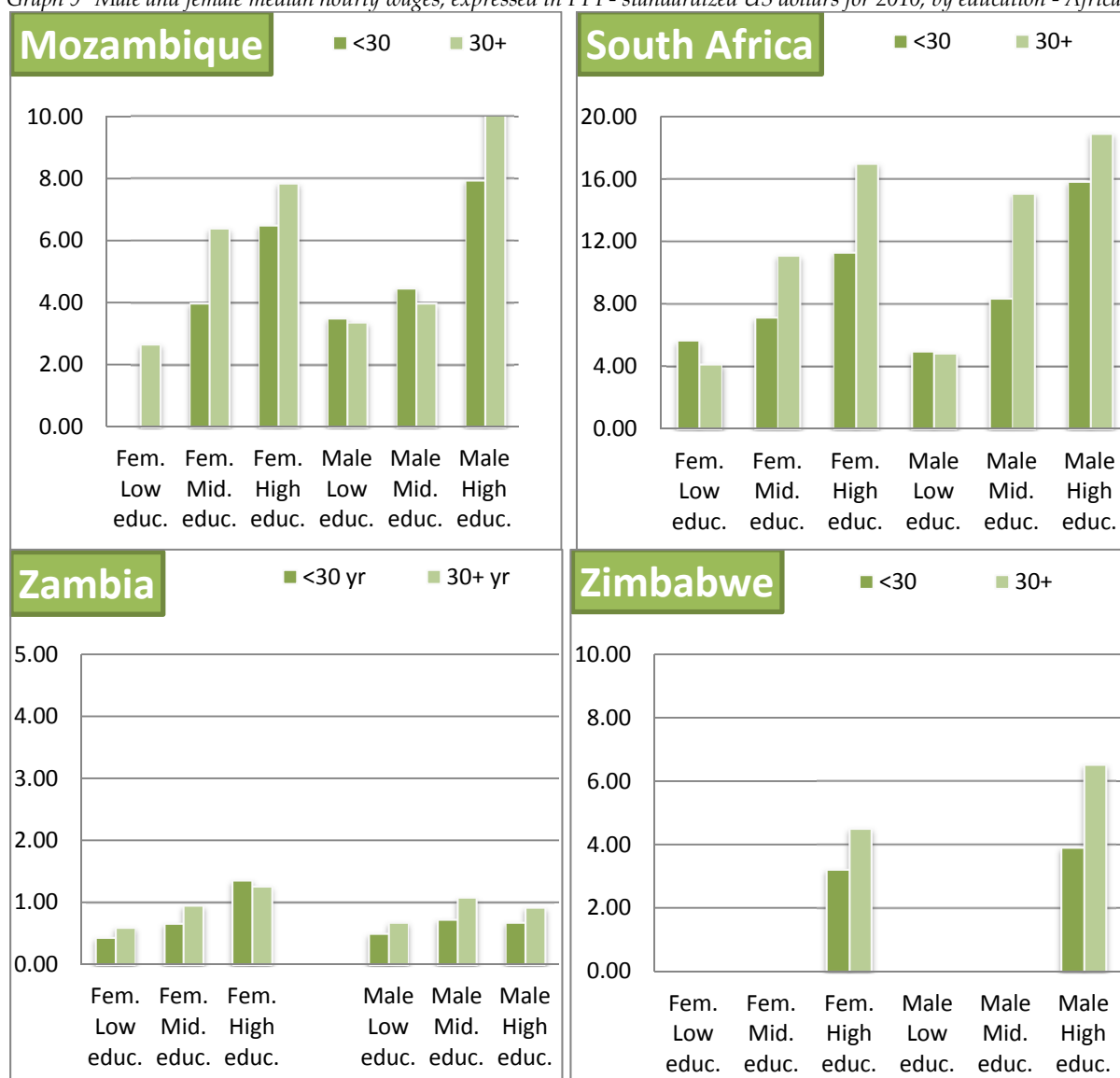
When comparing the high educated male and female workers under 30 years of age, the GPGs range from -11% in Zimbabwe to 37% in the United States. Apart from Zimbabwe, in all other countries men have higher earnings than women. When comparing the middle educated male and female workers in

⁶ For the European Union, the annual percentage change in wages of employees per hour is available in the LABDEV Economic databases and indicators of the European Commission, DG Economic and Financial Affairs. However, this data is not available on a global scale.

the age group of 30 years and above , the GPGs range from -8% Mozambique to 48% in the USA. Apart from Mozambique, in all other countries men have higher earnings than women.

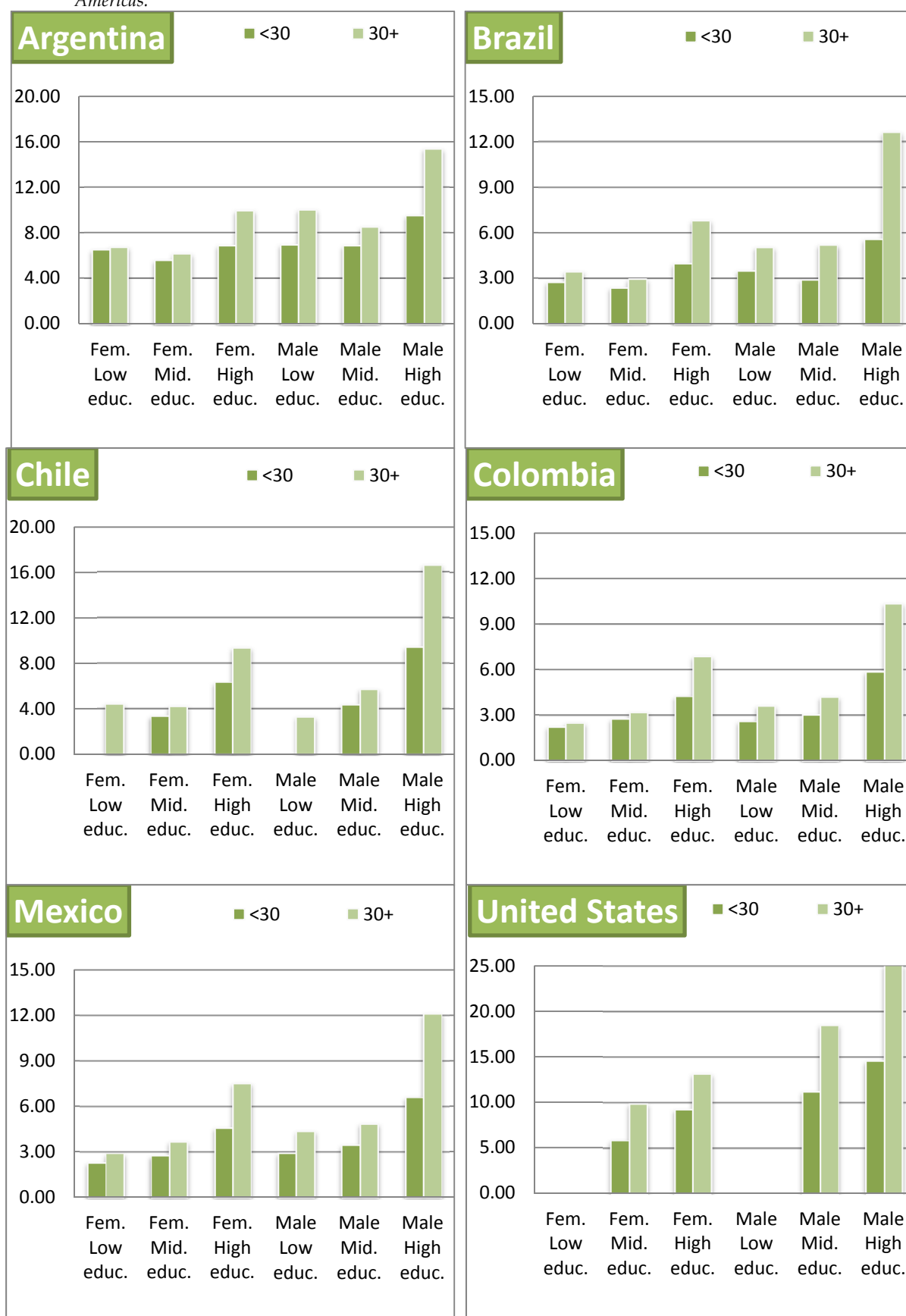
In summary, the graphs show that in all countries both the high educated male and female workers have higher earnings than low educated male and female workers respectively. In the age group under 30 the high educated men have higher earnings compared to the low educated men , namely between 23% (Belgium) and 241% (Zambia). In the age group under 30 the high educated women have higher earnings compared to the low educated women, namely between 6% (Argentina) and 107% (China). In the age group of 30 years and over the high educated men have higher earnings compared to the low educated men, namely between 22% (Belarus and Sweden) and 507% (South Africa). In this age group the high educated women have higher earnings compared to the low educated women, namely between -5% (Ukraine) and 300% (South Africa). **In conclusion, in most countries the male workers profit more from having a higher education than the female workers.**

Graph 9 Male and female median hourly wages, expressed in PPP- standardized US dollars for 2010, by education - Africa



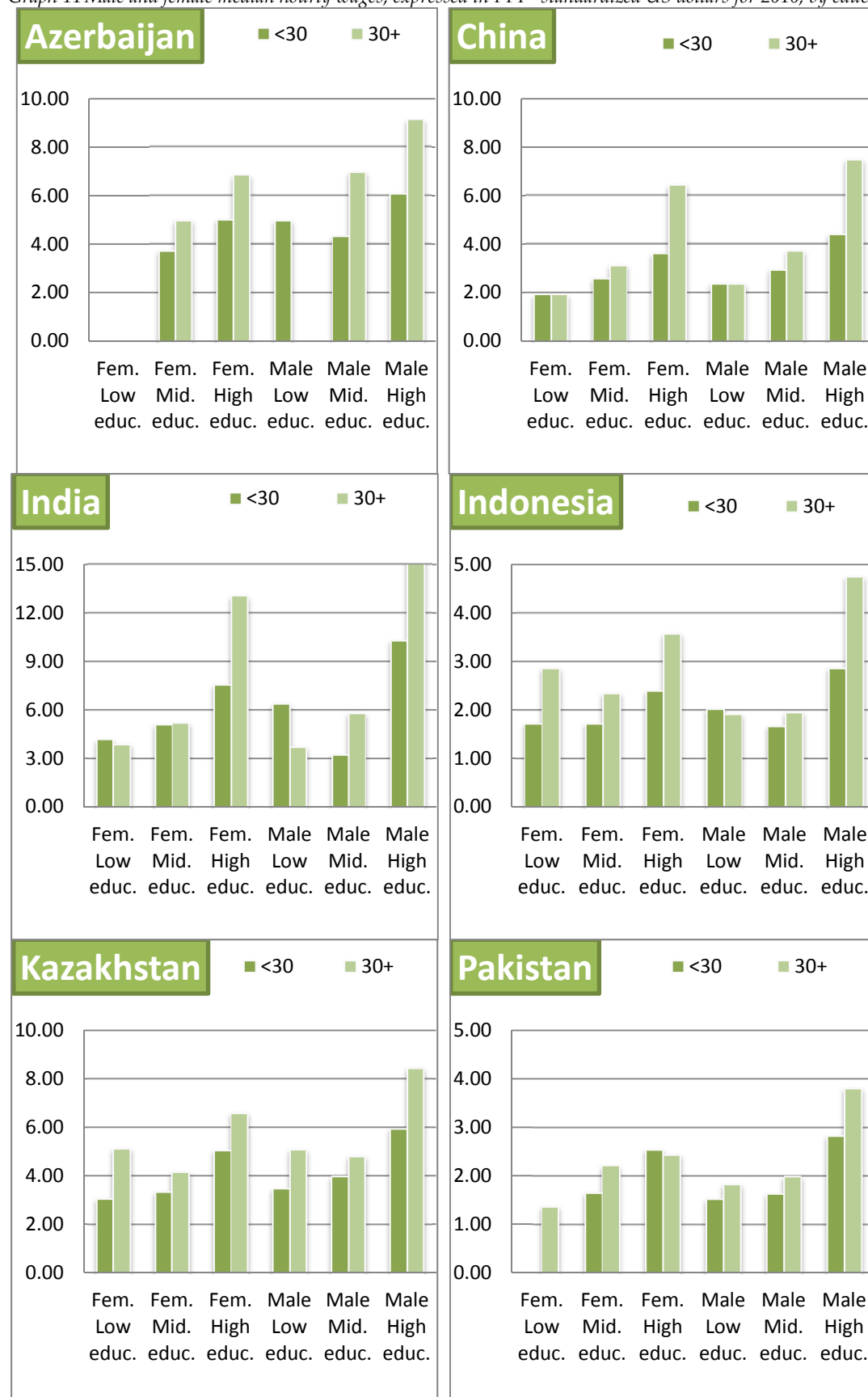
Source: WageIndicator data 2010; 2011

Graph 10 Male and female median hourly wages, expressed in PPP- standardized US dollars for 2010, by education - Americas.



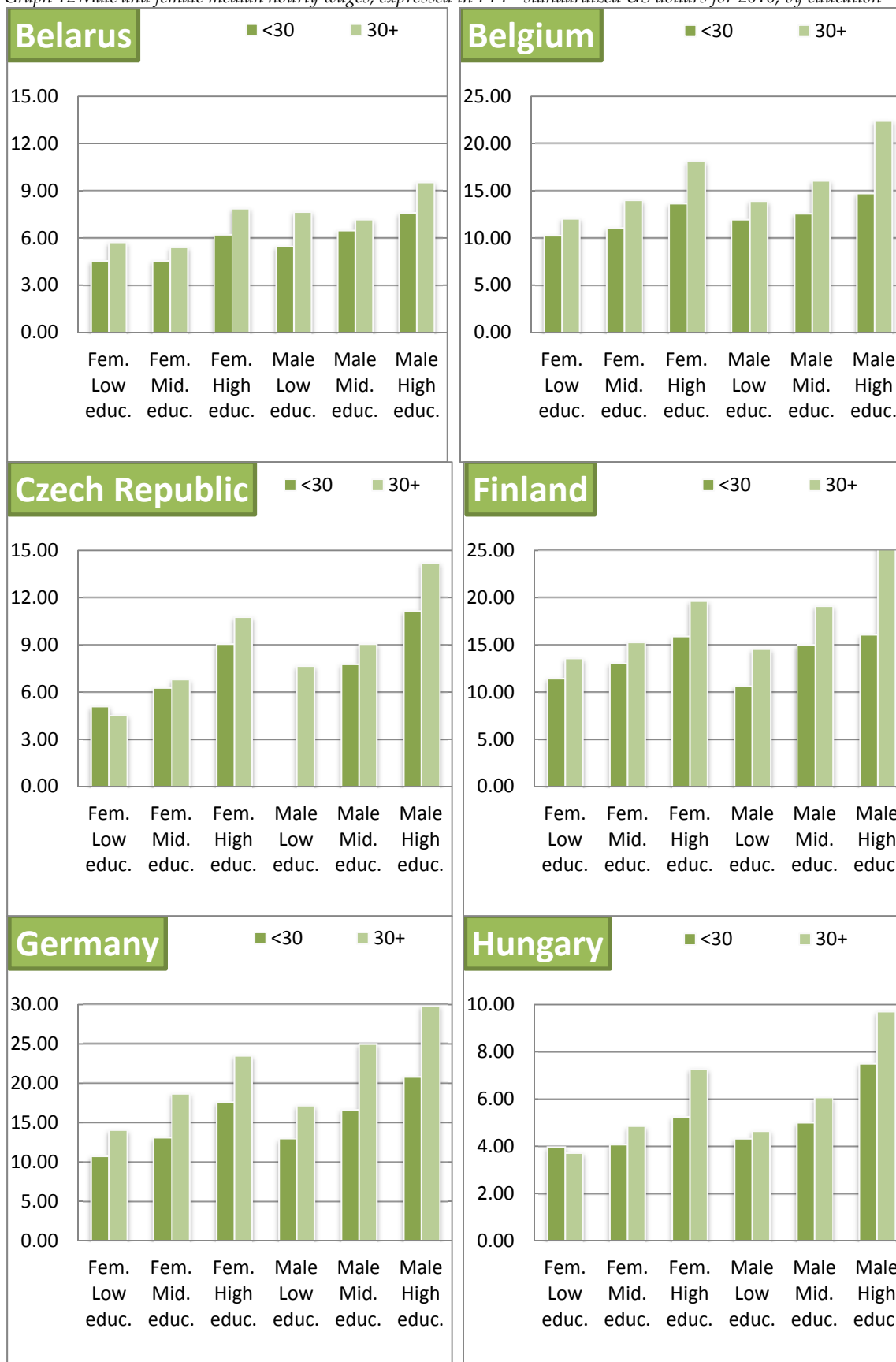
Source: WageIndicator data 2010; 2011

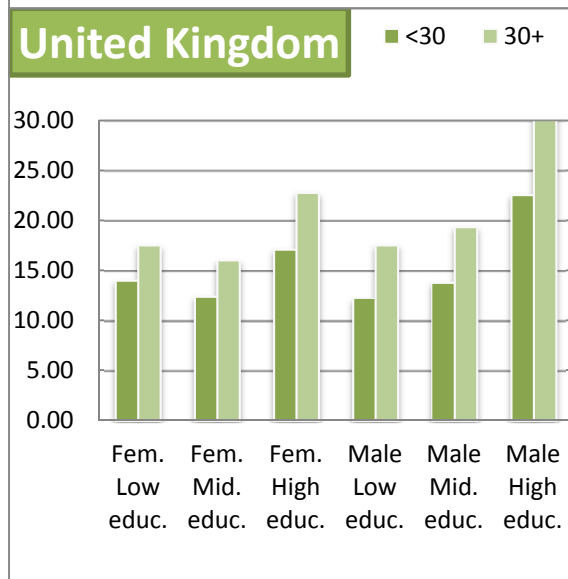
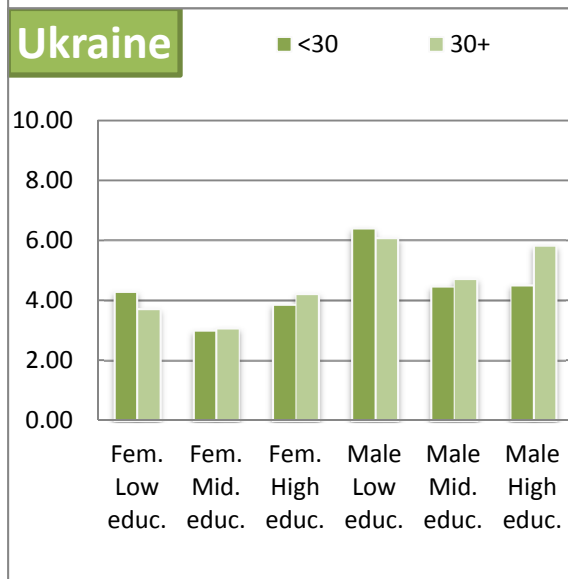
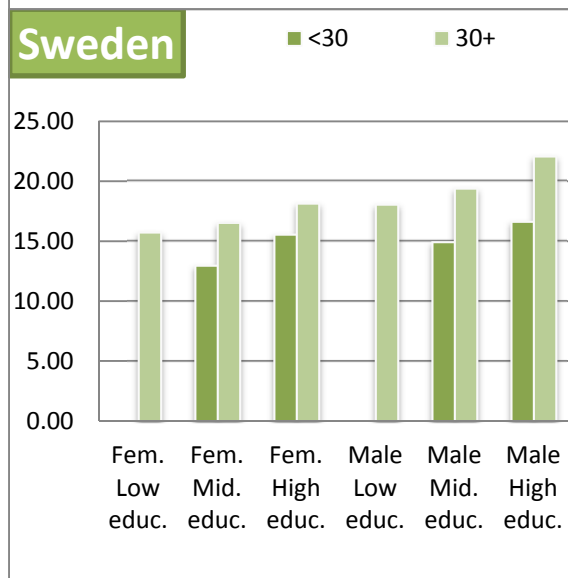
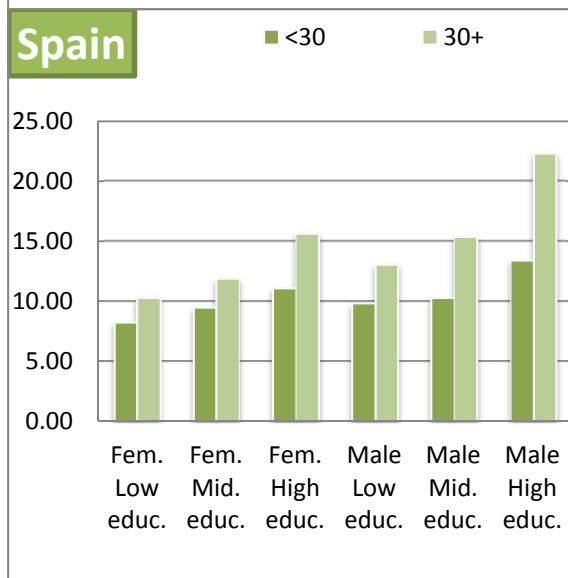
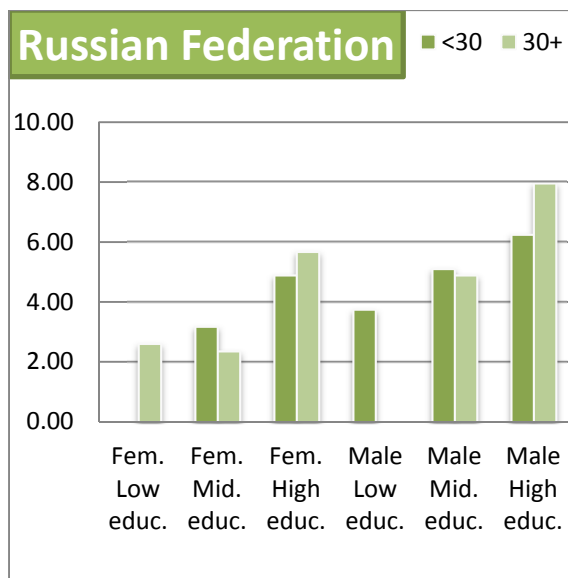
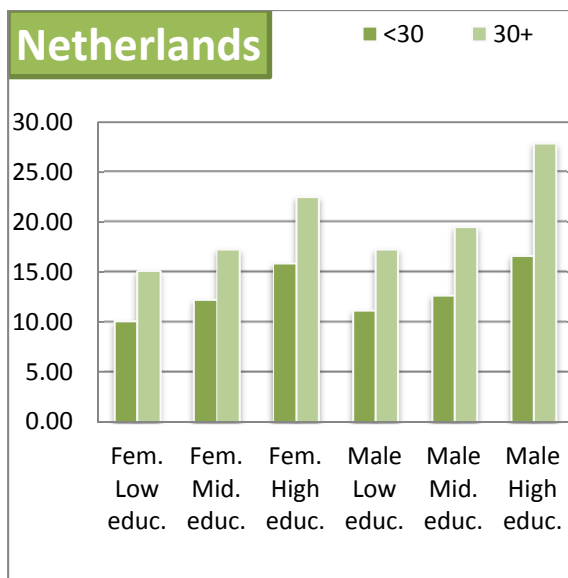
Graph 11 Male and female median hourly wages, expressed in PPP- standardized US dollars for 2010, by education - Asia.



Source: WageIndicator data 2010; 2011

Graph 12 Male and female median hourly wages, expressed in PPP- standardized US dollars for 2010, by education - Europe





Source: WageIndicator data 2010; 2011

3.3 The 'child penalty/premium' for female and male wages

In most countries childrearing is much more detrimental to women's wages compared to men's wages, thereby contributing to the GPG. Any policies to facilitate childrearing tasks for both men and women will decrease the GPG

In the last decade a discussion in the academic literature took place about the 'child penalty'. This concept refers to the fact that wage analyses in industrialised countries have revealed that women with children earn on average less than comparable women without children. Reversely, male workers with children are noticed to have a so-called 'child premium' earning on average more than comparable male workers without children. This pattern is most likely due to diverging labour market behaviour of women and men once children are born in their households and to employer's behaviour anticipating these changes. Little is known whether this 'child wage penalty/premium' also applies worldwide. In this section we discuss the results for 28 countries. The reader should note that the 'child penalty/premium' does not include a judgement about having and upbringing children as such. The concept only refers to the impact of children on average wages in the survey data. Note that the *WageIndicator* survey does not ask if one has children, but if children live in one's household. This may include own children, but also foster children, grandchildren, or other children. This implies that once the children have left the home, the respondents fall in the category 'no children'. This should be kept in mind when reviewing Graph 13 to Graph 16.

Note again that the *WageIndicator* data are not representative for the labour force in the countries. This chapter reports the findings for the population in the survey and, again, these findings cannot be generalised to the population at large. We just report them because no other sources allow to study the impact of childrearing on men and women's wages. To prevent reporting unreliable wage information, groups with less than 10 observations are not included. For 28 countries the graphs Graph 13 to Graph 16 show the median hourly wages, which are expressed in PPP-standardized US dollars, for male and female workers with a breakdown for three age groups and by men and women (6 groups).

The 'child penalty/premium' is computed for 28 countries x 6 groups = 168 groups. Unfortunately, for 4 groups of female workers the data had not sufficient observations. In the remaining 164 groups, the results show that slightly more than half of the groups receive a child penalty (88 of 164 groups or 54%). Hence, in these groups the earnings of those living with children are lower than the earnings of those not living with children. Slightly less than half of the groups receive a child premium (76 of 164 groups or 46%). Hence, in these groups the earnings of workers with children are higher than for those without children.

Does the 'child wage penalty/premium' differ for male and female workers? Yes, it does. Table 18 shows that in all age groups, the majority of men receive a child premium. In the age group 40 and over, the majority of men receive a large child premium. In contrast, in all age groups, the majority of women receive a child penalty. In the age group 30-39, almost all female groups receive a wage penalty, and almost half of them receives a large wage penalty. This indicates that in many countries childrearing is much more detrimental to female wages compared to male wages, thereby contributing to the GPG.

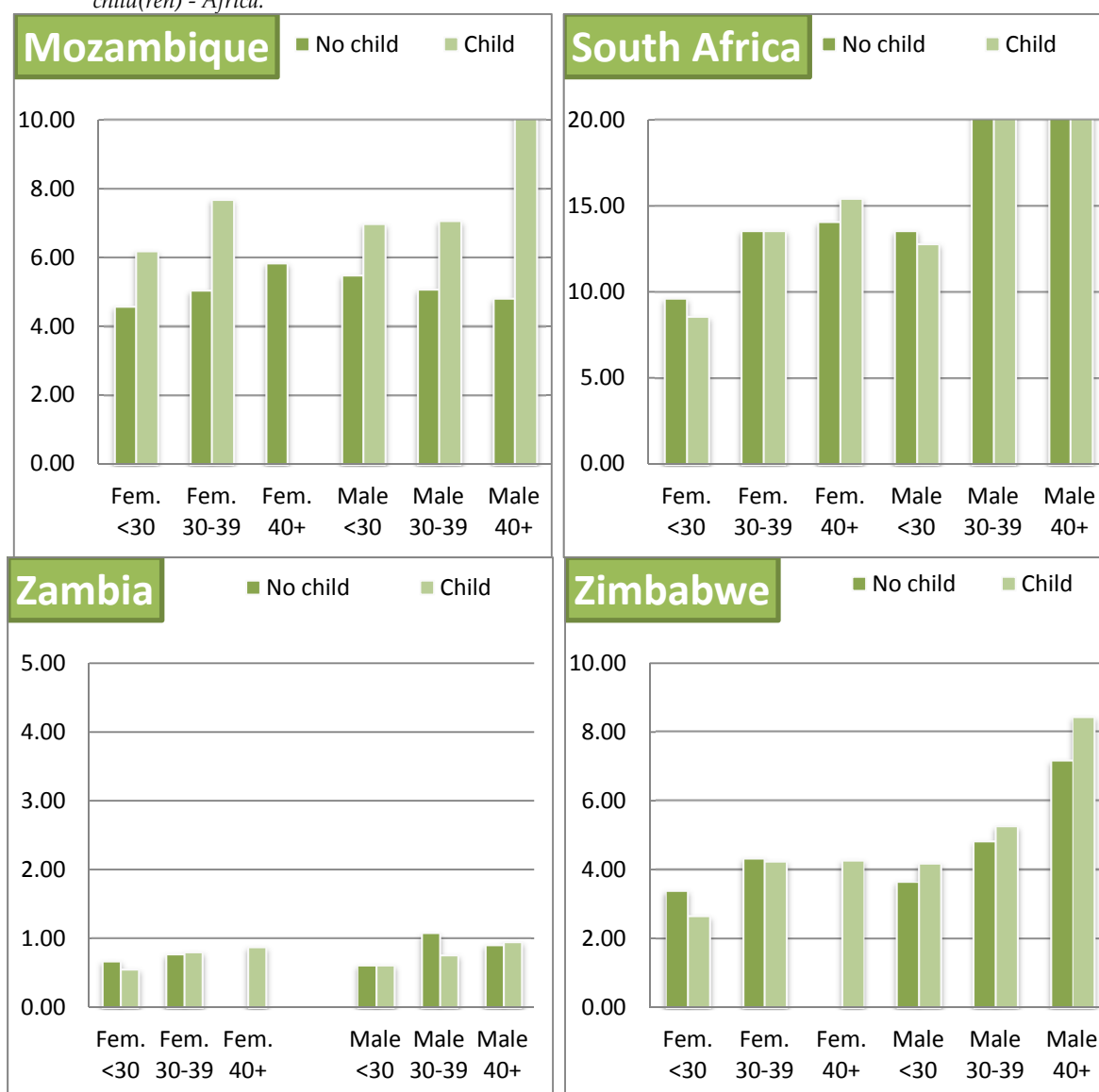
Table 18 Distribution of the child premium and penalty across 28 countries, breakdown by gender*age groups.

	Fem. <30	Fem. 30-39	Fem. 40+	Male <30	Male 30-39	Male 40+	Total	Gender*age group
Large child premium	7%	4%	8%	14%	32%	54%	20%	33
Child premium	22%	11%	36%	43%	25%	21%	26%	43
Child penalty	56%	43%	40%	29%	25%	11%	34%	55
Large child penalty	15%	43%	16%	14%	18%	14%	20%	33
Total	100%	100%	100%	100%	100%	100%	100%	164
Countries	27 ¹	28	25 ¹	28	28	28		

Source: *WageIndicator* data 2010; 2011 (aggregate data)

¹ 1 respectively 3 countries have not sufficient data

Graph 13 Male and female median hourly wages, expressed in PPP- standardized US dollars for 2010, by presence of child(ren) - Africa.



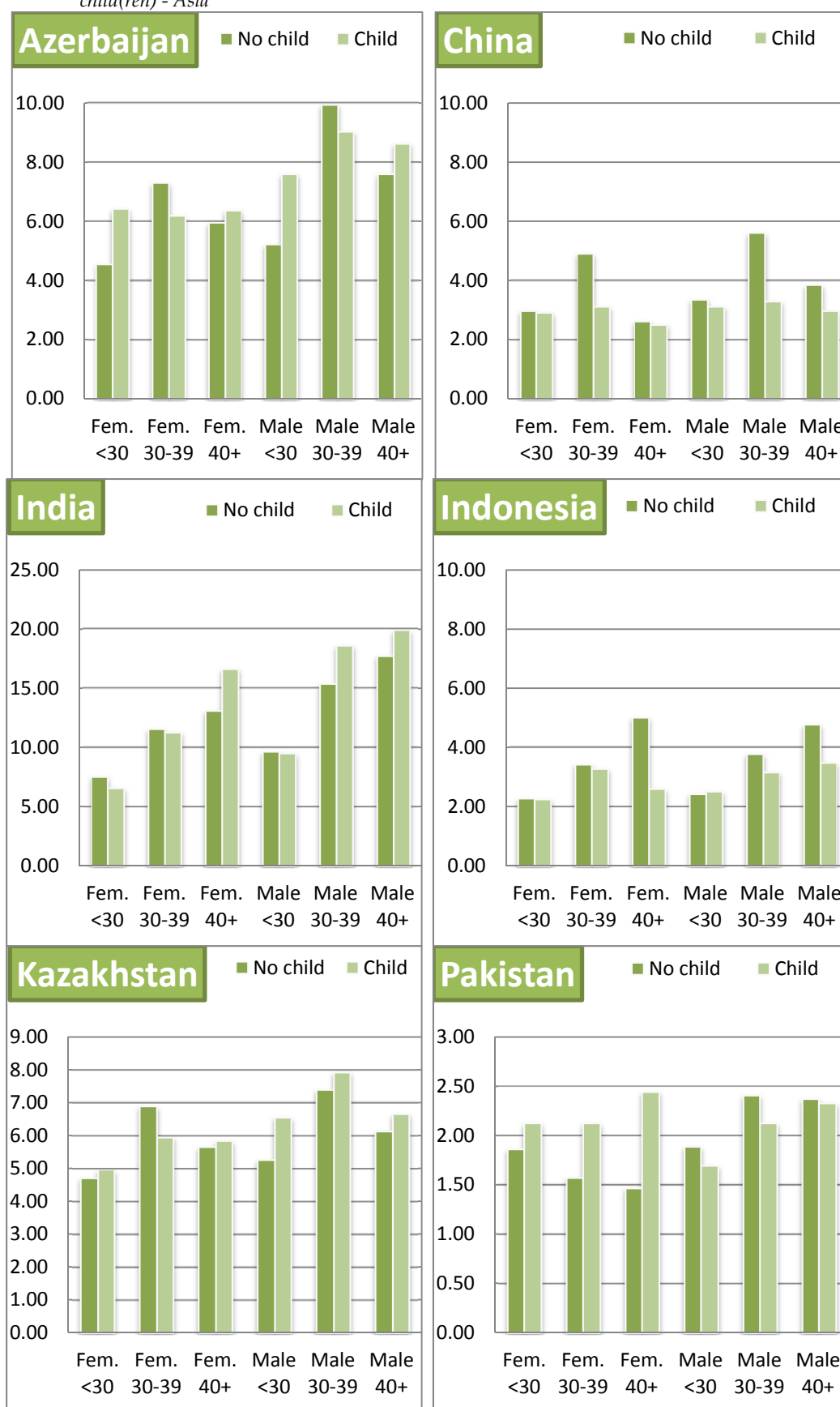
Source: WageIndicator data 2010; 2011

Graph 14 Male and female median hourly wages, expressed in PPP- standardized US dollars for 2010, by presence of child(ren) - Americas.



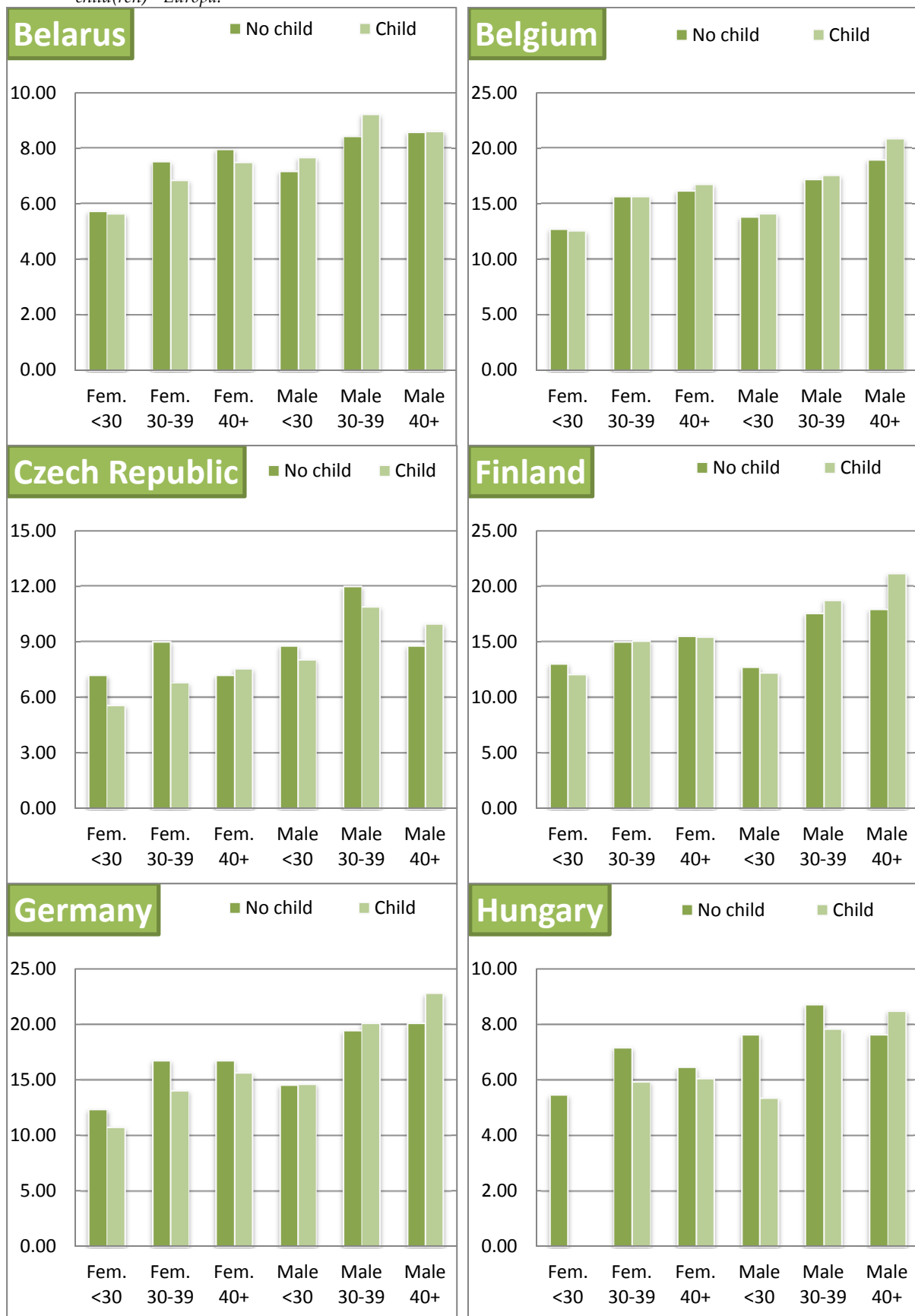
Source: WageIndicator data 2010; 2011

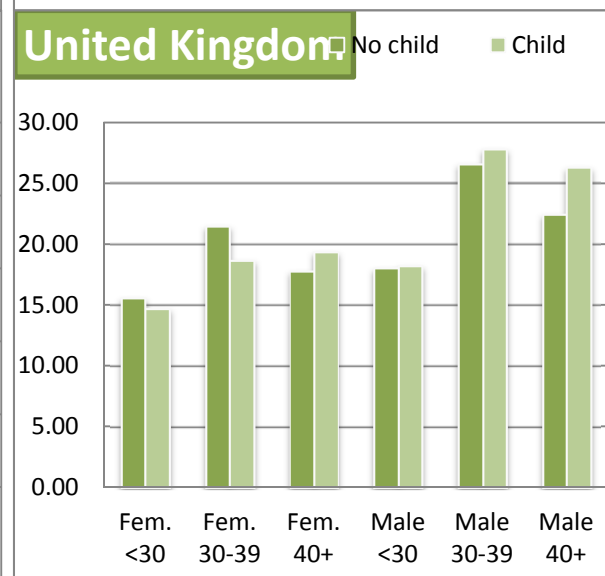
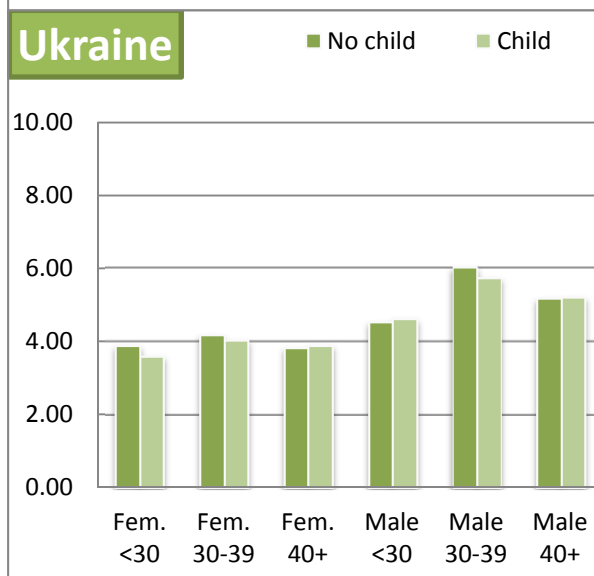
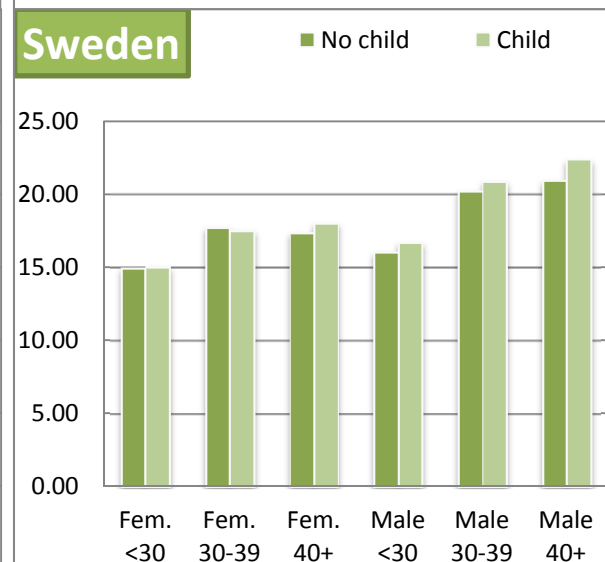
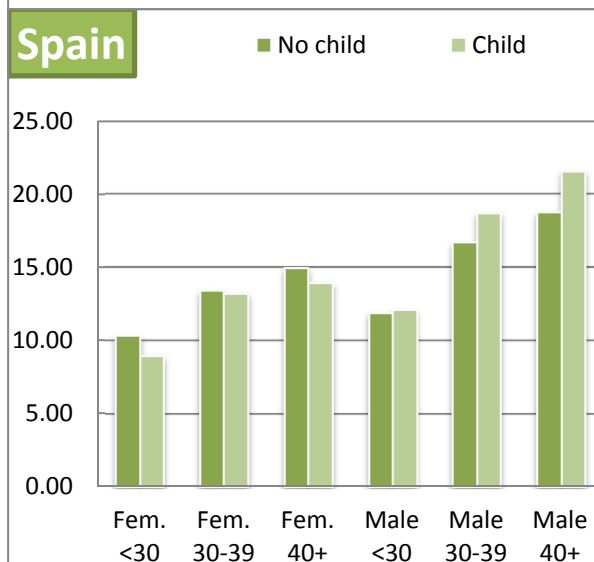
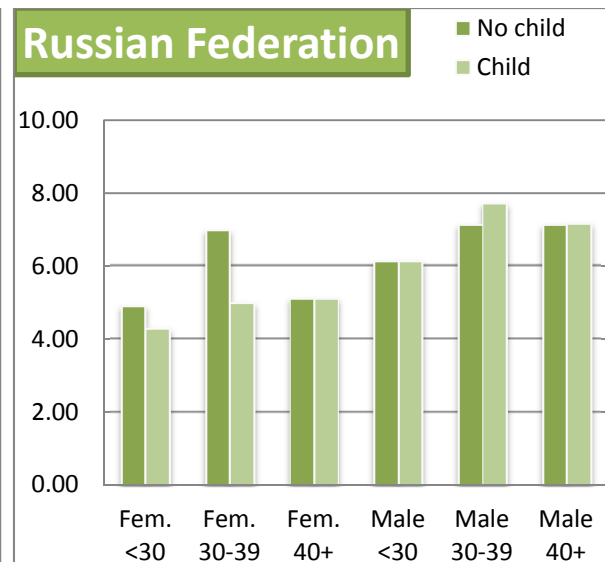
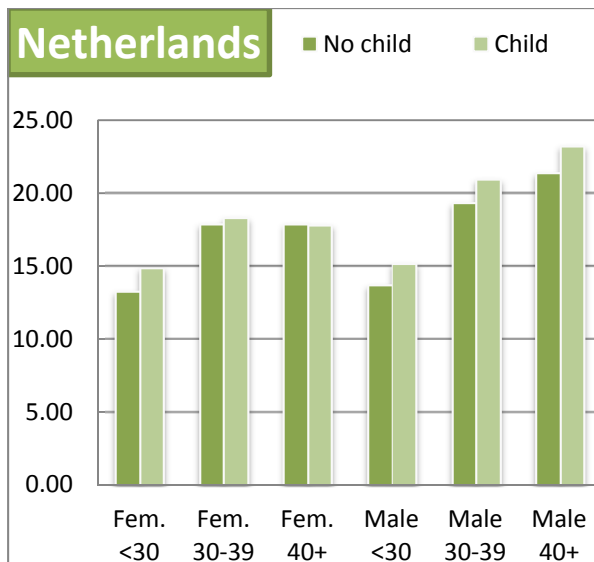
Graph 15 Male and female median hourly wages, expressed in PPP- standardized US dollars for 2010, by presence of child(ren) - Asia



Source: WageIndicator data 2010; 2011

Graph 16 Male and female median hourly wages, expressed in PPP- standardized US dollars for 2010, by presence of child(ren) - Europa.





Source: WageIndicator data 2010; 2011

3.4 The GPG broken down by household and socio-demographic characteristics

A considerable share of the GPG can still be attributed to discrimination

In the previous sections we provided the raw GPG with breakdowns by age and education (section 3.2) and by age and child (section 3.3). A statistical analysis allows to include many more breakdowns, thereby controlling for other relevant characteristics. In this section, the GPG is controlled for having a partner, for education, for years of service, for firm size, for occupational group, and for living with one or more children. Based on the previous section, it is assumed that living with children has a different impact for men and women: therefore we included both categories. Table 19 shows the results of the analysis for five countries in Latin-America. Table 20 does so for four countries in Asia and one country in Africa. Table 21 does so for six countries in Europe. These analyses include fewer countries than the sections 3.2 and 3.3, because of higher requirements for the number of observations.

The results of the analyses show overwhelmingly that the GPG remains, even when controlled for all characteristics. It clarifies that the smallest adjusted GPG is found in Kazakhstan (6%), followed by Indonesia (9%) and the Netherlands (10%). In contrast, the largest adjusted GPG is found in Chile (22%), followed by South Africa and Argentina (both also 22%), and Spain and Mexico (both 21%). GPGs in the remaining countries are as follows: 18% for Russian Federation and Brazil, 17% for Colombia, 15% for the United Kingdom, 14% for Sweden, 13% for China, 12% for India, 11% for Belarus, and 10% for Belgium and Ukraine. This adjusted GPG is *not* the raw GPG, but the GPG controlled for a number of relevant characteristics; it is often referred to as the unexplained GPG, which means that the available explanatory factors cannot fully explain the raw GPG. Sometimes this unexplained GPG is referred to as discrimination. In these cases the discrimination refers to a wide range of discriminatory practices, not solely to wage discrimination of an individual employer towards an individual employee, as defined in the Equal Pay Legislation.

Table 19 The adjusted gender wage gap: effect of personal, educational, firm size and occupational characteristics on wages (logarithm) in five countries in Latin America

	Argentina		Brazil		Chile		Colombia		Mexico	
	B	s.e.	B	s.e.	B	s.e.	B	s.e.	B	s.e.
(Constant)	2.612	.038	1.368	.040	7.304	.114	7.808	.091	2.270	.099
Female	-.215	.016	-.178	.017	-.219	.046	-.174	.039	-.207	.034
Child * male	.033	.019	.085	.022	.029	.046	.015	.043	-.061	.036
Child * female	.059	.021	-.024	.022	-.123	.054	-.071	.047	-.177	.049
Partner	.063	.014	.090	.016	.129	.037	.070	.034	.133	.031
ISCED education level [1=low,...,6=high]	.098	.005	.172	.006	.226	.019	.221	.012	.305	.017
Years of service	.023	.002	.022	.002	.025	.005	.034	.005	.048	.005
Years of service squared	.000	.000	.000	.000	.000	.000	.000	.000	-.001	.000
Firm size [1=0-10,...,5=>500]	.116	.005	.101	.005	.115	.012	.092	.010	.106	.009
2 Professionals	-.192	.025	-.095	.025	-.306	.056	-.366	.049	-.229	.041
3 Technicians and assoc. professionals	-.331	.026	-.358	.025	-.717	.061	-.559	.053	-.392	.046
4 Clerical support workers	-.420	.025	-.566	.025	-.904	.060	-.748	.051	-.556	.045
5 Service and sales workers	-.611	.031	-.497	.032	-1.105	.087	-.553	.072	-.462	.073
6 Skilled agricult., forestry and fishery w.	-.514	.112	-.040	.196	-.797	.197	-.763	.274	-.312	.484
7 Craft and related trades workers	-.543	.035	-.408	.034	-.857	.080	-.717	.073	-.389	.066
8 Plant and machine operators, assem.	-.385	.041	-.454	.042	-.887	.095	-.817	.092	-.356	.100
9 Elementary occupations	-.592	.037	-.473	.044	-1.301	.109	-.907	.112	-.435	.122
Rsquared	.227		.258		.397		.325		.282	
N	14546		16859		2147		3139		4509	

Source: WageIndicator data 2010; 2011

Table 20 The adjusted gender wage gap: effect of personal, educational, firm size and occupational characteristics on wages (logarithm) in four countries in Asia and one country in Africa

	China		India		Indonesia		Kazakhstan		South Africa	
			B	s.e.	B	s.e.	B	s.e.	B	s.e.
(Constant)	2.197	.082	3.463	.101	9.265	.075	5.870	.079	3.130	.058
Female	-.126	.026	-.119	.035	-.089	.039	-.056	.027	-.217	.025
Child * male	-.116	.042	-.013	.034	-.027	.047	.092	.032	.004	.030
Child * female	-.115	.045	-.134	.063	-.026	.063	-.021	.030	.036	.028
Partner	-.003	.026	.098	.030	.091	.042	.022	.023	.072	.021
ISCED education level [1=low,...,6=high]	.201	.013	.232	.019	.176	.012	.148	.014	.191	.009
Years of service	.039	.004	.080	.005	.021	.005	.036	.003	.043	.003
Years of service squared	-.001	.000	-.002	.000	.000	.000	-.001	.000	-.001	.000
Firm size [1=0-10,...,5=>500]	.051	.009	.184	.008	.083	.010	.041	.007	.131	.007
2 Professionals	-.145	.047	-.059	.032	-.156	.045	-.226	.034	-.045	.030
3 Technicians and assoc. professionals	-.316	.049	-.360	.041	-.198	.047	-.305	.035	-.217	.031
4 Clerical support workers	-.396	.048	-.851	.049	-.367	.049	-.279	.038	-.422	.034
5 Service and sales workers	-.757	.065	-.876	.101	-.380	.072	-.464	.056	-.849	.060
6 Skilled agricult., forestry and fishery w.	-.318	.328	.101	.357	-.003	.209	-.642	.187	-.279	.166
7 Craft and related trades workers	-.256	.060	-.577	.082	-.253	.066	-.527	.050	-.582	.059
8 Plant and machine operators, assem.	-.523	.061	-.761	.094	-.461	.064	-.109	.055	-.624	.083
9 Elementary occupations	-.691	.069	-.686	.124	-.705	.081	-.503	.087	-.904	.075
Rsq	0.138		0.193		0.123		0.066		0.264	
N	6861		10946		4893		9347		8348	

Source: WageIndicator data 2010; 2011

Table 21 The adjusted gender wage gap: effect of personal, educational, firm size and occupational characteristics on wages (logarithm) in six countries in Europe

	Belarus		Belgium		Netherlands		Russian Fed.		Spain		Ukraine	
	B	s.e.	B	s.e.	B	s.e.	B	s.e.	B	S.e.	B	S.e.
(Constant)	8.830	.041	2.190	.036	2.019	.020	4.392	.090	2.041	.074	2.631	.063
Female	-.109	.015	-.105	.015	-.097	.008	-.185	.029	-.214	.031	-.104	.021
Child * male	.034	.018	.060	.018	.052	.010	-.015	.032	.013	.038	-.016	.026
Child * female	-.057	.017	.051	.018	.053	.010	-.180	.030	-.037	.044	-.092	.020
Partner	.077	.013	.008	.013	.096	.007	.063	.023	.093	.028	.081	.017
ISCED education level [1=low,...,6=high]	.085	.007	.094	.005	.119	.003	.129	.016	.100	.011	.076	.010
Years of service	.029	.002	.019	.002	.031	.001	.025	.003	.028	.004	.023	.002
Years of service squared	-.001	.000	.000	.000	.000	.000	-.001	.000	.000	.000	-.001	.000
Firm size [1=0- 10,...,5=>500]	.006	.004	.049	.004	.042	.002	.035	.007	.098	.009	.043	.005
2 Professionals	-.128	.020	-.107	.022	-.113	.013	-.341	.034	-.094	.042	-.185	.025
3 Technicians and assoc. professionals	-.108	.021	-.198	.022	-.176	.013	-.290	.036	-.247	.047	-.225	.026
4 Clerical support workers	-.220	.023	-.262	.022	-.279	.013	-.369	.040	-.420	.046	-.265	.029
5 Service and sales workers	-.403	.028	-.306	.027	-.376	.014	-.732	.050	-.621	.059	-.365	.036
6 Skilled agricult., forestry and fishery w.	-.305	.079	-.398	.081	-.331	.033	-.676	.205	-.269	.243	-.555	.140
7 Craft and related trades workers	-.151	.025	-.274	.028	-.271	.015	-.516	.045	-.369	.062	-.288	.036
8 Plant and machine operators, assem.	-.199	.032	-.290	.035	-.323	.018	-.419	.057	-.392	.073	-.161	.046
9 Elementary occupations	-.313	.046	-.396	.036	-.466	.019	-.709	.076	-.602	.086	-.348	.059
Rsq	.052		.207		.264		.108		.149		.040	
N	24074		8469		33978		6845		6425		15529	

Source: WageIndicator data 2010; 2011

3.5 Comparing the publicly available official sources with *WageIndicator* data

How well does the *WageIndicator* survey measure the GPG? For 17 countries Table 22 shows the results of a comparison between the GPG measured in *WageIndicator* and the GPG measured in national statistics, as presented in Chapter 2. In the last column, the table presents the difference between the two sources. For 9 of the 17 countries the difference is less than 5 percentage points, namely Belarus, Czech Republic, Germany, Indonesia, Netherlands, Paraguay, Sweden, Ukraine, and United Kingdom. For 3 countries the difference is between 5 and 10 percentage points, namely Finland, Hungary, and Spain. For the remaining 5 countries the differences are larger than 10 percentage points, with the *WageIndicator* data revealing a smaller GPG (Azerbaijan, Kazakhstan, and Zambia) or a larger GPG (Brazil, Mexico).

There are two reasons for these differences. The first is that the years of measurement are not similar across the two sources. Whereas all *WageIndicator* data are measured in 2010-2011, the national statistics are measured between 2005 (Zambia) and 2010 (the European countries). Changes over time may have influenced the GPG, as discussed in Section 2.2. The second reason is that the sampling is different across the two sources. The *WageIndicator* data are derived from a volunteer web-survey and thus not representative for the national labour force, as discussed earlier, whereas the national statistics are assumed to be based on either a random sample of the labour force or based on administrative records.

In conclusion, the national statistics data are certainly a better reflection of reality than the *WageIndicator* data. In Chapter 3 we nevertheless use the *WageIndicator* data, because the aggregate data of the national statistics do not allow for breakdowns by age, education or children, and certainly not for a statistical analysis as conducted in Section 3.4. The latter requires the raw survey data, which is not available for the national statistics.

Table 22 The Gender Pay Gap according to national statistics and according to the *WageIndicator* data.

	GPG Nat. Stat.	Year	GPG <i>WageIndicator</i>	Year	Diff
Azerbaijan	43.2%	2008	19.8%	2010-2011	-23.4%
Belarus	25.1%	2008	19.9%	2010-2011	-5.2%
Brazil	23.3%	2007	40.0%	2010-2011	16.7%
Czech Republic	25.5%	2010	27.0%	2010-2011	1.5%
Finland	19.4%	2010	12.5%	2010-2011	-6.9%
Germany	23.1%	2010	21.9%	2010-2011	-1.2%
Hungary	17.6%	2010	8.4%	2010-2011	-9.2%
Indonesia	13.7%	2008	11.6%	2010-2011	-2.1%
Kazakhstan	31.4%	2008	14.9%	2010-2011	-16.5%
Mexico	17.4%	2008	40.0%	2010-2011	22.6%
Netherlands	18.5%	2010	13.5%	2010-2011	-5.0%
Paraguay	5.3%	2007	8.8%	2010-2011	3.5%
Spain	16.7%	2010	25.5%	2010-2011	8.8%
Sweden	15.8%	2010	14.8%	2010-2011	-1.0%
Ukraine	24.8%	2008	23.3%	2010-2011	-1.5%
United Kingdom	19.5%	2010	23.2%	2010-2011	3.7%
Zambia	45.6%	2005	11.8%	2010-2011	-33.8%

Source: National Statistics reported in this report and *WageIndicator* data 2010; 2011

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Appendix 1 Figures corresponding with the graphs in this report

Table 23 Figures corresponding with the industry pattern of the Gender Pay Gap in 15 of 18 countries (Table 16), most recent years available

	Australia	Azerbaijan	Botswana	Brazil	Costa Rica	Egypt	Indonesia	Japan	Kazakhstan	Mexico	Paraguay	Philippines	South Korea	USA	Zambia
Period	hour	month	month	hour	hour	hour	hour	hour	month	month	month	hour	month	week	hour
Year	2010	2008	2005-06	2007	2008	2007	2008	2008	2008	2008	2008	2008	2007	2008	2005
Agriculture		21.8	4.4	70.6	11.9	1.7	22.7		27.6	6.1		13.4		15.4	47.1
Fishing		16.7			-15.5	-30.1	-19.8		27.0	17.7		8.9			
Mining	22.6	19.7	-12.8	39.2	20.7	72.1	30.6	28.5	30.0	0.5		-26.4	44.3	20.3	52.7
Manufacturing	15.8	24.5	51.8	-5.5	18.8	35.1	21.5	23.0	33.6	28.2	-9.8	7.8	38.9	26.2	54.9
Utilities	16.4	20.7	2.1		-34.0	-4.5	22.5		23.6	6.8	27.5	-5.9	44.4	24.2	53.0
Construction	18.0	45.7	13.4	?	-20.3	-13.8	-29.1	7.1	25.7	-40.8	-69.0	-45.9	40.6	7.8	-64.9
Wholesale, retail	16.8	7.1	36.0	53.5	18.1	10.9	9.9	11.9	22.5	18.6	6.9	7.9	38.7	24.0	43.8
Hotels,restaurants	12.5	8.9	33.3		9.9	-14.1	19.2	0.3	42.6	26.8		20.3	32.2	16.4	3.7
Transport,storage,comm.	6.0	40.9	11.9	-2.3	-4.1	-19.5	-16.5	-4.4	15.6	-1.5	-9.7	-52.8	12.5	20.0	17.1
Finance, insurance	32.1	34.6	31.4		22.9	-8.7	-3.1	29.3	34.7	16.1	-0.8	-2.9	40.9	37.8	6.2
Real estate, renting, other business	24.9	58.2	12.9		4.4	-1.3	-18.6	12.9	13.5	19.9		-24.3	40.8	22.0	
Public admin.,defense	8.3	22.0		8.6	-13.1		1.0		21.5	13.0	36.5	0.9		21.5	
Education	9.5	27.6	36.1		13.2	4.9	1.4	15.6	10.1	16.9		-3.1	41.9	15.6	
Health, social work	27.2	32.9	35.6		16.8	28.1	14.3	16.0	11.2	29.8		6.1	43.3	28.3	
Other community and personal services	16.3	47.0	31.4	38.6	39.0	7.3	-7.4		36.8	23.3		9.0	36.1	24.4	18.1
Private households				22.8	25.1		41.1			35.8		40.9			

Sources: see Section 2.1.3

Table 24 Figures corresponding with graph 1

Continent	Country	% GPG	Continent	Country	% GPG
			Europe	Denmark 2010	16.0
Africa	Botswana 2006	19.0	Europe	Estonia 2008	27.6
Africa	Egypt 2007	25.1	Europe	Finland 2010	19.4
Africa	Zambia 2005	45.6	Europe	France 2009	16.0
			Europe	Germany 2010	23.1
Americas	Brazil 2007	21.8	Europe	Greece 2008	22.0
Americas	Costa Rica 2008	14.7	Europe	Hungary 2010	17.6
Americas	Mexico 2008	17.4	Europe	Ireland 2009	12.6
Americas	Paraguay 2008	5.3	Europe	Italy 2009	5.5
Americas	USA 2009	19.8	Europe	Latvia 2010	17.6
			Europe	Lithuania 2010	14.6
Asia/ Austr.	Australia 2010	16.9	Europe	Luxembourg 2010	12.0
Asia/ Austr.	Azerbaijan 2008	43.2	Europe	Malta 2010	6.1
Asia/ Austr.	Indonesia 2008	13.7	Europe	Netherlands 2010	18.5
Asia/ Austr.	Japan 2008	13.5	Europe	Norway 2010	16.1
Asia/ Austr.	Kazakhstan 2008	31.4	Europe	Poland 2009	9.8
Asia/ Austr.	Philippines 2008	16.8	Europe	Portugal 2010	12.8
Asia/ Austr.	South Korea (ROK) 2007	37.2	Europe	Romania 2010	12.5
			Europe	Slovakia 2010	20.7
Europe	Austria 2010	25.5	Europe	Slovenia 2010	4.4
Europe	Belgium 2009	8.8	Europe	Spain 2010	16.7
Europe	Bulgaria 2010	15.7	Europe	Sweden 2010	15.8
Europe	Cyprus 2010	21.0	Europe	United Kingdom 2010	19.5
Europe	Czech Republic 2010	25.5	Weighted	All 43 countries	18.4

Source: Sources referred to in section 2.1 of this report for countries outside Europe and Eurostat, accessed 01/02/2012, for European countries

Table 25 Figures corresponding with graphs 2-8

Continents	Country	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Africa	Botswana			2.9	3.5	11.2		16.3	20.2	18.2	23.3	19.0				
Africa	Egypt	18.6	13.8	14.8	21.6	26.0	15.3	16.8	16.8	12.4			25.1			
Americas	Brazil	24.3	21.8	18.9	19.7	17.7	18.8	17.7		21.6			21.8			
Americas	Costa Rica						8.8	2.1	8.0	3.5	2.4	2.2		14.7		
Americas	Mexico	11.1	17.0	15.0	17.3	17.0	17.7	17.2	15.7	16.0	16.5	15.5		17.4	17.4	
Americas	United States	25.0	25.6	23.7	23.5	23.1	23.6	22.1	20.6	19.6	19.0	19.2	19.8	20.1	19.8	
Asia/ Austr	Australia	16.80	16.60	16.70	15.40	16.30	15.30	15.40	15.80	15.20	15.10	16.10	16.00	16.00	17.00	16.90
Asia/ Austr	Japan	37.2	36.9	36.1	35.4	34.5	34.7	33.5	33.2	32.8	34.2	33.4		13.5		
Asia/ Austr	Kazakhstan			24.2	32.4	38.5	41.3	38.3	39.2	38.1				31.4		
Asia/ Austr	South Korea (ROK)	39.1	37.9	36.3	36.7	36.8	35.7	36.1	37.1	37.7	37.4	36.6	37.2			

Continents	Country	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005		2006	2007	2008	2009	2010
E Europe	Czech Republic	21.0	21.0	25.0	22.0	22.0	20.0	19.0	19.0	19.0	19.0		23.4	23.6	26.2	25.9	25.5
E Europe	Hungary	23.0	24.0	23.0	21.0	21.0	20.0	16.0	12.0	14.0	11.0		14.4	16.3	17.5	17.1	17.6
E Europe	Poland				15.0		12.0	11.0	11.0	10.0	10.0		7.5	7.5	9.8	9.8	
E Europe	Slovakia				23.0	22.0	23.0	27.0	23.0	24.0	24.0		25.8	23.6	20.9	21.9	20.7
N Europe	Denmark	15.0	13.0	12.0	14.0	15.0	15.0	18.0	18.0	17.0	18.0		17.6	17.7	17.1	16.8	16.0
N Europe	Finland	17.0	18.0	19.0	19.0	17.0	17.0	20.0	20.0	20.0	20.0		21.3	20.0	20.0	20.1	19.4
N Europe	Norway		16.0	16.0	17.0	17.0	17.0	16.0	16.0	16.0	16.0		16.0	15.7	17.2	16.7	16.1
N Europe	Sweden	17.0	17.0	18.0	17.0	18.0	18.0	17.0	16.0	17.0	16.0		16.5	17.9	17.1	16.0	15.8
S Europe	France	13.0	12.0	12.0	12.0	13.0	14.0	13.0	12.0	12.0	12.0		15.4	16.9	17.9	16.0	
S Europe	Italy	8.0	7.0	7.0	8.0	6.0	6.0			7.0	9.0		4.4	5.1	4.9	5.5	
S Europe	Spain	14.0	14.0	16.0	14.0	15.0	17.0	21.0	18.0	15.0	13.0		17.9	17.1	16.1	16.7	16.7
S Europe	Portugal	6.0	7.0	6.0	5.0	8.0	10.0	8.0	9.0	5.0	9.0		8.4	8.3	9.2	10.0	12.8
W Europe	Belgium	10.0	10.0	9.0	11.0	13.0	12.0			6.0	7.0		9.5	9.1	9.0	8.8	
W Europe	Germany	21.0	21.0	22.0	19.0	21.0	21.0	22.0	23.0	23.0	22.0		22.7	23.0	23.2	23.2	23.1
W Europe	Netherlands	23.0	22.0	21.0	21.0	21.0	16.0	16.0	18.0	19.0	18.0		23.6	23.6	19.6	19.2	18.5
W Europe	UK	24.0	21.0	24.0	22.0	21.0	21.0	23.0	22.0	22.0	20.0		24.3	21.1	21.4	20.6	19.5

Source ITUC/IDS (2008) and sources referred to in this report.

Table 26 Figures corresponding with graphs 9-12

Country	Category	Median wage stand USD <30yrs	Median wage stand USD 30+yrs	Diff	N_obs <30yrs	N_obs 30+yrs
112 Belarus	Male Low educ.	5.50	7.69	2.19	35	44
112 Belarus	Male Middle educ.	6.50	7.17	0.67	2240	1765
112 Belarus	Male High educ.	7.61	9.56	1.95	4798	4767
112 Belarus	Fem. Low educ.	4.56	5.72	1.17	44	82
112 Belarus	Fem. Middle educ.	4.59	5.43	0.84	1737	1480
112 Belarus	Fem. High educ.	6.22	7.91	1.69	4540	4400
152 Chile	Male Low educ.		3.28		3	13
152 Chile	Male Middle educ.	4.38	5.72	1.34	118	267
152 Chile	Male High educ.	9.42	16.61	7.19	285	728
152 Chile	Fem. Low educ.		4.46		1	14
152 Chile	Fem. Middle educ.	3.36	4.21	0.85	89	189
152 Chile	Fem. High educ.	6.32	9.38	3.07	193	370
156 China	Male Low educ.	2.37	2.37	0.00	181	191
156 China	Male Middle educ.	2.95	3.74	0.78	1556	551
156 China	Male High educ.	4.41	7.47	3.07	1366	504
156 China	Fem. Low educ.	1.92	1.92	0.00	76	122
156 China	Fem. Middle educ.	2.59	3.13	0.54	1152	309
156 China	Fem. High educ.	3.61	6.43	2.82	1244	281
170 Colombia	Male Low educ.	2.58	3.61	1.03	35	106
170 Colombia	Male Middle educ.	3.01	4.19	1.18	173	300
170 Colombia	Male High educ.	5.87	10.34	4.47	422	945
170 Colombia	Fem. Low educ.	2.24	2.47	0.23	20	42
170 Colombia	Fem. Middle educ.	2.76	3.18	0.42	173	226
170 Colombia	Fem. High educ.	4.24	6.86	2.62	324	541
203 Czech Republic	Male Low educ.		7.67		7	16
203 Czech Republic	Male Middle educ.	7.77	9.06	1.29	227	632
203 Czech Republic	Male High educ.	11.16	14.22	3.06	144	368
203 Czech Republic	Fem. Low educ.	5.09	4.55	-0.54	16	28
203 Czech Republic	Fem. Middle educ.	6.26	6.80	0.53	255	707
203 Czech Republic	Fem. High educ.	9.05	10.76	1.71	143	232
246 Finland	Male Low educ.	10.66	14.60	3.94	167	317
246 Finland	Male Middle educ.	15.05	19.11	4.06	116	350
246 Finland	Male High educ.	16.11	26.16	10.05	39	134
246 Finland	Fem. Low educ.	11.44	13.55	2.11	84	253
246 Finland	Fem. Middle educ.	13.04	15.28	2.23	122	500
246 Finland	Fem. High educ.	15.95	19.65	3.70	26	137
276 Germany	Male Low educ.	12.94	17.12	4.18	1905	8875
276 Germany	Male Middle educ.	16.66	24.94	8.28	1490	7080
276 Germany	Male High educ.	20.76	29.77	9.01	235	1120
276 Germany	Fem. Low educ.	10.78	14.07	3.28	1372	5099
276 Germany	Fem. Middle educ.	13.12	18.68	5.56	1333	3830
276 Germany	Fem. High educ.	17.63	23.44	5.82	237	762
31 Azerbaijan	Male Low educ.	4.97			13	4
31 Azerbaijan	Male Middle educ.	4.34	6.95	2.61	64	84
31 Azerbaijan	Male High educ.	6.08	9.12	3.04	351	407
31 Azerbaijan	Fem. Low educ.				7	6
31 Azerbaijan	Fem. Middle educ.	3.72	4.97	1.24	37	55
31 Azerbaijan	Fem. High educ.	5.00	6.84	1.84	235	217
32 Argentina	Male Low educ.	6.96	10.03	3.07	434	1181
32 Argentina	Male Middle educ.	6.89	8.52	1.64	1188	1251
32 Argentina	Male High educ.	9.51	15.34	5.84	1197	3359
32 Argentina	Fem. Low educ.	6.52	6.76	0.24	414	788
32 Argentina	Fem. Middle educ.	5.61	6.16	0.55	1038	907
32 Argentina	Fem. High educ.	6.89	9.97	3.09	1273	2336
348 Hungary	Male Low educ.	4.32	4.65	0.32	125	622
348 Hungary	Male Middle educ.	5.01	6.06	1.05	138	336

348 Hungary	Male High educ.	7.49	9.70	2.20	68	209
348 Hungary	Fem. Low educ.	3.99	3.72	-0.27	80	523
348 Hungary	Fem. Middle educ.	4.08	4.85	0.77	168	770
348 Hungary	Fem. High educ.	5.25	7.27	2.02	117	462
356 India	Male Low educ.	6.37	3.72	-2.65	96	116
356 India	Male Middle educ.	3.26	5.80	2.54	302	324
356 India	Male High educ.	10.28	19.43	9.15	4106	4983
356 India	Fem. Low educ.	4.17	3.90	-0.28	20	20
356 India	Fem. Middle educ.	5.12	5.20	0.08	50	44
356 India	Fem. High educ.	7.58	13.04	5.46	1237	885
360 Indonesia	Male Low educ.	2.02	1.91	-0.11	132	256
360 Indonesia	Male Middle educ.	1.67	1.96	0.29	389	507
360 Indonesia	Male High educ.	2.86	4.75	1.88	1166	1470
360 Indonesia	Fem. Low educ.	1.72	2.87	1.15	50	68
360 Indonesia	Fem. Middle educ.	1.72	2.35	0.63	173	77
360 Indonesia	Fem. High educ.	2.40	3.57	1.17	673	505
398 Kazakhstan	Male Low educ.	3.46	5.07	1.61	23	28
398 Kazakhstan	Male Middle educ.	3.97	4.80	0.84	560	508
398 Kazakhstan	Male High educ.	5.95	8.42	2.47	2323	1683
398 Kazakhstan	Fem. Low educ.	3.05	5.11	2.06	20	28
398 Kazakhstan	Fem. Middle educ.	3.33	4.16	0.83	451	481
398 Kazakhstan	Fem. High educ.	5.06	6.57	1.52	2032	1863
484 Mexico	Male Low educ.	2.92	4.38	1.46	42	58
484 Mexico	Male Middle educ.	3.46	4.87	1.40	343	391
484 Mexico	Male High educ.	6.59	12.10	5.52	895	1421
484 Mexico	Fem. Low educ.	2.29	2.89	0.61	14	24
484 Mexico	Fem. Middle educ.	2.76	3.68	0.92	236	193
484 Mexico	Fem. High educ.	4.60	7.51	2.91	550	510
508 Mozambique	Male Low educ.	3.49	3.36	-0.13	30	27
508 Mozambique	Male Middle educ.	4.46	4.00	-0.47	107	89
508 Mozambique	Male High educ.	7.93	10.66	2.72	112	177
508 Mozambique	Fem. Low educ.		2.66		8	17
508 Mozambique	Fem. Middle educ.	3.99	6.39	2.39	55	31
508 Mozambique	Fem. High educ.	6.50	7.86	1.36	78	68
528 Netherlands	Male Low educ.	11.20	17.31	6.11	1420	3918
528 Netherlands	Male Middle educ.	12.68	19.52	6.84	3152	5800
528 Netherlands	Male High educ.	16.63	27.84	11.21	2313	6306
528 Netherlands	Fem. Low educ.	10.14	15.14	5.00	991	2697
528 Netherlands	Fem. Middle educ.	12.24	17.29	5.05	3336	5048
528 Netherlands	Fem. High educ.	15.91	22.54	6.63	2622	3557
56 Belgium	Male Low educ.	11.99	13.92	1.93	164	494
56 Belgium	Male Middle educ.	12.59	16.07	3.48	542	996
56 Belgium	Male High educ.	14.79	22.43	7.64	950	1715
56 Belgium	Fem. Low educ.	10.34	12.11	1.77	142	280
56 Belgium	Fem. Middle educ.	11.12	13.99	2.87	606	879
56 Belgium	Fem. High educ.	13.70	18.10	4.40	1101	1472
586 Pakistan	Male Low educ.	1.52	1.83	0.30	56	238
586 Pakistan	Male Middle educ.	1.63	1.98	0.35	64	194
586 Pakistan	Male High educ.	2.83	3.81	0.98	39	119
586 Pakistan	Fem. Low educ.		1.37		5	22
586 Pakistan	Fem. Middle educ.	1.65	2.21	0.56	51	49
586 Pakistan	Fem. High educ.	2.54	2.44	-0.10	70	80
643 Russian Fed.	Male Low educ.	3.74			11	8
643 Russian Fed.	Male Middle educ.	5.11	4.90	-0.21	109	287
643 Russian Fed.	Male High educ.	6.26	7.97	1.71	1097	2078
643 Russian Fed.	Fem. Low educ.		2.63		4	30
643 Russian Fed.	Fem. Middle educ.	3.20	2.36	-0.84	79	169
643 Russian Fed.	Fem. High educ.	4.90	5.67	0.77	1178	2146
710 South Africa	Male Low educ.	4.96	4.84	-0.12	40	57

710 South Africa	Male Middle educ.	8.38	15.09	6.71	529	854
710 South Africa	Male High educ.	15.84	28.93	13.09	1367	1599
710 South Africa	Fem. Low educ.	5.66	4.16	-1.50	48	78
710 South Africa	Fem. Middle educ.	7.14	11.09	3.95	851	1056
710 South Africa	Fem. High educ.	11.31	16.97	5.66	1276	1366
716 Zimbabwe	Male Low educ.				2	7
716 Zimbabwe	Male Middle educ.				3	9
716 Zimbabwe	Male High educ.	3.90	6.51	2.62	46	76
716 Zimbabwe	Fem. Low educ.				5	3
716 Zimbabwe	Fem. Middle educ.				7	7
716 Zimbabwe	Fem. High educ.	3.22	4.51	1.29	57	51
724 Spain	Male Low educ.	9.84	13.06	3.21	207	589
724 Spain	Male Middle educ.	10.27	15.38	5.11	115	526
724 Spain	Male High educ.	13.39	22.32	8.93	654	1870
724 Spain	Fem. Low educ.	8.25	10.25	2.00	182	365
724 Spain	Fem. Middle educ.	9.48	11.89	2.40	94	318
724 Spain	Fem. High educ.	11.06	15.60	4.54	626	1198
752 Sweden	Male Low educ.		18.02		7	22
752 Sweden	Male Middle educ.	14.92	19.38	4.46	56	316
752 Sweden	Male High educ.	16.60	22.05	5.44	195	998
752 Sweden	Fem. Low educ.		15.70		3	27
752 Sweden	Fem. Middle educ.	12.96	16.48	3.52	62	349
752 Sweden	Fem. High educ.	15.55	18.15	2.61	234	1145
76 Brazil	Male Low educ.	3.49	5.08	1.59	863	904
76 Brazil	Male Middle educ.	2.91	5.23	2.32	1105	920
76 Brazil	Male High educ.	5.59	12.63	7.04	2636	3180
76 Brazil	Fem. Low educ.	2.76	3.45	0.70	948	876
76 Brazil	Fem. Middle educ.	2.38	2.97	0.59	1272	856
76 Brazil	Fem. High educ.	3.98	6.83	2.86	2795	2350
804 Ukraine	Male Low educ.	6.38	6.07	-0.31	18	15
804 Ukraine	Male Middle educ.	4.45	4.73	0.28	449	907
804 Ukraine	Male High educ.	4.52	5.81	1.29	2290	2840
804 Ukraine	Fem. Low educ.	4.30	3.73	-0.57	29	79
804 Ukraine	Fem. Middle educ.	3.01	3.08	0.07	564	1108
804 Ukraine	Fem. High educ.	3.87	4.23	0.36	3957	4282
826 United Kingd.	Male Low educ.	12.28	17.62	5.34	24	114
826 United Kingd.	Male Middle educ.	13.81	19.38	5.58	168	379
826 United Kingd.	Male High educ.	22.58	32.65	10.07	368	708
826 United Kingd.	Fem. Low educ.	14.03	17.54	3.51	13	66
826 United Kingd.	Fem. Middle educ.	12.47	16.08	3.61	154	282
826 United Kingd.	Fem. High educ.	17.18	22.79	5.61	314	428
840 United States	Male Low educ.				4	6
840 United States	Male Middle educ.	11.20	18.50	7.30	56	79
840 United States	Male High educ.	14.57	25.09	10.52	212	749
840 United States	Fem. Low educ.				4	8
840 United States	Fem. Middle educ.	5.82	9.90	4.08	38	91
840 United States	Fem. High educ.	9.24	13.16	3.92	198	480
894 Zambia	Male Low educ.	1.40	1.36	-0.05	23	63
894 Zambia	Male Middle educ.	1.40	1.80	0.40	59	163
894 Zambia	Male High educ.	3.70	2.78	-0.92	43	134
894 Zambia	Fem. Low educ.	1.96	1.43	-0.53	13	30
894 Zambia	Fem. Middle educ.	1.51	2.11	0.60	37	61
894 Zambia	Fem. High educ.	3.50	3.07	-0.43	43	56

Source: WageIndicator data 2010; 2011

Table 27 Figures corresponding with graphs 13-16

Country	Category	Median wage stand USD No child	Median wage stand USD Child	Diff	N_obs No child	N_obs Child
112 Belarus	Fem. <30	6.37	6.20	0.17	4568	1756
112 Belarus	Fem. 30-39	7.98	7.20	0.78	1358	2703
112 Belarus	Fem. 40+	8.62	8.13	0.49	730	1170
112 Belarus	Male <30	7.40	8.20	-0.80	5572	1509
112 Belarus	Male 30-39	8.85	9.71	-0.86	1738	2716
112 Belarus	Male 40+	8.86	9.49	-0.63	840	1281
152 Chile	Fem. <30	5.14	4.23	0.91	215	69
152 Chile	Fem. 30-39	8.67	5.78	2.89	169	152
152 Chile	Fem. 40+	7.06	6.50	0.57	103	149
152 Chile	Male <30	8.34	5.40	2.95	333	77
152 Chile	Male 30-39	12.37	14.11	-1.74	285	256
152 Chile	Male 40+	11.09	12.43	-1.34	193	274
156 China	Fem. <30	3.74	3.74	0.00	2129	333
156 China	Fem. 30-39	5.98	3.30	2.68	382	145
156 China	Fem. 40+	2.63	2.50	0.13	98	86
156 China	Male <30	4.27	3.79	0.48	2772	312
156 China	Male 30-39	6.52	3.74	2.79	684	240
156 China	Male 40+	4.47	2.99	1.48	208	102
170 Colombia	Fem. <30	3.54	3.12	0.42	398	119
170 Colombia	Fem. 30-39	5.01	4.59	0.41	227	241
170 Colombia	Fem. 40+	4.90	5.46	-0.56	144	197
170 Colombia	Male <30	4.37	4.04	0.33	516	114
170 Colombia	Male 30-39	8.16	6.47	1.69	349	337
170 Colombia	Male 40+	8.71	8.47	0.24	249	416
203 Czech Republic	Fem. <30	7.19	5.58	1.61	382	41
203 Czech Republic	Fem. 30-39	8.99	6.77	2.22	190	264
203 Czech Republic	Fem. 40+	7.17	7.53	-0.36	194	327
203 Czech Republic	Male <30	8.77	8.04	0.73	355	27
203 Czech Republic	Male 30-39	11.96	10.87	1.08	291	232
203 Czech Republic	Male 40+	8.77	9.96	-1.20	191	300
246 Finland	Fem. <30	13.00	12.07	0.94	192	44
246 Finland	Fem. 30-39	14.96	15.04	-0.08	159	173
246 Finland	Fem. 40+	15.49	15.41	0.08	253	305
246 Finland	Male <30	12.72	12.20	0.52	262	61
246 Finland	Male 30-39	17.52	18.70	-1.18	222	216
246 Finland	Male 40+	17.89	21.09	-3.20	173	190
276 Germany	Fem. <30	12.37	10.72	1.65	2990	309
276 Germany	Fem. 30-39	16.74	14.07	2.68	2326	1236
276 Germany	Fem. 40+	16.74	15.62	1.13	4220	3034
276 Germany	Male <30	14.51	14.64	-0.13	3747	430
276 Germany	Male 30-39	19.42	20.08	-0.65	3709	2327
276 Germany	Male 40+	20.09	22.77	-2.68	7328	5856
31 Azerbaijan	Fem. <30	6.08	6.81	-0.73	223	59
31 Azerbaijan	Fem. 30-39	9.56	7.12	2.44	75	89
31 Azerbaijan	Fem. 40+	8.14	6.74	1.40	41	72
31 Azerbaijan	Male <30	6.08	8.17	-2.09	349	81
31 Azerbaijan	Male 30-39	11.57	9.66	1.91	110	163
31 Azerbaijan	Male 40+	8.38	8.82	-0.44	61	161
32 Argentina	Fem. <30	6.23	6.23	0.00	2315	410
32 Argentina	Fem. 30-39	8.13	7.79	0.34	1476	995
32 Argentina	Fem. 40+	8.38	9.10	-0.72	671	889
32 Argentina	Male <30	7.87	8.10	-0.23	2441	376
32 Argentina	Male 30-39	11.97	11.53	0.44	1912	1562
32 Argentina	Male 40+	13.52	14.75	-1.23	998	1319
348 Hungary	Fem. <30	5.45			99	7
348 Hungary	Fem. 30-39	7.17	5.92	1.25	70	105

348 Hungary	Fem. 40+	6.46	6.06	0.41	137	232
348 Hungary	Male <30	7.63	5.35	2.28	64	13
348 Hungary	Male 30-39	8.72	7.82	0.90	62	65
348 Hungary	Male 40+	7.64	8.48	-0.85	47	73
356 India	Fem. <30	7.61	6.66	0.95	1173	144
356 India	Fem. 30-39	11.57	11.41	0.16	441	336
356 India	Fem. 40+	13.07	16.61	-3.54	88	95
356 India	Male <30	9.78	9.78	0.00	4039	505
356 India	Male 30-39	15.49	18.59	-3.10	1957	2221
356 India	Male 40+	17.70	19.93	-2.23	313	1001
360 Indonesia	Fem. <30	2.77	2.74	0.03	763	131
360 Indonesia	Fem. 30-39	4.25	3.98	0.27	288	224
360 Indonesia	Fem. 40+	6.39	2.58	3.81	47	92
360 Indonesia	Male <30	3.29	2.92	0.37	1424	262
360 Indonesia	Male 30-39	4.98	3.56	1.42	691	878
360 Indonesia	Male 40+	5.90	3.64	2.25	145	518
398 Kazakhstan	Fem. <30	5.91	6.38	-0.47	1817	696
398 Kazakhstan	Fem. 30-39	7.96	7.17	0.80	548	939
398 Kazakhstan	Fem. 40+	6.52	6.69	-0.17	355	531
398 Kazakhstan	Male <30	6.17	8.03	-1.86	2202	721
398 Kazakhstan	Male 30-39	8.86	9.23	-0.37	521	922
398 Kazakhstan	Male 40+	7.01	7.39	-0.38	299	478
484 Mexico	Fem. <30	4.14	3.20	0.94	632	169
484 Mexico	Fem. 30-39	6.27	4.89	1.38	339	221
484 Mexico	Fem. 40+	6.95	4.61	2.34	89	78
484 Mexico	Male <30	5.56	4.78	0.78	949	342
484 Mexico	Male 30-39	9.20	8.62	0.57	644	638
484 Mexico	Male 40+	12.44	13.43	-1.00	212	376
508 Mozambique	Fem. <30	4.59	6.19	-1.60	99	42
508 Mozambique	Fem. 30-39	5.04	7.69	-2.65	41	52
508 Mozambique	Fem. 40+	5.85			14	9
508 Mozambique	Male <30	5.48	6.99	-1.50	186	62
508 Mozambique	Male 30-39	5.10	7.06	-1.96	91	107
508 Mozambique	Male 40+	4.81	10.89	-6.08	39	56
528 Netherlands	Fem. <30	13.26	14.87	-1.61	6308	655
528 Netherlands	Fem. 30-39	17.90	18.30	-0.41	2447	1760
528 Netherlands	Fem. 40+	17.90	17.85	0.05	3701	3393
528 Netherlands	Male <30	13.69	15.16	-1.48	6271	624
528 Netherlands	Male 30-39	19.30	20.95	-1.64	3510	2487
528 Netherlands	Male 40+	21.37	23.25	-1.88	5121	4905
56 Belgium	Fem. <30	12.69	12.53	0.16	1560	295
56 Belgium	Fem. 30-39	15.64	15.60	0.04	597	716
56 Belgium	Fem. 40+	16.11	16.77	-0.66	615	700
56 Belgium	Male <30	13.78	14.10	-0.32	1443	214
56 Belgium	Male 30-39	17.18	17.50	-0.32	836	768
56 Belgium	Male 40+	18.95	20.80	-1.85	710	888
586 Pakistan	Fem. <30	1.86	2.12	-0.27	68	58
586 Pakistan	Fem. 30-39	1.57	2.12	-0.55	28	80
586 Pakistan	Fem. 40+	1.46	2.44	-0.98	11	32
586 Pakistan	Male <30	1.95	1.69	0.26	77	82
586 Pakistan	Male 30-39	2.59	2.12	0.47	58	217
586 Pakistan	Male 40+	2.37	2.33	0.04	32	244
643 Russian Fed.	Fem. <30	5.12	4.75	0.38	954	316
643 Russian Fed.	Fem. 30-39	7.40	5.12	2.28	409	828
643 Russian Fed.	Fem. 40+	5.45	5.25	0.20	363	750
643 Russian Fed.	Male <30	6.51	6.55	-0.04	934	293
643 Russian Fed.	Male 30-39	7.40	8.02	-0.62	506	720
643 Russian Fed.	Male 40+	7.17	7.21	-0.04	477	672

710 South Africa	Fem. <30	9.62	8.60	1.02	1544	636
710 South Africa	Fem. 30-39	13.58	13.58	0.00	753	903
710 South Africa	Fem. 40+	14.08	15.45	-1.37	393	449
710 South Africa	Male <30	13.58	12.80	0.78	1630	308
710 South Africa	Male 30-39	21.12	22.06	-0.94	870	759
710 South Africa	Male 40+	25.14	24.89	0.25	371	509
716 Zimbabwe	Fem. <30	3.38	2.64	0.74	46	40
716 Zimbabwe	Fem. 30-39		4.23		8	18
716 Zimbabwe	Fem. 40+	6.50	4.28	2.22	25	27
716 Zimbabwe	Male <30	3.64	4.19	-0.55	17	31
716 Zimbabwe	Male 30-39	4.81	5.25	-0.44	23	11
716 Zimbabwe	Male 40+	7.15	8.42	-1.27	11	18
724 Spain	Fem. <30	10.48	8.96	1.53	855	52
724 Spain	Fem. 30-39	13.48	13.39	0.09	865	345
724 Spain	Fem. 40+	14.98	14.31	0.67	319	352
724 Spain	Male <30	11.98	12.43	-0.45	930	45
724 Spain	Male 30-39	16.85	18.80	-1.95	1248	526
724 Spain	Male 40+	18.86	21.87	-3.02	467	739
752 Sweden	Fem. <30	14.98	15.02	-0.04	276	32
752 Sweden	Fem. 30-39	17.72	17.54	0.19	271	375
752 Sweden	Fem. 40+	17.41	18.04	-0.63	310	566
752 Sweden	Male <30	16.04	16.70	-0.67	225	36
752 Sweden	Male 30-39	20.21	20.83	-0.62	315	347
752 Sweden	Male 40+	20.95	22.39	-1.44	245	430
76 Brazil	Fem. <30	3.21	2.79	0.42	4167	859
76 Brazil	Fem. 30-39	4.89	4.03	0.86	1716	1160
76 Brazil	Fem. 40+	5.97	5.93	0.03	581	629
76 Brazil	Male <30	4.19	3.99	0.20	3955	670
76 Brazil	Male 30-39	8.24	8.10	0.14	1932	1366
76 Brazil	Male 40+	11.05	12.75	-1.70	693	1013
804 Ukraine	Fem. <30	4.77	4.29	0.48	3218	1335
804 Ukraine	Fem. 30-39	5.09	4.80	0.29	1085	2203
804 Ukraine	Fem. 40+	4.52	4.53	-0.01	820	1358
804 Ukraine	Male <30	5.06	5.16	-0.10	2113	645
804 Ukraine	Male 30-39	6.52	6.31	0.21	886	1235
804 Ukraine	Male 40+	5.85	5.96	-0.12	698	945
826 United Kingd.	Fem. <30	15.58	14.73	0.85	458	50
826 United Kingd.	Fem. 30-39	21.50	18.69	2.81	274	134
826 United Kingd.	Fem. 40+	17.80	19.35	-1.55	241	178
826 United Kingd.	Male <30	18.00	18.23	-0.22	539	56
826 United Kingd.	Male 30-39	26.56	27.79	-1.23	390	210
826 United Kingd.	Male 40+	22.46	26.26	-3.80	340	314
840 United States	Fem. <30	8.37	7.85	0.52	187	57
840 United States	Fem. 30-39	11.49	10.48	1.01	88	119
840 United States	Fem. 40+	13.49	13.15	0.35	212	163
840 United States	Male <30	13.82	11.55	2.27	225	49
840 United States	Male 30-39	21.10	23.29	-2.19	192	156
840 United States	Male 40+	25.06	28.13	-3.07	256	231
894 Zambia	Fem. <30	2.50	1.78	0.72	63	26
894 Zambia	Fem. 30-39	2.34	1.98	0.35	35	60
894 Zambia	Fem. 40+		2.09		5	42
894 Zambia	Male <30	1.63	1.99	-0.36	74	42
894 Zambia	Male 30-39	2.26	1.88	0.38	50	146
894 Zambia	Male 40+	2.45	1.82	0.63	18	145

Source: WageIndicator data 2010; 2011

Appendix 2 Explanatory note on the WageIndicator surveys

This paper uses survey data of individuals from many countries. The data stem from the continuous, volunteer *WageIndicator* web-survey (www.wageindicator.org). This is an international comparable survey in national languages, posted at the frequently visited *WageIndicator* websites. The survey contains questions about wages, education, occupation, industry, socio-demographics, and alike (Tijdens *et al*, 2010). In 2000, the *WageIndicator* project started as a paper-and-pencil survey for establishing a website with salary information for women's occupations in the Netherlands. By mid 2011, it had developed into an online data collection tool hosted on more than 60 national websites with job-related content, labour law and minimum wage information, and a free and crowd-pulling Salary Check presenting average wages for occupations. The web-survey has a prize incentive; it takes approximately 10 minutes to complete part 1 and 10 minutes for part 2.

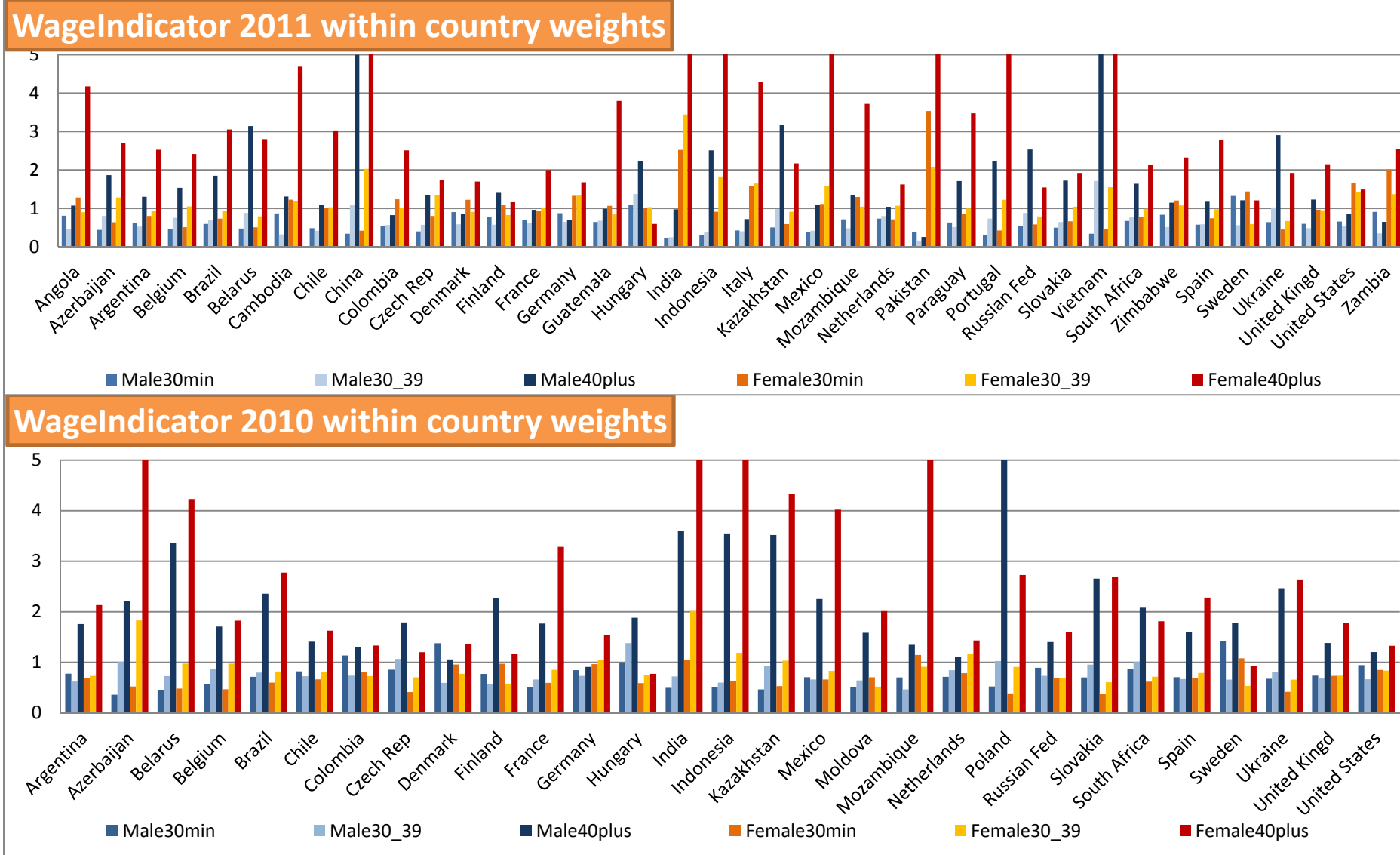
Being a volunteer survey, the data is biased towards those people who have access to Internet and who are inclined to complete the web-survey. Graph 17 shows the weights for 2010 and 2011 for all countries in the dataset, thus more countries than included in this report. The weights reflect the multiplication needed so that the survey sample resembles the labour force at large. It shows for example that in the *WageIndicator* data in Angola in 2011, women aged 40 and over need to be multiplied with 5 in order to resemble their proportion in the labour force of Angola.

To counterbalance the bias in the web-survey WageIndicator Foundation increasingly conducts face-to-face surveys in countries with poor Internet access. In 2010 and 2011 such surveys were conducted in to reveal that particularly women aged 40 and over are underrepresented Cambodia, China, Hungary, Indonesia, Pakistan, and Zambia. The Table shows the number of observations included in the analyses in this report.

Table 28 Total number of observations in the WageIndicator dataset for the countries addressed in this report (only cases with valid wage information are included here), underlined numbers are indicating the paper surveys

Country	2010	2011	Total	Country	2010	2011	Total
Argentina	9541	6688	16229	Mexico	4004	946	4950
Azerbaijan	564	984	1548	Mozambique	112	696	808
Belarus	9867	16934	26801	Netherlands	24439	19086	43525
Belgium	6418	3698	10116	Pakistan	11	<u>976</u>	987
Brazil	13046	7394	20440	Russian Fed.	5594	2091	7685
Chile	1176	1225	2401	South Africa	4659	4920	9579
China	5	<u>7553</u>	7558	Spain	4243	2943	7186
Colombia	2801	783	3584	Sweden	2330	1242	3572
Czech Republic	1999	948	2947	Ukraine	2245	14507	16752
Finland	1295	1093	2388	United Kingdom	2133	1254	3387
Germany	22050	17886	39936	United States	1629	546	2175
Hungary	<u>3246</u>	433	3679	Zambia	48	<u>699</u>	747
India	6702	6257	12959	Zimbabwe	54	228	282
Indonesia	<u>2455</u>	3224	5679				
Kazakhstan	2350	7953	10303	Total	135016	133187	268203

Graph 17 Within country weights for the 2010 and 2011 WageIndicator data, including the web-survey and the face-to-face survey data jointly.



Source: WageIndicator data 2010; 2011

