

Postanna
Зайнятість
Emplois চাক
arbeiten 仕事
চাকরীগুলি
Emprego
KAZI ڪم
وظائف
Casa
Trunca
anna
сияс
EMPREGOS
Nitsumo
Emplois
Em
Werk
नौकरियाँ
Arbeitsplätze
is
Cong viêc
praca
Em
Зан
praca
Занятость
Darbo vietos
Banen

**BACKGROUND PAPER FOR THE
WORLD DEVELOPMENT REPORT 2013**

The Occupational Wages around the World (OWW) Database: Update for 1983- 2008

Remco H. Oostendorp

VU University Amsterdam

Tinbergen Institute

Amsterdam Institute for International Development

world development report

2013 

Acknowledgements

We gratefully acknowledge the financial support for this research from the VU University Amsterdam, the ILO and the World Bank. We also like to thank Davin Chor and Fujin Zhou for their assistance during the Herculean task of cleaning an earlier version of the database.

The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors. They do not necessarily represent the views of the World Development Report 2013 team, the World Bank and its affiliated organizations, or those of the Executive Directors of the World Bank or the governments they represent.

Introduction

This document describes the standardization procedure for the 1983-2008 ILO October Inquiry data. Earlier standardization procedures were those applied to the 1983-2003 data (Oostendorp 2005) and the 1983-1998 data (Freeman and Oostendorp 2000). The current standardization procedure for the 1983-2008 ILO October Inquiry data expands the earlier databases by including the most recent data available on the ILO website (<http://laborsta.ilo.org>) as well as data for 1983-1984 that are only available in hardcopy format (see below). The wages are standardized on both an hourly and monthly basis unlike the two previous standardizations which were on a monthly basis only.

We will discuss the main characteristics of the 1983-2008 ILO October Inquiry database first, and next we give a detailed account of each of the steps of the standardization procedure.

The 1983-2008 ILO October Inquiry data

The ILO October Inquiry is the most far-ranging survey of wages by occupation around the world. It was started initially in 1924 in 15 countries (or rather capital cities) for 18 occupations, and it has been conducted on an annual basis up till 2008.¹ Over time the number of occupations covered was increased in 1929 (30 occupations), 1951 (41 occupations), 1953 (48 occupations) and finally in 1983 (161 occupations) (see Freeman and Oostendorp 2000).²

The 1983-2008 ILO October Inquiry is mostly available in electronic format (<http://laborsta.ilo.org>), except for data for 45 occupations which are only available in hardcopy format.³ We have therefore scanned the 1983-1984 ILO October Inquiry data which was not available in electronic format, creating a complete electronic version of the ILO October Inquiry for the 1983-2008 period.

The electronic version of the ILO October Inquiry poses a number of challenges. First, many of the pay observations have been reported throughout the period with additional footnotes (contained in the variable 'NOTES'), such as "Average per hour", "Auckland", "Both sexes" or "Large hotels". We have coded these footnotes as much as possible, using the variables y0 (year), y1 (country code), y2 (city or region code), y3 (industry code), y4 (occupation code), y6 (pay or hours of work concept code such as wages versus earnings, and normal versus average hours of work), y7 (sex code), y8 (range code), y9 (period concept code such as monthly versus hourly pay) and y10 (averaging concept code such as mean versus minimum pay) (see Appendix A for the coding of the variables that were ultimately retained in the standardized data set).

Second, the electronic version available on <http://laborsta.ilo.org> has a variable (TIME) which indicates both the time period as well as the averaging concept used (for instance 'Per Month. Minimum' or 'Per Week. Average'). It is straightforward to recode this variable separating the period and averaging concept by using two variables, one indicating the time period (y9) and

¹ The ILO October Inquiry is currently being revised and therefore more recent data are not yet available.

² The ILO actually asks for information on 159 occupations since 1983 but it differentiates occupation 139, executives in the government into three sectors; national, regional or provincial, and local governments.

³ The Bulletin of Labour Statistics, issues 1984-2 and 1985-2. Actually the hardcopy data is for the 48 occupations that were reported since 1953 before the extension to 161 occupations in 1983. However, only 45 of the 48 occupations were retained among the 161 reported occupations since 1983.

another indicating the averaging concept (y10). However, it is more problematic to note that in the electronic version of the ILO October Inquiry the TIME variable is time-invariant as it has been reported for each country and each occupation but not for each year. In the published version of the ILO October Inquiry,⁴ this variable does change over time and has been reported for each year (in the heading of the column). Therefore, we have consulted all issues of the published version of the ILO October Inquiry to make the variables y9 and y10 time-variant.

Third, the variable indicating the footnote ('NOTES') sometimes indicates whether the data are 'Minimum' or 'Maximum'. However, this is insufficient to determine whether the data refer to minimum respectively maximum wages, or to a range of, say, average wages. For instance, the reported minimum wage for a miner in Belgium in 1993 is 387.34-444.22. And the reported minimum-maximum wage for an automobile mechanic in Barbados in 1993 is 306-333. It is clear that for Belgium a range of (minimum) wages are reported, while for Barbados the minimum and maximum wage are reported respectively. Nevertheless, in the electronic version of the ILO October Inquiry they are reported in exactly the same manner—the first wage is reported as 'Minimum' and the second wage as 'Maximum'. Because of this ambiguity, we have consulted all issues of the published version again to verify whether 'Minimum' and 'Maximum' refers to minimum and maximum wages or rather a range of wages (which could be otherwise average, minimum, etc. wages).⁵

Figure 1 reports the number of countries that report pay data for each year and all years cumulatively for at least one of the 161 occupations in the 1983-2008 period. The number of countries that report pay data for at least one occupation varies between 26 and 78 countries in the years 1983-2008. The number of countries reporting for 2008 is rather low at 26 and this may be partly due to some countries having reported late. However, there is also a clear downward trend in the number of countries reporting. In terms of cumulative number of countries reporting, a total number of 171 countries reported pay at least one time in this period.

⁴ The Bulletin of Labour Statistics (issues 1984-2 and 1985-2), Bulletin of Labour Statistics. October Inquiry Results (1986-1991), Statistic on Occupational Wages and Hours of Work and on Food Prices. October Inquiry Results. Special Supplement to the Bulletin of Labour Statistics (1992-2009).

⁵ It can be noted that in previous releases of the electronic data a variable was included to indicate whether the data was reported as a 'range' (apart from whether it applied to minimum, average or other types of pay).

Figure 1. Number of countries reporting in the 1983-2008 ILO October Inquiry

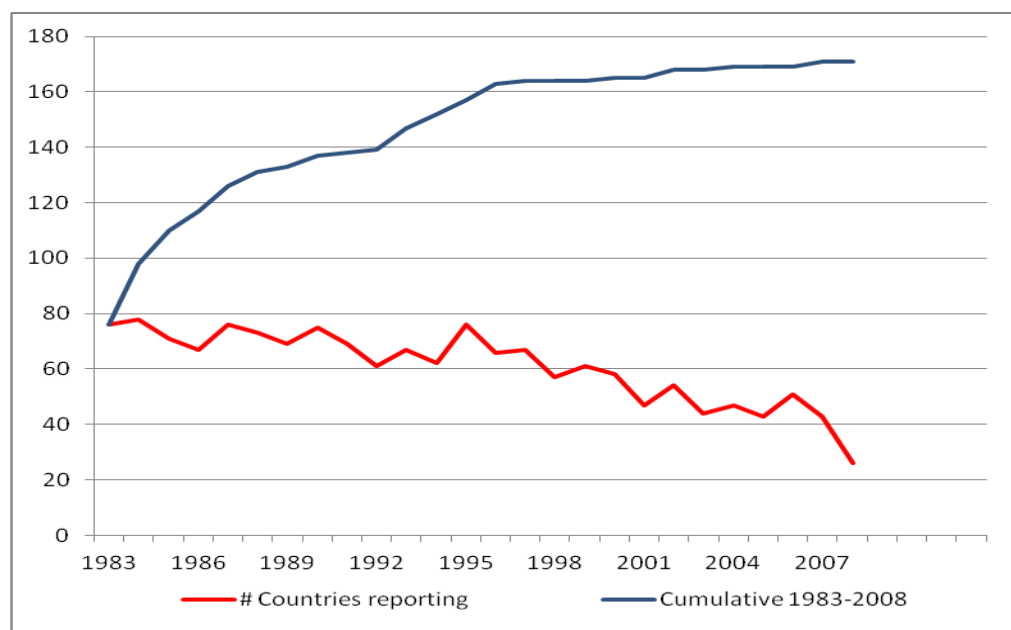


Table 1 below gives a detailed description of the information in the 1983-2008 ILO October Inquiry. It should be noted that these numbers reflect the raw data before extensive cleaning (the data cleaning procedure is described below). Also if a range has been reported for pay, we found the midpoint of the range and use it as the reported pay for the category.

Panel A gives information on the size of the samples. It shows the maximum conceivable number of observations that the Inquiry would contain if each country reported a single pay statistic for each occupation yearly: over 715,000 pieces of data for the 1983-2008 period.⁶ The actual number of observations is smaller, largely because most countries do not report statistics in many years. On average, countries report wages for 9.3 years out of 26 possible years for the period 1983-2008. This implies that about two-thirds of country year observations are empty. In addition, countries do not report data for every occupation in the years when they do report. The bottom line is that there are 125,811 country x year x occupation cells with wage data in the 1983-2008 data files.

However, many countries report more than one wage for a single occupation. Some give hourly wage rates **and** average earnings. Others give wages for men **and** wages for women. Others give wages for one gender and for both genders. Nearly one-half of the observations (51.4%) contain multiple wage figures. While this will help us to calibrate the data into a standardized format, it makes the raw data difficult to use in cross-country comparisons, particularly since different countries report pay differently. Including multiple wages, there are 241,240 pieces of data for the 1983-2008 period.

⁶ The maximum is the multiplicand of the number of countries (171) times the number of occupations (161) times the number of years (26).

Panel B shows the frequency distribution of countries by the number of occupations they report; and the frequency distribution of occupations by the number of countries that report statistics on them. The distribution of countries by number of occupations shows that in most countries there are sufficient occupations with wage data to get a good measure of the overall wage structure. It also shows, however, that different countries report on different numbers of occupations, which creates problems in comparing wage structures across countries. The distribution of occupations by country shows that many occupations have wage data for large numbers of countries, which will allow us to contrast labor costs and living standards for workers in the same occupation around the world.

Panel C shows the diverse way in which countries report wages. Most countries report wage rates, presumably from employer surveys or collective bargaining contracts or legislated pay schedules. However, many report earnings, which may come from household surveys. For the 1983-2008 period, most pay statistics are in the form of means but 16 percent are reported as minimum wages, some from collective bargaining contracts. Some countries report maximum wages. Others give prevailing wages. The US reports median weekly earnings for most occupations (from individual reports on the Current Population Survey).

The time period to which the pay refers also varies, with the most common period being the month, followed by the hour, but some countries report weekly pay, others give daily rates for some occupations, and so on. There is also variation by gender, with forty percent of the observations relating to male workers, 38 percent to all workers, and 23 percent to female workers.

Finally, in terms of coverage, most pay figures in the 1983-2008 period are for the whole country (84%). When the country coverage is for only part of the country, the reported pay is virtually always for the dominant economic regions where most of the (formal) employment is located. This implies that the pay figures may not be that different from those for the entire country. Also if they are actually different, this may be less of an issue if one analyzes within-country wage inequality.

Table 1. Types of observations contained in the October Inquiry computer files, 1983-2008

	No. of observations
A. SAMPLE SIZE	
Maximum conceivable observations (excl multiple observations)	715,806
Missing because country did not report in given year	460,782
Missing because occupation missing in year country reported	129,213
Actual year/country/occupation observations (excl multiple observations)	125,811
Observations with multiple figures	64,697
Multiple figures	115,429
Total, including all multiple observations	241,240

B. COUNTRIES AND OCCUPATIONS WITH AT LEAST ONE REPORTED WAGE STATISTIC

Countries with reported wage statistic for different numbers of occupations

No. of occupations	No. of countries (total=171)
<=29	14
30-59	17
60-79	16
80-99	15
100-119	33
120-139	23
140+	53

Occupations with one reported wage statistic for different numbers of countries

No. of countries reporting on occupations	No. of occs (total=161)
<=79	22
80-99	30
100-119	39
120-139	46
140+	24

C. ACTUAL OBSERVATIONS

Pay concept (y6)

Wage rates	142,163
Earnings	99,077

Averaging concept (y10)

Mean	182,682
Minimum	38,358
Maximum	5,640
Average of min-max	21
Prevailing	7,193
Median	6,821
Missing	515

Period concept (y9)

Monthly	155,079
Hourly ¹	43,325

Daily	10,541
Weekly	27,247
Per 8 days	4
Per 12 days	32
Fortnight	1,299
Per 15 days	56
Annual	3,592
Other	44
Missing	21
Sex (y7)	
Male workers	95,349
Male and female workers	54,913
Female workers	90,978
Coverage (y2)	
Whole country	202,435
Part of country	38,805

Notes: Tabulated from the ILO October Inquiry computer files, 1983-2008, and from the hardcopy tables, 1983-1984. The total number of countries is 171.

¹ The hourly figures under “period concept” include a small number of observations which concern hours paid for, and another small number which concern wages relating to hours worked.

Standardization procedure for the 1983-2008 ILO October Inquiry data

Because of the nonstandard nature of the database we use a standardization procedure to make the data comparable across occupations, countries and time. This procedure is similar to the standardization procedure that was applied to the 1983-2003 ILO October Inquiry (Oostendorp 2005). In the 1983-2003 standardization procedure, the data were normalized as mean monthly male wages. For the 1983-2008 standardization, the data will be standardized both on an hourly as well as a monthly basis. Also the data will be standardized for adult wages (i.e. the mean wage for both sexes) rather than male wages. In the 1983-2003 standardization procedure it was noted that the data are most frequently reported in terms of male wages and hence it was chosen as the basis for the standardization. However, the frequency of wages reported in terms of both sexes is only slightly lower (see Table 1). Standardization in terms of adult wages is now preferred, because adult wages are more representative of the actual wages earned by all workers. The remainder of this section provides a detailed account of each of the steps in the standardization procedure.

Step 1. Data cleaning of hours of work data

Initially, the data for hours of work were inspected for whether they were out of bound and/or whether there was a typo in the raw data. In a number of cases the reported hours of work per

week did indeed exceed the total of 168 hours in the week and this was due to an incorrect coding of the period concept (for instance monthly hours were reported as weekly hours).⁷ Also a number of obvious typos in the hours of work data was found and these were corrected.

No further cleaning of the hours of work data was done, because measurement error in hours of work and pay figures often appear to be negatively correlated, with low (high) reported hours of work appearing in combination with high (low) hourly pay figures. Hence, in these cases the implied actual monthly wages may still be reasonable. Also apparently low numbers for hours of work may reflect gender differences (with much lower hours of work reported for female workers in some instances) or the difference between normal hours of work and the hours actually worked. Therefore the more extensive cleaning was applied to the derived hourly and monthly wages (see step 3 below)

Step 2. Construction of hourly and monthly data

Hourly data

The wage observations have been recalculated on a hourly basis using the reported (and cleaned) hours of work data from step 1. In case hours of work have been reported using the same period concept as wages (for instance both are reported per week or per day), this is straightforward. However, in a number of cases dimensional analysis was applied if the hours of work were reported but for a different time period than for wages.⁸ For instance, if wages were reported on a monthly basis and hours of work on a weekly basis, then the hourly wages were calculated as $wages / (hours * 52 / 12)$.

However, the number of hours was not always reported for the given occupation (y4), pay concept (y6), sex (y7), year (y0), city/region (y2) and country (y1). In this case the next best alternative hours of work was assigned. The following table reports the different hours of work data that have been used successively in lexicographic order for the 1983-2008 data.

⁷ In case the reported hours of work were not on a weekly basis, weekly hours of work were calculated through dimensional analysis (for instance by dividing reported monthly hours of work by 52/12). Only reported hours of work on a daily basis could not be converted but no obvious problems with these data were found.

⁸ By dimensional analysis we mean simply changing the time units in well-determined ways, such as obtaining weekly pay by dividing annual pay by 52.

Table 2. Lexicographic assignment of hours of work for 1983-2008 data

Lexicographic order	Hours of work assigned from
1	same occupation (y4), pay concept (y6), sex (y7), year (y0) city/region (y2) and country (y1)
2	average of any city/region (y2) for given occupation (y4), pay concept (y6), sex (y7), year (y0) and country (y1)
3	average of any sex (y7) for given occupation (y4), pay concept (y6), year (y0), city/region (y2) and country (y1)
5	other pay concept (y6) for given occupation (y4), sex (y7), year (y0), city/region (y2) and country (y1)
4	closest other year (y0) for given occupation (y4), pay concept (y6), sex (y7), year (y0), city/region (y2) and country (y1)
6	average of any occupation (y4) for given pay concept (y6), sex (y7), year (y0), city/region (y2) and country (y1)
7	average of any occupation/pay concept/sex/year/city/region (y4, y6, y7, y0, y2) for given country (y1)
8	average of any country/ pay concept/sex/year/city/region (y0,y1,y2,y6,y7) for given occupation (y4)

The above lexicographic ordering has been chosen because the variation in hours of work in the 1983-2008 period can be attributed in decreasing order of magnitude to variation in city/region (y2), sex (y7), pay concept (y6), year (y0) and occupation (y4). In the few remaining cases where the lexicographic assignment rules 1 to 6 did not yield an estimate of hours of work, the country-average (assignment rule 7) or, if not available, the world-average of hours of work by occupation (assignment rule 8) was used.

Monthly data

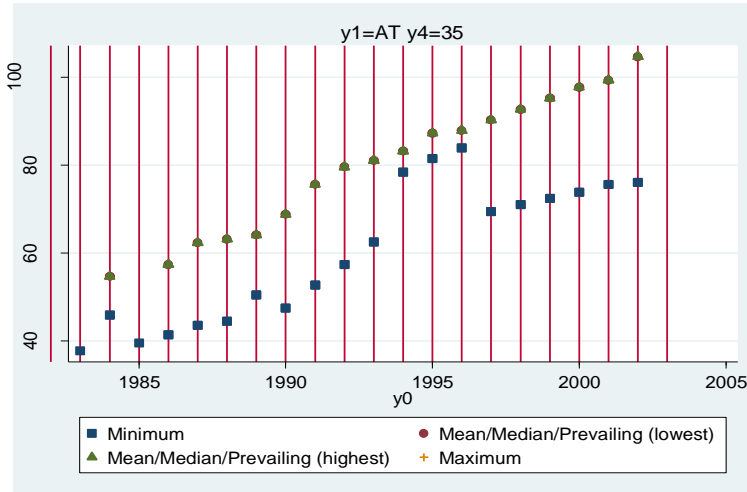
The same procedure has been applied to construct monthly wage data. However, wage observations that are reported on a daily basis could not be converted into monthly pay figures, because the number of working days per month is not reported. Therefore, the observations are either on a monthly or daily basis, and data correction factors for daily wages will need to be estimated to convert them into monthly pay figures (see step 4 below).

Step 3. Data cleaning of wage data

The data cleaning of the wage data was undertaken in five different steps. First, a number of wage observations were removed from the data set because their exact data type was unspecified or too idiosyncratic. For the period concept, wage observations with a missing or 'other' period concept (such as per shift, per piece) were dropped. For the averaging concept, wage

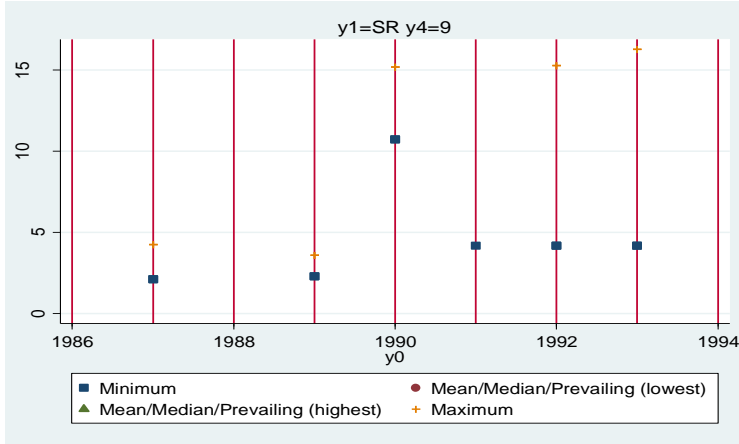
observations with missing averaging concept were also dropped. We also removed the wage observations that were reported as the average of minimum and maximum wages because there are only few of them (see Table 1) and it is not a common averaging concept.

Second, data plots with hourly wages (in local currency units or in US\$) on the vertical axis and year of reporting on the horizontal axis for each country x occupation pair were inspected. The following figure shows one example of a plot for the occupation “Shoe sewer (machine)” (y4=35) for Austria in LCU (note that the pay is converted into Austrian Shillings from 1999 when the Euro was introduced).

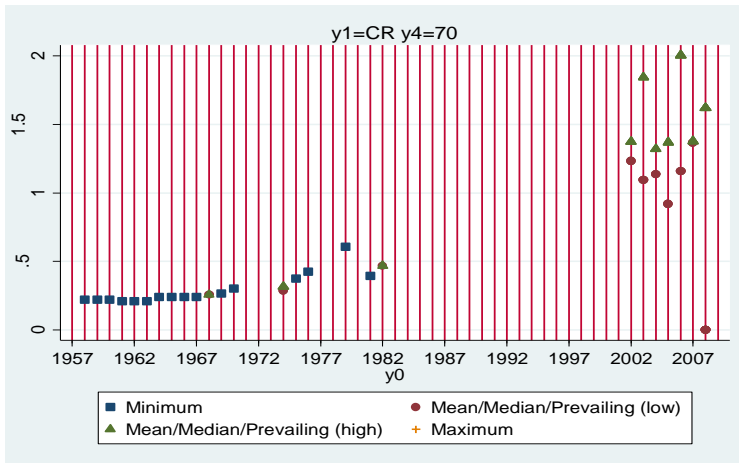


The plot clearly shows that the wage observations for 1984 and 1994-96 are potential outliers. Further inspection of the raw data showed that this problem was not caused by variation in the averaging concept (e.g. maximum wage reported instead of minimum wage), (obvious) miscoding in the period concept (e.g. annual wages reported instead of monthly wages), gender wage differences, or differences in location (i.e. regions within the country) from which wages were reported. In this case it was therefore decided to drop these outliers in order to preserve the obvious time pattern in the data.

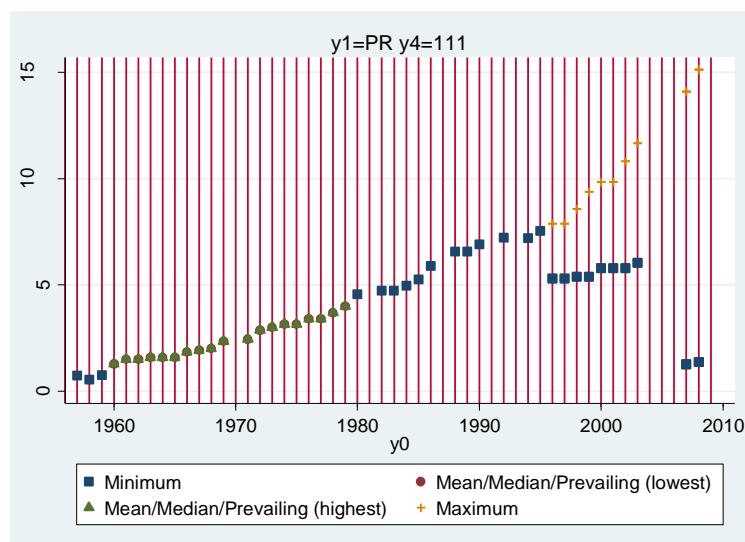
The following figure shows a similar plot for the occupation “Deep-sea fisherman” (y4=9) for Suriname in LCU. The plot clearly shows that the hourly wages for 1990 are potential outliers, and further inspection of the raw data showed that this was due to an obvious miscoding of the period concept for 1990 (the raw wages were reported as weekly rather than monthly). Therefore the period concept was recorded to monthly wages for 1990 and the obvious time pattern in the constructed hourly wages was restored.



As final example we show a figure for the occupation “labourer” in manufacture of machinery (except electrical) (y4=70) for Costa Rica. Because this occupation was also reported in the 1953-1982 period, we plot the hourly wage figures in US\$ rather than LCU for the entire 1953-2008 period. The observation for 2008 is a potential outlier, and further inspection of the raw data shows that this is caused by a typo leading to a misplaced digit.



In total 18,302 country x occupation pairs were inspected. For a few country x occupation pairs it was obvious that there was no logical time pattern in the reported data and all the observations of the country x occupation pair were deleted from the database. The following plot for “Motor bus driver” (y4=111) for Puerto Rico illustrates this case. Here only minimum wages are reported for the period 1980-1995, but both minimum wages and maximum wages are reported for the 1996-2008 period. However, there is no logical time pattern in the reported minimum wage, even accounting for the fact that the low figures in 2007 and 2008 are probably due to a misplaced digit. One may speculate that the reported wages for the period 1980-1995 are actually maximum wages, creating a smooth time pattern in maximum wages for the period 1980-2008. Or else they could be mean/prevailing (no median wages were reported), creating a smooth time pattern in mean/prevailing wages for the 1960-1995 period. Hence, whatever is true is not obvious here, and it was therefore decided to drop all the observations from this country x occupation pair.



As a third step in the cleaning procedure, hourly wages were inspected across occupations for each country x year pair. In case occupational wages were a tenfold smaller or a tenfold larger than the average occupational wage within a country x year pair, then this wage observation was further checked and corrected if necessary.

Fourth, the average hourly wage within a country x year pair was compared to GDP per capita for that country and year. In case the ratio of the average wage and GDP per capita was very low or high (in the lower or upper 1% of the distribution), then these wage observations were further checked and corrected if necessary.

In the fifth and final step of the cleaning procedure the monthly wages were also cleaned. In principle hourly and monthly wages will show the same time patterns unless the hours of work changed significantly for a given country-occupation pair across time. We calculated the range in hours of work for each country-occupation pair and repeated the second step of the cleaning procedure but now for monthly wages in case the range in hours of work standardized by the mean hours of work exceeded 0.25 (2,069 country-occupation pairs).⁹

As a consequence of the above cleaning steps, the number of year/country/occupation observations dropped from 125,811 (Table 1) to 125,018 (a 0.6% reduction). In the cleaned dataset, there are two pay concepts (58.9% wage rates, 41.1% earnings), five averaging concepts (76.0% mean, 15.8% minimum, 2.3% maximum, 3.0% prevailing, 2.8% median) and 3 sex concepts (39.5% male, 37.7% male and female, 22.8% female). In the following section we discuss the procedure to standardize these data with these different concepts.

Step 4. Estimation of data type correction factors

The next step is to estimate data correction factors for the 1983-2008 ILO October Inquiry data following the procedure discussed in Freeman and Oostendorp (2000) which was further improved in Oostendorp (2005). Note first that because data concepts can occur in combination with each other, this gives potentially 30 data correction factors for hourly wages: 2 types of pay

⁹ We multiplied all daily wages by 25 to make them comparable with monthly wages during the cleaning procedure.

concepts (wage and earnings), 5 types of averaging concepts (mean, minimum, maximum, prevailing and median) and 3 types of sex concepts (male, female, both sexes) ($2 \times 5 \times 3 = 30$). For monthly wages we also have 2 types of period concepts (monthly and daily) and therefore there will be 60 potential data correction factors. Furthermore, the impact on wages of each of these (combinations of) data concepts could vary across countries (and even across regions within countries), occupations, and years. Hence, there are a large number of potential correction factors that need to be estimated.

This problem of heterogeneity of the data correction factors was discussed in Freeman and Oostendorp (2000). It was noted that the variation in the October Inquiry is too 'thin' to estimate all potential data correction factors for all data types and that it is necessary to simplify the procedure. Also here we will assume that the different data types affect wages separately rather than interactively (reducing the number of combinations of data concepts from 30 to 10 for hourly wages and 60 to 12 for monthly wages). Also we will not estimate data correction factors that vary across occupation, assuming for instance that the gender wage gap is constant across occupations within a country.¹⁰ The reason we do make these simplifying assumptions is that we think that the largest source of variation in the data correction factors can be found across countries rather than across occupations.

In Freeman and Oostendorp (2000, 2001) data correction factors were estimated that varied by region or income rank of the country but not by country. In Oostendorp (2005) *country-specific* data correction factors were estimated as much as possible. Because data correction factors turned out to be highly variable across countries, this country-specific standardization procedure can be seen as an important refinement of the original procedure. Apart from the introduction of country-specific data correction factors, also country-specific occupational dummies were introduced to allow the occupational wage structure or ranking to vary across countries. Therefore we will follow the same procedure as in Oostendorp (2005) to standardize the data with country-specific data correction factors and occupational wage structures, but we will impose more plausibility checks on the estimated correction factors (see below).

A number of issues need to be addressed when estimating country-specific data correction factors. First, for a number of countries some or none of the data correction factors can be estimated because they are not identified for lack of variation in the data at the country level. If wages in one country are only reported as minimum wages, then it will not be possible to estimate the average wage in this country. Or if average wages are only reported for female workers, and prevailing wages for male workers, then it is not possible to identify separately the data correction factors for the averaging and sex concept. Second, there might be variation in the data but some of the data types are reported sparsely. For instance in some countries wages are mostly reported as minimum wages and only in a few instances as average wages. Third, the estimated data correction factor may be implausible. If wages have been reported as median wages in some instances, and if the estimated data correction factor for the averaging concept implies that median wages are higher than average wages, then this is not plausible.

Taking these issues into account, we therefore distinguish between three types of standard(ized) wages. First, there are wages that are reported in a standard format and that do not need to be

¹⁰ See Oostendorp (2009) on the variation of the gender wage gap across occupations and time.

standardized. The standard format is here defined as mean hourly or monthly wage rates for adult workers. Second, there are wages that are reported at least partly in non-standard format and for which plausible data country-specific correction factors can be identified on non-sparse data types. The definition of non-sparse data types is arbitrary and we have chosen as cut-off point at least 10 wage observations of the given data type. Third, there are wages that are reported at least partly in non-standard format for which no plausible country-specific estimates on non-sparse data types for all correction factors can be identified. In this case we substitute the estimated data correction factors for the pooled sample of all countries for the correction factors that could not be estimated plausibly on non-sparse data for a given country.

We have applied the following rules to determine whether an estimated data correction factor is plausible: (1) minimum pay should be below average pay, (2) maximum pay should be above average pay, (3) median pay should be below average pay, (4) prevailing wages should be within 25% of average pay, (5) earnings should be above wages, and (6) the number of working days per month is at least 20 and at most 30.4 days (the average number of days in a month).¹¹ If any of the estimated data correction factors is deemed implausible according to the above rules, then it is replaced by the estimated data correction factor for the pooled sample of all countries and the remaining data corrections factors were reestimated.¹²

Next we applied two additional rules taking into account that the reestimated data correction factor for both sexes should be a weighted average of the data correction factors for males and females and that female wages are typically lower than male wages. In particular, if both female and male wages are estimated to be below the adult wages (wages for both sexes), then the (implausible) negative data correction factor for male wages (relative to adult wages) is set equal to zero (which would be a lower bound). And if both female and male wages are estimated to be above adult wages, then the (implausible) positive data correction factor for female wages (relative to wages for both sexes) is set equal to zero (which would be an upper bound).

We also distinguish a fourth type of standard(ized) wage namely wages which are corrected using exclusively the estimated data correction factors for the pooled sample of all countries (hence not country-specific). This type of standardized wages corresponds to the standardization variant 2 in Freeman and Oostendorp (2000, Table A.1) and is therefore included for comparison.

It should be noted that for each of the standardized data there is an issue of how to treat multiple wage observations within a given country, occupation, and year. Countries often report wages in different format (for instance male *and* female wages or for different regions) and therefore we have often multiple estimated standard wages for a given country, occupation and year. Following Freeman and Oostendorp (2000) and Oostendorp (2005), we use two types of weighting schemes. First, we use uniform weighting which gives an equal weight of the reciprocal of the number of wage observations reported within a country, occupation and year.

¹¹ In Oostendorp (2005) only the following plausibility checks were made: (1) number of working days per month more than 31, (2) minimum wage more than average wage, (3) prevailing wage deviates from average wage by more than 25%, and (4) maximum wage less than average wage.

¹² For a few countries the data correction factors for minimum or maximum wages became implausible after reestimation. In these instances we replaced the implausible reestimated data correction factors by the estimated data correction factors for the pooled sample (without reestimating the remaining data correction factors again).

Second, we use lexicographic weighting, which gives weight equal to one to the wage observation that is reported in standard format and zero to others.¹³ If no standard wage is reported, then uniform weights are assigned. It can be shown that lexicographic weighting is most efficient if there is much uncertainty in the data type correction terms and uniform weighting is most efficient if there is much measurement error in the reported wage data. Table 4 summarizes the different standardized data that we have calculated.

Table 4. Sources of data for different types of standardized data

	type 1	type 2	type 3	type 4
data reported in standard format	yes	yes	yes	yes
data corrected with country-specific correction factors	no	yes	yes	no
data corrected with average correction factors	no	no	yes	yes

Tables B1 and B2 in Appendix B report the estimated data correcting factors for respectively hourly and monthly wages for the different countries in the 1983-2008 ILO October Inquiry. Naturally no correction factor was estimated for data types that were not reported (indicated by a dot). Correction factors in italics are imputed data correction factors, either because the country-specific correction factor could not be estimated, the data type was sparsely reported, or because the estimate was implausible.

We have not attempted to estimate data correction factors for the coverage of the wage data to estimate the difference in wages reported for the whole country and for part of the country. The reason for this omission is that regional coverage varies mostly across time, and therefore its impact on wages is mostly unidentified.

Because the data correction factors were estimated for *log* wages, they indicate that the reported wages of the corresponding data type deviate from the standard data type by the factor $\exp(\text{estimated data correction factor})$ or by $(\exp(\text{estimated data correction factor})-1) \times 100\%$.

As an example, the first row of Table B1 shows that for Antigua and Barbuda ($y1=AG$) it is estimated that hourly earnings are 5 percent higher than wage rates, that males earn 3 percent more than adult workers (both sexes) while female workers earn 5 percent less, that minimum wages are 27 percent below average wages, that prevailing wages are 1 percent lower than average wages, and that maximum wages are 30 percent higher than average wages in the 1983-2008 period. For Antigua and Barbuda all data correction factors could be estimated, but for instance for Anguilla ($y1=AI$, see the second row of Table B1) only the data correction factor for female wages could be plausibly estimated. The estimated data correction factor for male wages was negative and therefore implausible (given that the estimated data correction factor for female wages was also negative) and set equal to zero (and in italics). The data correction factors for minimum, prevailing and maximum wages could not be estimated because of lack of variation in

¹³ In case there are multiple observations for wages in the standard format (this is possible if mean hourly or monthly wage rates for adult workers have been reported for different cities/regions within a country), we use lexicographic weighting for these standard wage observations as well – giving a weight equal to one to the standard wage that has been reported for the entire country and zero to the other standard wages. In case none of the standard wages have been reported for the entire country, we use uniform weighting for the standard wages with weights equal to the reciprocal of the number of standard wage observations reported within a country, occupation and year.

the data and were set equal to the data correction factors as estimated across all countries is reported (in italics).

It is clear that the estimated correction factors vary widely across countries, underlining the need for estimating country-specific correction factors unlike in Freeman and Oostendorp (2000, 2001).

The standardized data

Appendix A provides the codes for the variables in the standardized data set. The standardized data set includes wage observations both in local currency units (LCUs) and in US dollars. Also the dataset includes a conversion factor for countries that have revalued their currency (e.g. because of hyperinflation) or which have introduced a new currency in the 1983-2008 period. For instance, for countries that have adopted the Euro, a conversion factor is included which can be used to multiply the wage observations in LCUs to create a smooth series in Euros throughout the 1983-2008 period.

The means, standard deviation, minimum and maximum of the standardized data of four types is reported in Panels A and B (respectively hourly and monthly wages) in Table 5. The reported numbers are for lexicographic weighting but the numbers are virtually the same if uniform weighting is applied.

The first type of standardized data consists of only those wage observations that have been reported in the standard format.¹⁴ Panels A and B show that there are around 24,000 standard hourly and monthly wage observations (in 124 countries) with mean wage rates equal to 4.45 US \$ respectively 739 US\$.

The second type of standardized data also includes the wages that could be corrected with (only) country-specific data correction factors. This increases the number of wage observations to around 65,000 and 55,000 observations (in 129 countries) for respectively hourly and monthly wages, with mean wage rates equal to 4.86 US \$ respectively 903 US\$.

¹⁴ After wages were converted onto an hourly or monthly basis as described in step 2 of the standardization procedure. The smaller number of standard observations for monthly wages reflects the fact that wages reported on a daily basis could not be converted on a monthly basis because the number of days worked per week (or, say, month) is not known.

Table 5. Descriptive statistics of standardized data (lexicographic weighting)

	Number of observations	Mean wage (in US \$)	Standard deviation	Minimum	Maximum
Panel A: Hourly wages					
type 1	24,620	4.45	6.35	0.03	124.52
type 2	65,502	4.86	6.54	0.02	124.52
type 3	125,018	4.88	6.70	0.02	205.39
type 4	125,018	4.87	6.63	0.02	195.38

Panel B: Monthly wages					
type 1	24,087	739.48	983.49	6.36	21583.96
type 2	55,608	902.63	1119.25	4.42	21583.96
type 3	125,018	821.45	1085.52	3.02	27625.98
type 4	125,018	821.59	1073.47	3.02	26157.25

Note: the mean wages in US \$ have been calculated on slightly smaller number of observations because of non-available exchange rates (for hourly respectively monthly wages: 23,641 and 23,108 for type 1, 63,989 and 54,095 for type 2, and 123,464 and 123,464 for types 3 and 4;).

The third type of standardized data also includes wage observations that could only be corrected using average (non-country-specific) data correction factors (next to country-specific data correction factors). This gives around 125,000 hourly and monthly wage observations (in 171 countries) with mean hourly and monthly wages of 4.88 US \$ respectively 821 US \$. The fourth and last type of standardized data is based on average data correction factors which gives also around 125,000 hourly and monthly wage observations with mean hourly and monthly wages of 4.87 US \$ respectively 822 US\$.

The following table gives the pair-wise correlations of the four types of standardized wages across all countries / occupations / years for hourly wages.

Table 6. Pair-wise correlations of standardized hourly wages.

	type 1	type 2 –wu	type 3 –wu	type 4 –wu	type 2 –wl	type 3 –wl	type 4 –wl
type 1	1.0000						
type 2 –wu	0.9998	1.0000					
type 3 –wu	0.9998	1.0000	1.0000				
type 4 –wu	0.9997	0.9999	0.9999	1.0000			
type 2 –wl	1.0000	0.9998	0.9998	0.9997	1.0000		
type 3 –wl	1.0000	0.9998	0.9998	0.9997	1.0000	1.0000	
type 4 –wl	1.0000	0.9998	0.9998	0.9997	1.0000	1.0000	1.0000

Note: wu = uniform weighting, wl = lexicographic weighting.

The above table shows that the different standardization methods give similar results, with correlations above 0.99. Similar strong correlations are found between wages converted to US\$ and for monthly wages. This is reassuring as a high correlation suggests that the choice of the exact standardization procedure has little effect on the outcome.

Tables C1 and C2 in appendix C summarize the data for each country and year for respectively hourly and monthly wages. The reported wages are expressed in US \$ and based on the type 3 standardization. In a few instances we were unable to transform the wages in US \$ because of missing exchange rates in the IMF IFS (indicated by *). It should be noted that part of the reason why average wages vary across time within a country is that wages have been reported for different occupations at different points in time.

References

- Freeman, R.B. and R.H. Oostendorp (2000): "Wages Around the World: Pay Across Occupations and Countries", NBER Working Paper no. 8058.
- Freeman, R.B. and R.H. Oostendorp (2001): "The Occupational Wages around the World Data File", *ILO Labour Review*, 2001, Fall Issue.
- Oostendorp, R.H. (2005): "The Standardized ILO October Inquiry 1983-2003", http://www.nber.org/oww/Technical_document_1983-2003_standardizationv3.pdf.
- Oostendorp, R.H (2009): "Globalization and the Gender Wage Gap", *World Bank Economic Review*, 23(1), pp.141-61.

Appendix A. Codes for standardized ILO October Inquiry Database 1983-2003

y0: year

y1: country code (from ILO October Inquiry)

AG	Antigua and Barbuda
AI	Anguilla
AN	Netherlands Antilles
AO	Angola
AR	Argentina
AS	American Samoa
AT	Austria
AU	Australia
AZ	Azerbaijan
BB	Barbados
BD	Bangladesh
BE	Belgium
BF	Burkina Faso
BG	Bulgaria
BH	Bahrain
BI	Burundi
BJ	Benin
BM	Bermuda
BN	Brunei
BO	Bolivia
BR	Brazil
BS	Bahamas
BW	Botswana
BY	Belarus
BZ	Belize
CA	Canada
CF	Central African Republic
CI	Ivory Coast
CL	Chile
CM	Cameroon
CN	China
CO	Colombia
CR	Costa Rica
CS	Czechoslovakia
CU	Cuba
CV	Cape Verde
CY	Cyprus
CZ	Czech Republic
DC	Dominica
DE	Germany

DJ	Djibouti
DK	Denmark
DO	Dominican Republic
DZ	Algeria
EE	Estonia
EG	Egypt
ER	Eritrea
ET	Ethiopia
FI	Finland
FJ	Fiji
FK	Falkland Islands (Malvinas)
FR	France
GA	Gabon
GB	United Kingdom
GD	Grenada
GF	French Guyana
GH	Ghana
GI	Gibraltar
GP	Guadeloupe
GQ	Guinea Ecuatorial
GR	Greece
GT	Guatemala
GU	Guam
GX	Gambia
GY	British Guyana
HK	Hong Kong
HN	Honduras
HR	Croatia
HT	Haiti
HU	Hungary
ID	Indonesia
IE	Ireland
IL	Israel
IM	Isle of Man
IN	India
IR	Iran, Islamic Republic of
IS	Iceland
IT	Italy
JO	Jordan
JP	Japan
KE	Kenya
KG	Kyrgyzstan
KH	Cambodia
KM	Comoros
KN	St Kitts and Nevis
KR	Korea, Republic of

KW	Kuwait
KZ	Kazachstan
LC	St Lucia
LK	Sri Lanka
LR	Liberia
LS	Lesotho
LT	Lithuania
LU	Luxembourg
LV	Latvia
MD	Moldova
MG	Madagascar
ML	Mali
MM	Myanmar
MN	Mongolia
MO	Macau, China
MQ	Martinique
MT	Malta
MU	Mauritius
MV	Maldives
MW	Malawi
MX	Mexico
MY	Malaysia
MZ	Mozambique
NA	Namibia
NC	New Caledonia
NE	Niger
NG	Nigeria
NI	Nicaragua
NL	Netherlands
NO	Norway
NP	Nepal
NZ	New Zealand
PE	Peru
PF	French Polynesia
PG	Papua New Guinea
PH	Philippines
PK	Pakistan
PL	Poland
PM	St Pierre and Miquelon
PR	Puerto Rico
PS	West Bank and Gaza strip
PT	Portugal
RO	Romania
RU	Russian Federation (before 9.91: USSR)
RW	Rwanda
SB	British Solomon Islands

SC	Seychelles
SD	Sudan
SE	Sweden
SG	Singapore
SH	Saint Helena
SI	Slovenia
SK	Slovakia
SL	Sierra Leone
SM	Samoa
SN	Senegal
SR	Surinam
SV	El Salvador
SW	Switzerland
SY	Syria (United Arab Republic)
SZ	Swaziland
TD	Chad
TG	Togo
TH	Thailand
TJ	Tajikistan
TN	Tunisia
TO	Tonga
TR	Turkey
TT	Trinidad and Tobago
TW	Taiwan
TZ	Tanzania
UA	Ukraine
UG	Uganda
US	United States
UY	Uruguay
VC	St Vincent and the Grenadines
VE	Venezuela
VG	Virgin Islands (British)
VI	Virgin Islands (US)
YA	Yemen
YU	Yugoslavia
ZA	South Africa
ZM	Zambia
ZR	Zaire
ZW	Zimbabwe

country: country code (from World Development Indicators)

y3: industry code

AA Agricultural production (field crops)
AB Plantations
AC Forestry
AD Logging
AE Deep-sea and coastal fishing
BA Coalmining
BB Crude petroleum and natural gas production
BC Other mining and quarrying
CA Slaughtering, preparing and preserving meat
CB Manufacture of dairy products
CG Grain mill products
CH Manufacture of bakery products
DA Spinning, weaving and finishing textiles
DB Manufacture of wearing apparel (except footwear)
DC Manufacture of leather and leather products (except footwear)
DD Manufacture of footwear
EA Sawmills, planing and other wood mills
EB Manufacture of wooden furniture and fixtures
FA Manufacture of pulp, paper and paperboard
FB Printing, publishing and allied industries
GA Manufacture of industrial chemicals
GB Manufacture of other chemical products
GC Petroleum refineries
IA Iron and steel basic industries
JA Manufacture of metal products (except machinery and equipment)
JB Manufacture of machinery (except electrical)
JC Manufacture of electronic equipment, machinery and supplies
JD Shipbuilding and repairing
KA Electric light and power
LA Construction
MA Wholesale trade (grocery)
MB Retail trade (grocery)
MC Restaurants and hotels
NA Railway transport
NB Passenger transport by road
NC Freight transport by road
ND Maritime transport
NE Supporting services to maritime transport
NF Air transport
NG Supporting services to air transport
NH Communication
OA Banks

OB Insurance
OC Engineering and architectural services
PA Public administration
PB Sanitary services
PC Education services
PD Medical and dental services
PF Repair of motor vehicles

y4: occupation code

- 1 Farm supervisor
- 2 Field crop farm worker
- 3 Plantation supervisor
- 4 Plantation worker
- 5 Forest supervisor
- 6 Forestry worker
- 7 Logger
- 8 Tree feller and buckler
- 9 Deep-sea fisherman
- 10 Inshore (coastal) maritime fisherman
- 11 Coalmining engineer
- 12 Miner
- 13 Underground helper, loader
- 14 Petroleum and natural gas engineer
- 15 Petroleum and natural gas extraction technician
- 16 Supervisor or general foreman
- 17 Derrickman
- 18 Miner
- 19 Quarryman
- 20 Butcher
- 21 Packer
- 22 Dairy product processor
- 23 Grain miller
- 24 Baker (ovenman)
- 25 Thread and yarn spinner
- 26 Loom fixer, tuner
- 27 Cloth weaver (machine)
- 28 Labourer
- 29 Garment cutter
- 30 Sewing-machine operator
- 31 Tanner
- 32 Leather goods maker
- 33 Clicker cutter (machine)
- 34 Laster
- 35 Shoe sewer (machine)
- 36 Sawmill sawyer

- 37 Veneer cutter
- 38 Plywood press operator
- 39 Furniture upholsterer
- 40 Cabinetmaker
- 41 Wooden furniture finisher
- 42 Wood grinder
- 43 Paper-making-machine operator (wet end)
- 44 Journalist
- 45 Stenographer-typist
- 46 Office clerk
- 47 Hand compositor
- 48 Machine compositor
- 49 Printing pressman
- 50 Bookbinder (machine)
- 51 Labourer
- 52 Chemical engineer
- 53 Chemistry technician
- 54 Supervisor or general foreman
- 55 Mixing- and blending-machine operator
- 56 Labourer
- 57 Mixing- and blending-machine operator
- 58 Packer
- 59 Labourer
- 60 Controlman
- 61 Occupational health nurse
- 62 Blast furnaceman (ore smelting)
- 63 Hot-roller (steel)
- 64 Metal melter
- 65 Labourer
- 66 Metalworking machine setter
- 67 Welder
- 68 Bench moulder (metal)
- 69 Machinery fitter-assembler
- 70 Labourer
- 71 Electronics draughtsman
- 72 Electronics engineering technician
- 73 Electronics fitter
- 74 Electronic equipment assembler
- 75 Ship plater
- 76 Power distribution and transmission engineer
- 77 Office clerk
- 78 Electric power lineman
- 79 Power-generating machinery operator
- 80 Labourer
- 81 Building electrician
- 82 Plumber

- 83 Constructional steel erector
- 84 Building painter
- 85 Bricklayer (construction)
- 86 Reinforced concreter
- 87 Cement finisher
- 88 Construction carpenter
- 89 Plasterer
- 90 Labourer
- 91 Stenographer-typist
- 92 Stock records clerk
- 93 Salesperson
- 94 Book-keeper
- 95 Cash desk cashier
- 96 Salesperson
- 97 Hotel receptionist
- 98 Cook
- 99 Waiter
- 100 Room attendant or chambermaid
- 101 Ticket seller (cash desk cashier)
- 102 Railway services supervisor
- 103 Railway passenger train guard
- 104 Railway vehicle loader
- 105 Railway engine-driver
- 106 Railway steam-engine fireman
- 107 Railway signalman
- 108 Road transport services supervisor
- 109 Bus conductor
- 110 Automobile mechanic
- 111 Motor bus driver
- 112 Urban motor truck driver
- 113 Long-distance motor truck driver
- 114 Ship's chief engineer
- 115 Ship's steward (passenger)
- 116 Able seaman
- 117 Dock worker
- 118 Air transport pilot
- 119 Flight operations officer
- 120 Airline ground receptionist
- 121 Aircraft cabin attendant
- 122 Aircraft engine mechanic
- 123 Aircraft loader
- 124 Air traffic controller
- 125 Aircraft accident fire-fighter
- 126 Post office counter clerk
- 127 Postman
- 128 Telephone switchboard operator

- 129 Accountant
- 130 Stenographer-typist
- 131 Bank teller
- 132 Book-keeping machine operator
- 133 Computer programmer
- 134 Stenographer-typist
- 135 Card- and tape-punching- machine operator
- 136 Insurance agent
- 137 Clerk of works
- 138 Computer programmer
- 140 Stenographer-typist
- 141 Card- and tape-punching- machine operator
- 142 Office clerk
- 143 Fire-fighter
- 144 Refuse collector
- 145 Mathematics teacher (third level)
- 146 Teacher in languages and literature (third level)
- 147 Teacher in languages and literature (second level)
- 148 Mathematics teacher (second level)
- 149 Technical education teacher (second level)
- 150 First-level education teacher
- 151 Kindergarten teacher
- 152 General physician
- 153 Dentist (general)
- 154 Professional nurse (general)
- 155 Auxiliary nurse
- 156 Physiotherapist
- 157 Medical X-ray technician
- 158 Ambulance driver
- 159 Automobile mechanic
- 160 Government executive official – central
- 161 Government executive official – regional or provincial
- 162 Government executive official – local authority

Hourly wages in local currency units (LCUs):

- hw1: *wage* reported in standard format in raw data (type 1)
- hw2wu: *wage* with country-specific calibration (type 2, uni weighting)
- hw3wu: *wage* with country-specific and uniform calibration (type 3, uni weighting)
- hw4wu: *wage* with uniform calibration (type 4, uni weighting)
- hw2wl: *wage* with country-specific calibration (type 2, lex weighting)
- hw3wl: *wage* with country-specific and uniform calibration (type 3, lex weighting)
- hw4wl: *wage* with uniform calibration (type 4, lex weighting)

Hourly wages in US \$:

hw1us: wage reported in standard format in raw data (type 1)
hw2wuus: wage with country-specific calibration (type 2, uni weighting)
hw3wuus: wage with country-specific calibration (type 3, uni weighting)
hw4wuus: wage with country-specific and uniform calibration (type 4, uni weighting)
hw2wlus: wage with country-specific and uniform calibration (type 2, lex weighting)
hw3wlus: wage with uniform calibration (type 3, lex weighting)
hw4wlus: wage with uniform calibration (type 4, lex weighting)

Monthly wages in local currency units (LCUs):

mw1: *wage* reported in standard format in raw data (type 1)
mw2wu: *wage* with country-specific calibration (type 2, uni weighting)
mw3wu: wage with country-specific and uniform calibration (type 3, uni weighting)
mw4wu: wage with uniform calibration (type 4, uni weighting)
mw2wl: wage with country-specific calibration (type 2, lex weighting)
mw3wl: wage with country-specific and uniform calibration (type 3, lex weighting)
mw4wl: wage with uniform calibration (type 4, lex weighting)

Monthly wages in US \$:

mw1us: wage reported in standard format in raw data (type 1)
mw2wuus: wage with country-specific calibration (type 2, uni weighting)
mw3wuus: wage with country-specific calibration (type 3, uni weighting)
mw4wuus: wage with country-specific and uniform calibration (type 4, uni weighting)
mw2wlus: wage with country-specific and uniform calibration (type 2, lex weighting)
mw3wlus: wage with uniform calibration (type 3, lex weighting)
mw4wlus: wage with uniform calibration (type 4, lex weighting)

currency: currency as reported in ILO October Inquiry

exrt: exchange rate (LCU per US\$)

conv: conversion factor for wages in LCUs

curr_conv: currency used for conversion factor

Appendix B. Estimated data correction factors

Table B1. Estimated data correction factors for 1983-2008, hourly wages

Country	Earnings	Males	Females	Median	Minimum	Prevailing	Maximum
AG	0.05	0.03	-0.05	.	-0.31	-0.01	0.26
AI	.	0.00	-0.06	.	-0.16	-0.01	0.25
AN	0.08	0.01	-0.15	.	-0.16	-0.01	.
AO	.	.	.	-0.06	-1.04	-0.01	.
AR	0.36	0.03	.	.	-0.06	0.01	.
AS	0.13	0.00	-0.37	.	-0.16	.	0.25
AT	0.16	0.00	-0.03	.	-0.10	0.06	0.11
AU	0.05	0.08	-0.05	.	-0.13	.	.
AZ	0.14	0.00	-0.30	.	.	.	.
BB	.	0.00	-0.01	.	-0.19	0.00	0.17
BD	0.40	0.02	-0.25	.	-0.16	.	.
BE	.	0.03	-0.12	.	-0.06	-0.11	.
BF	0.23	-0.01	0.03	.	-0.16	-0.12	0.25
BG	0.00	0.01	-0.06	.	.	.	.
BH	.	0.04	0.00	.	.	0.17	.
BI	0.19	-0.04	.	.	.	.	.
BJ	0.18	0.06	0.00	.	-0.03	0.09	0.36
BM	0.13	0.03	-0.12	-0.16	-0.16	0.00	0.00
BN	0.04	0.06	-0.05	.	.	.	.
BO	0.18	0.00	-0.19	.	.	-0.18	.
BR	0.29	0.05	-0.14	.	.	.	.
BS	0.13	0.12	-0.01	.	-0.16	.	0.43
BW	0.13	.	.	.	-0.16	.	.
BY	0.36	0.00	-0.13	.	.	.	.
BZ	.	0.00	-0.14	.	-0.34	0.05	0.19
CA	0.13	0.03	-0.12	.	.	-0.01	.
CF	0.13	0.03	-0.12	.	-0.19	-0.08	.
CI	0.13	0.03	.	.	-0.16	.	0.23
CL	0.13	0.00	-0.08	.	.	.	.
CM	.	-0.01	0.00	.	-0.12	0.01	.
CN	.	0.03	-0.12	.	.	.	.

CO	.	0.21	0.00	.	-0.52	-0.20	.
CR	0.06	0.00	-0.12	.	-0.21	0.07	.
CS	0.08	0.00	-0.08	.	.	.	.
CU	0.22	0.02	0.00	.	-0.25	-0.01	.
CV	.	0.03	-0.12	.	.	-0.01	.
CY	0.03	0.09	-0.13	.	.	.	.
CZ	0.13	0.07	-0.10	.	.	.	.
DC	.	0.03	-0.12	.	.	.	.
DE	0.16	0.04	-0.07	.	-0.16	.	.
DJ	.	0.03	-0.12	.	-0.16	-0.01	.
DK	0.09	0.03	-0.06	.	.	-0.06	.
DO	.	0.03	-0.12	.	-0.16	-0.01	.
DZ	0.13	1.05	-0.12	.	-0.16	.	0.25
EE	0.05	0.00	-0.17	.	.	0.01	.
EG	0.13	0.24	0.00	.	.	.	.
ER	0.03	0.00	-0.26	-0.06	-0.16	.	0.25
ET	.	-0.18	.	.	.	-0.01	.
FI	0.13	0.00	-0.13	.	.	-0.01	.
FJ	0.02	0.03	.	.	.	-0.01	.
FK	0.13	0.03	0.00	.	-0.16	0.08	0.27
FR	0.13	0.03	-0.12	.	.	.	.
GA	0.20	0.02	-0.06	.	-0.16	-0.27	0.25
GB	0.02	0.03	-0.11	.	-0.16	-0.01	.
GD	.	0.00	-0.10	.	-0.16	.	0.15
GF	.	.	.	.	-0.04	-0.04	0.25
GH	0.07	0.03	-0.12	.	.	.	.
GI	0.01	0.01	-0.23	.	.	.	.
GP	.	0.03	-0.12	.	-0.16	-0.01	.
GQ	.	0.03	-0.12	.	-0.16	.	.
GR	.	0.03	-0.12	.	.	.	.
GT	0.22	0.02	-0.15	.	.	.	.
GU	0.00	0.03	-0.12	.	.	0.00	.
GX	.	0.03	-0.12	.	.	-0.01	.
GY	0.05	0.02	-0.01	.	-0.16	-0.01	0.25
HK	0.20	0.03	-0.06	.	-0.16	.	0.25

HN	0.06	0.02	-0.09	.	-0.16	-0.26	.
HR	0.13	.	.	.	.	.	.
HT	0.14	-0.02	0.01	.	.	.	.
HU	0.08	0.03	-0.12	.	.	.	.
ID	0.13	0.05	-0.23	.	-0.61	.	.
IE	0.13	0.00	-0.09	.	-0.16	-0.01	.
IL	.	0.03	-0.12	.	-0.16	-0.01	.
IM	0.01	0.00	-0.07	.	-0.23	-0.03	0.04
IN	0.13	0.02	-0.12	.	-0.26	-0.01	0.40
IR	.	.	.	.	.	.	.
IS	0.12	0.06	-0.12	.	-0.22	.	.
IT	.	0.03	-0.12	.	-0.06	-0.07	.
JO	0.13	0.02	-0.11	.	.	.	.
JP	0.13	0.02	-0.37	.	.	.	.
KE	.	0.03	-0.12	.	.	.	.
KG	0.10	0.00	-0.04	.	.	.	.
KH	.	0.03	.	.	-0.16	.	.
KM	0.32	0.12	-0.06	.	-0.16	-0.11	0.95
KN	.	0.00	-0.04	.	-0.15	-0.07	0.32
KR	0.19	0.13	-0.27	.	.	.	.
KW	0.08	0.03	-0.12	.	.	.	.
KZ	.	0.07	-0.09	.	.	.	.
LC	0.13	0.00	-0.08	.	-0.24	0.00	0.22
LK	0.13	0.00	-0.27	.	.	.	.
LR	0.00	0.16	-0.12	.	.	.	.
LS	0.13	0.29	0.00	.	-0.16	0.05	0.25
LT	0.03	0.06	-0.06	.	.	.	.
LU	0.04	0.03	-0.11	.	.	.	.
LV	0.01	0.04	-0.08	.	.	.	.
MD	0.30	0.03	-0.12	.	.	.	.
MG	0.13	0.06	0.00	.	-0.16	.	0.25
ML	0.14	0.04	0.00	.	-0.10	-0.12	0.25
MM	.	-0.02	.	.	-0.16	0.05	.
MN	0.13	.	-0.12	.	.	.	.
MO	0.17	0.01	-0.14	.	.	.	.

MQ	.	0.03	.	.	-0.16	.	.
MT	.	0.03	-0.12	.	.	.	.
MU	0.03	0.00	-0.13	.	-0.34	.	0.16
MV	0.13	0.03	-0.12	.	-0.16	-0.01	0.15
MW	0.07	0.00	-0.11	.	-0.16	.	.
MX	0.24	0.44	0.00	.	0.00	.	.
MY	0.17	0.11	-0.08	.	-0.20	-0.03	0.87
MZ	.	0.03	-0.12	.	-0.16	0.07	.
NA	.	0.03	-0.12	.	-0.16	-0.01	0.25
NC	0.00	0.03	-0.12	.	-0.16	.	.
NE	.	0.04	-0.12	.	-0.16	-0.25	0.25
NG	0.32	0.00	-0.19	.	-0.16	-0.01	.
NI	.	0.18	-0.12	.	.	.	.
NL	.	0.00	-0.02	.	-0.16	-0.14	0.05
NO	0.39	0.06	-0.00	.	.	.	.
NP	.	0.00	-0.14	.	-0.57	-0.01	0.25
NZ	.	0.00	-0.08	.	-0.16	-0.14	0.25
PE	0.08	0.06	-0.04	.	-0.15	-0.09	.
PF	.	0.06	.	.	-0.32	.	.
PG	0.03	0.00	-0.03	.	-0.16	-0.01	.
PH	.	0.02	-0.10	.	-0.16	0.03	0.18
PK	0.10	0.03	-0.12	.	-0.16	0.13	0.25
PL	0.13	0.03	-0.10	.	.	.	.
PM	0.13	0.04	-0.12	.	-0.16	-0.01	.
PR	0.00	0.02	-0.04	.	-0.26	.	0.01
PS	.	0.08	-0.11	.	.	.	.
PT	0.17	0.03	-0.09	.	.	.	.
RO	0.01	0.09	0.00	.	.	-0.01	.
RU	0.30	0.08	-0.06	.	.	-0.01	.
RW	.	0.03	-0.12	.	-0.16	.	.
SB	0.04	0.03	-0.12	.	.	.	.
SC	0.13	0.00	-0.02	.	-0.16	0.07	.
SD	0.05	-0.14	.	-0.06	-0.45	0.05	0.10
SE	0.15	0.04	-0.05	.	-0.22	-0.01	0.25
SG	.	0.05	-0.09	.	.	.	.

SH	.	0.04	-0.28	.	-0.16	.	0.25
SI	0.13	0.07	-0.00	.	.	.	.
SK	0.44	0.06	-0.09	.	.	.	.
SL	.	0.09	0.00	.	-0.22	0.03	.
SM	.	.	.	.	.	-0.01	.
SN	.	0.03	-0.12	.	-0.16	.	.
SR	.	0.07	0.00	.	-0.42	-0.20	0.22
SV	0.06	0.08	0.00	-0.06	-0.23	-0.01	0.17
SW	.	0.03	-0.12	.	-0.04	.	0.25
SY	.	0.03	.	.	.	.	.
SZ	.	0.00	-0.49	.	-0.16	0.15	0.25
TD	0.13	0.00	-0.01	.	-0.05	-0.01	0.25
TG	.	-0.01	0.14	.	-0.66	-0.17	.
TH	0.18	0.00	-1.19	.	.	.	.
TJ	0.40	0.03	-0.12	.	-0.16	.	.
TN	0.13	0.03	.	.	-0.16	.	0.41
TO	0.08	0.04	-0.11	.	-0.16	-0.01	.
TR	0.15	0.00	-0.24	.	.	.	.
TT	.	0.00	-0.09	.	-0.16	-0.01	.
TW	0.13	.	.	.	.	.	.
TZ	.	.	.	.	.	-0.01	.
UA	.	.	.	.	.	.	.
UG	.	0.03	-0.12	.	-0.16	-0.01	0.25
US	0.04	0.08	-0.08	-0.10	.	.	.
UY	0.19	.	.	.	.	.	.
VC	.	.	.	-0.06	-0.38	.	0.05
VE	0.19	0.00	-0.21	.	-0.38	-0.20	.
VG	.	0.03	-0.12	.	-0.16	-0.01	.
VI	.	0.03	-0.12	.	.	.	.
YA	.	0.03	-0.12	-0.06	-0.16	-0.01	.
YU	0.00	.	.	.	.	.	.
ZA	0.13	.	.	.	.	.	.
ZM	.	0.06	0.00	.	-0.18	0.13	0.26
ZR	0.13	0.03	-0.12	.	-0.16	-0.01	.
ZW	0.19	0.00	-0.03	.	-0.09	-0.01	.

Table B2. Estimated data correction factors for 1983-2008, monthly wages

Country	Earnings	Males	Females	Daily	Median	Minimum	Prevailing	Maximum
AG	0.05	0.03	-0.05	-3.27	.	-0.31	-0.01	0.26
AI	.	0.00	-0.08	-3.27	.	-0.16	-0.02	0.25
AN	0.08	0.05	-0.11	.	.	-0.16	-0.02	.
AO	.	.	.	.	-0.05	-0.88	-0.02	.
AR	0.36	0.03	.	-3.22	.	-0.04	0.00	.
AS	0.14	0.00	-0.38	.	.	-0.16	.	0.25
AT	0.20	0.01	-0.03	.	.	-0.10	0.02	0.12
AU	0.10	0.09	-0.06	.	.	-0.14	.	.
AZ	0.13	0.00	-0.31	.	.	.	.	.
BB	.	0.00	-0.01	-3.11	.	-0.20	-0.01	0.16
BD	0.41	0.00	-0.28	-3.27	.	-0.16	.	.
BE	.	0.03	-0.13	.	.	-0.06	-0.10	.
BF	0.23	0.00	-0.05	.	.	-0.16	-0.08	0.25
BG	0.01	0.01	-0.07	.	.	.	.	.
BH	.	0.04	0.00	.	.	.	0.18	.
BI	0.19	-0.05	.	.	.	.	.	.
BJ	0.18	-0.03	0.03	-3.27	.	-0.07	0.09	0.32
BM	0.14	0.03	-0.13	.	-0.05	-0.16	-0.07	0.25
BN	0.06	0.05	-0.05	.	.	.	.	.
BO	0.18	0.10	0.00	.	.	.	-0.23	.
BR	0.26	0.05	-0.14	.	.	.	.	.
BS	0.14	0.15	-0.02	.	.	-0.16	.	0.40
BW	0.14	.	.	.	.	-0.16	.	.
BY	0.39	0.00	-0.14	.	.	.	.	.
BZ	.	0.00	-0.12	-3.39	.	-0.35	-0.01	0.18
CA	0.14	0.07	-0.15	.	.	.	-0.02	.
CF	0.14	0.03	-0.13	-3.27	.	-0.15	-0.04	.
CI	0.14	0.00	.	-3.27	.	-0.16	.	0.24
CL	0.14	0.00	-0.08	.	.	.	.	.
CM	.	0.00	-0.04	.	.	-0.13	0.00	.
CN	.	0.03	-0.13	.	.	.	.	.
CO	.	0.19	0.00	-3.27	.	-0.54	-0.22	.

CR	0.02	0.01	-0.20	-3.27	.	-0.20	0.05	.
CS	0.08	0.01	-0.07	.	.	.	.	.
CU	0.19	0.02	0.00	.	.	-0.14	-0.01	.
CV	.	0.03	-0.13	.	.	.	-0.02	.
CY	0.06	0.09	-0.13	.	.	.	.	.
CZ	0.14	0.07	-0.10	.	.	.	.	.
DC	.	0.03	-0.13	.	.	.	.	.
DE	0.18	0.05	-0.05	-3.13	.	-0.16	.	.
DJ	.	0.03	-0.13	.	.	-0.16	-0.02	.
DK	0.10	0.00	-0.11	.	.	.	-0.09	.
DO	.	0.03	-0.13	.	.	-0.16	-0.02	.
DZ	0.14	1.04	-0.13	.	.	-0.16	.	0.25
EE	0.14	0.00	-0.20	.	.	.	0.16	.
EG	0.14	0.06	-0.12	.	.	.	.	.
ER	0.03	0.00	-0.30	-3.03	-0.05	-0.16	.	0.25
ET	.	-0.17	.	.	.	.	-0.02	.
FI	0.13	0.00	-0.11	-3.27	.	.	-0.02	.
FJ	0.02	0.03	.	.	.	.	-0.02	.
FK	0.14	0.06	0.00	.	.	-0.16	0.08	0.30
FR	0.14	0.03	-0.13	.	.	.	.	.
GA	0.18	0.02	-0.09	.	.	-0.16	-0.24	0.25
GB	0.09	0.04	-0.13	.	.	-0.16	-0.02	.
GD	.	0.00	-0.08	-3.11	.	-0.17	.	0.14
GF	.	.	.	-3.27	.	-0.02	-0.02	0.25
GH	0.07	0.03	-0.13	-3.27	.	.	.	.
GI	0.01	0.01	-0.23	.	.	.	.	.
GP	.	0.03	-0.13	.	.	-0.16	-0.02	.
GQ	.	0.03	-0.13	.	.	-0.16	.	.
GR	.	0.03	-0.13	.	.	.	.	.
GT	0.11	0.04	-0.14	.	.	.	.	.
GU	0.00	0.03	-0.13	.	.	.	0.00	.
GX	.	0.03	-0.13	.	.	.	-0.02	.
GY	0.03	0.05	0.00	-3.26	.	-0.16	-0.02	0.25
HK	0.20	0.04	-0.07	-3.24	.	-0.16	.	0.25
HN	0.06	0.01	-0.10	-3.15	.	-0.16	-0.25	.

HR	0.14	.	.	.	.	.	.	.
HT	0.14	0.00	-0.18	.	.	.	.	.
HU	0.08	0.03	-0.13	.	.	.	.	.
ID	0.14	0.06	-0.29	-3.27	.	-0.60	.	.
IE	0.14	0.01	-0.08	.	.	-0.16	-0.02	.
IL	.	0.03	-0.13	-3.27	.	-0.16	-0.02	.
IM	0.08	0.01	-0.05	.	.	-0.17	-0.02	0.10
IN	0.14	0.05	-0.13	-3.32	.	-0.20	-0.02	0.46
IR	.	.	.	.	.	.	.	.
IS	0.28	0.06	-0.12	.	.	-0.21	.	.
IT	.	0.03	-0.13	.	.	-0.06	-0.13	.
JO	0.14	0.02	-0.15	.	.	.	.	.
JP	0.14	0.02	-0.37	-3.14	.	.	.	.
KE	.	0.03	-0.13	.	.	.	.	.
KG	0.19	0.00	-0.05	.	.	.	.	.
KH	.	0.03	.	.	.	-0.16	.	.
KM	0.35	0.13	-0.05	-3.27	.	-0.16	-0.09	0.96
KN	.	0.00	-0.03	-3.27	.	-0.16	-0.08	0.30
KR	0.31	0.13	-0.28	.	.	.	.	.
KW	0.08	0.03	-0.13	.	.	.	.	.
KZ	.	0.07	-0.09	.	.	.	.	.
LC	0.14	0.02	-0.05	-3.04	.	-0.21	-0.01	0.25
LK	0.14	0.00	-0.25	.	.	.	.	.
LR	0.01	0.15	-0.13	-3.27	.	.	.	.
LS	0.14	0.29	0.00	-3.19	.	-0.16	0.05	0.25
LT	0.04	0.06	-0.07	.	.	.	.	.
LU	0.04	0.03	-0.11	.	.	.	.	.
LV	0.02	0.05	-0.08	.	.	.	.	.
MD	0.28	0.03	-0.13	.	.	.	.	.
MG	0.14	0.00	-0.05	.	.	-0.16	.	0.25
ML	0.13	0.07	0.00	.	.	-0.04	-0.11	0.25
MM	.	-0.02	.	.	.	-0.16	0.06	.
MN	0.14	.	-0.13	.	.	.	.	.
MO	0.17	0.01	-0.14	-3.27	.	.	.	.
MQ	.	0.03	.	-3.27	.	-0.16	.	.

MT	.	0.03	-0.13	.	.	.	.	.
MU	0.09	0.01	-0.11	-3.27	.	-0.28	.	0.23
MV	0.14	0.03	-0.13	-3.27	.	-0.16	-0.02	0.25
MW	0.07	0.00	-0.13	.	.	-0.16	.	.
MX	0.22	0.42	0.00	-3.27	.	-0.16	.	.
MY	0.13	0.12	-0.06	-3.27	.	-0.23	-0.06	0.85
MZ	.	0.03	-0.13	.	.	-0.16	0.07	.
NA	.	0.03	-0.13	.	.	-0.16	-0.02	0.25
NC	0.14	0.03	-0.13	.	.	-0.16	.	.
NE	.	0.06	-0.13	.	.	-0.13	-0.22	0.25
NG	0.35	0.00	-0.21	-3.27	.	-0.16	-0.02	.
NI	.	0.18	-0.13	.	.	.	.	.
NL	.	0.00	-0.01	.	.	-0.16	-0.14	0.06
NO	0.38	0.06	-0.00	.	.	.	.	.
NP	.	0.00	-0.15	-3.27	.	-0.54	-0.02	0.25
NZ	.	0.00	-0.08	-3.27	.	-0.16	-0.14	0.25
PE	0.10	0.05	-0.06	-3.27	.	-0.11	-0.09	.
PF	.	0.19	.	.	.	-0.27	.	.
PG	0.08	-0.08	0.06	.	.	-0.05	-0.02	.
PH	.	0.03	-0.10	-3.16	.	-0.16	0.12	0.18
PK	0.10	0.03	-0.13	-3.27	.	-0.16	0.08	0.25
PL	0.14	0.03	-0.11	.	.	.	.	.
PM	0.01	0.03	-0.13	.	.	-0.03	-0.02	.
PR	0.00	0.02	-0.04	.	.	-0.27	.	0.00
PS	.	0.08	-0.11	-3.27	.	.	.	.
PT	0.20	0.03	-0.09	-3.27	.	.	.	.
RO	0.04	0.09	0.00	.	.	.	-0.02	.
RU	0.31	0.09	-0.06	.	.	.	-0.02	.
RW	.	0.03	-0.13	.	.	-0.16	.	.
SB	0.14	0.03	-0.13	.	.	.	.	.
SC	0.14	0.01	-0.01	.	.	-0.16	0.07	.
SD	0.21	-0.19	.	.	-0.05	-0.45	0.03	0.10
SE	0.14	0.05	-0.03	.	.	-0.22	-0.02	0.25
SG	.	0.05	-0.09	.	.	.	.	.
SH	.	0.05	-0.10	-3.27	.	-0.16	.	0.25

SI	0.14	0.07	-0.00	.	.	.	.	.
SK	0.31	0.07	-0.10	.	.	.	.	.
SL	.	0.09	0.00	-3.17	.	-0.22	0.01	.
SM	.	.	.	.	.	.	-0.02	.
SN	.	0.03	-0.13	.	.	-0.16	.	.
SR	.	0.09	0.00	-3.27	.	-0.42	-0.19	0.23
SV	0.14	0.06	0.00	-3.27	-0.05	-0.13	0.04	0.31
SW	.	0.03	-0.13	.	.	-0.04	.	0.25
SY	.	0.03	.	-3.27	.	.	.	.
SZ	.	0.00	-0.46	-3.27	.	-0.16	0.18	0.25
TD	0.07	-0.13	0.02	-3.27	.	-0.13	-0.02	0.25
TG	.	-0.05	0.11	.	.	-0.65	-0.17	.
TH	0.18	0.00	-1.17	.	.	.	.	.
TJ	0.39	0.03	-0.13	.	.	-0.16	.	.
TN	0.14	0.03	.	-3.27	.	-0.16	.	0.43
TO	0.03	0.00	-0.20	.	.	-0.16	-0.02	.
TR	0.17	0.00	-0.24	.	.	.	.	.
TT	.	0.00	-0.05	-3.27	.	-0.16	-0.02	.
TW	0.14	.	.	.	.	.	.	.
TZ	.	.	.	.	.	.	-0.02	.
UA	.	.	.	.	.	.	.	.
UG	.	0.03	-0.13	-3.27	.	-0.16	-0.02	0.25
US	0.04	0.08	-0.08	.	-0.10	.	.	.
UY	0.19	.	.	.	.	.	.	.
VC	.	.	.	-3.10	-0.05	-0.37	.	0.06
VE	0.14	0.00	-0.18	-3.28	.	-0.30	-0.02	.
VG	.	0.03	-0.13	.	.	-0.16	-0.02	.
VI	.	0.03	-0.13	.	.	.	.	.
YA	.	0.03	-0.13	-3.27	-0.05	-0.16	-0.02	.
YU	0.00	.	.	.	.	.	.	.
ZA	0.14	.	.	.	.	.	.	.
ZM	.	0.06	0.00	-3.06	.	-0.14	0.16	0.27
ZR	0.14	0.03	-0.13	.	.	-0.16	-0.02	.
ZW	0.19	0.00	-0.03	.	.	-0.07	-0.02	.

y0	y1																		
	BO	BR	BS	BW	BY	BZ	CA	CF	CI	CL	CM	CN	CO	CR	CS	CU	CV	CY	CZ
1983				1.14		1.84	9.86				1.30			0.53	1.23	*		3.77	
1984		0.50		0.97		1.82	9.57			2.29	1.37			0.83	1.04	*		3.53	
1985						1.93	9.07		0.74	1.54	1.39				0.98	*	0.94	3.66	
1986			6.20			2.24				1.55	1.88			0.96	1.14	*	1.07	4.52	
1987	0.80	1.41	6.38			2.67		0.89			1.75			0.97	1.28	*		5.26	
1988	0.89		5.58			2.53		0.90					0.89		1.27	*		5.81	
1989	0.81					2.66		0.84			0.89		1.00		1.25	*		5.89	
1990	0.66		7.04			2.70			2.08		1.04	0.22	0.78		1.07			6.99	
1991	1.04		4.44			2.71		1.11			1.01	0.22			0.74			7.46	
1992	1.17					2.90		1.20	1.49		1.07	0.29			0.97			7.89	
1993	1.15					3.37		1.74				0.38		1.43				7.58	1.05
1994	1.31					3.66			0.76			0.34		1.26				8.32	1.22
1995	1.40				0.33	4.06		1.05				0.39		1.75				9.40	1.53
1996	1.30				0.45			1.12	1.23			0.49						9.62	1.74
1997	1.41				0.54		11.17	1.10	1.12			0.58						9.26	1.66
1998					0.62		10.59					0.59							1.75
1999	1.67	2.51			0.61		10.81					0.50		1.73				9.67	1.75
2000			7.64		0.47		11.18		0.91			0.55		1.89				9.01	1.68
2001		2.06			0.58		11.04		0.88									8.91	1.95
2002					0.64		11.09							2.09				10.01	2.41
2003		1.84	11.14		0.74		12.72							2.13				12.75	2.89
2004		2.30	10.60		0.86		14.31					0.77		1.95				14.38	3.22
2005		3.55					15.62					0.92		2.07		*		15.51	3.59
2006		4.39		0.74			17.14			4.07		1.15		2.01		*		15.36	4.11
2007			14.36	0.75	1.29		18.78			4.47				2.44		*			4.93
2008							19.31							2.80		*			6.04

y0	y1																		
	DC	DE	DJ	DK	DO	DZ	EE	EG	ER	ET	FI	FJ	FK	FR	GA	GB	GD	GF	GH
1983		6.90		7.82							3.90	2.27	2.69			3.69			
1984	2.35	6.37		7.32	1.15						5.83	2.14		1.27					
1985		6.67		8.19		3.01					6.32					3.84			0.17
1986		9.39		10.94		3.30					8.27			2.59	4.64	2.09			
1987		11.73		14.37		3.23		0.85			10.14	2.02				7.27		6.59	
1988		12.34		14.46		2.64		0.93			11.81	1.68				8.55		6.57	
1989		11.96		13.95		2.07					12.38			2.84	8.72			6.59	
1990		14.65		17.28		2.03		0.40			15.15					10.22		7.80	
1991		15.23		17.17		1.15					15.12		11.49	2.94	11.17			6.76	
1992		16.99		18.67		1.26					13.60		10.26	3.97	11.85				
1993		16.58					0.64		0.51		11.05				10.52	2.75			0.53
1994		17.28					0.92	0.37		0.74	12.39				10.76	2.75			
1995		20.24			1.09		1.41	0.38			16.07			2.32	11.55	2.89			
1996		19.55	3.00		1.08	1.00	1.54	0.34			13.96					11.77			
1997		17.18			2.36	1.14	1.69	0.39		0.73	12.49					12.89			
1998		17.26				1.28		0.37			12.52					13.68			
1999		16.00						0.46	0.50		12.58					13.83			
2000		15.08						0.57	0.43		11.21			18.18		13.36			
2001		14.89				0.91					11.36					13.26			
2002		16.00				1.13					12.48					14.88			
2003		15.28		30.42		0.78					12.06					16.70			
2004		21.63		33.51		0.85					17.53					18.82			
2005		22.14		35.36		0.88					17.23					19.41			
2006		22.75		37.56		0.88					18.06					20.52			0.20
2007		24.50		42.27		2.19					21.17					22.70			0.23
2008		26.88				2.35										21.84			

y0	y1																		
	MD	MG	ML	MM	MN	MO	MQ	MT	MU	MV	MW	MX	MY	MZ	NA	NC	NE	NG	NI
1983		0.54	0.77						1.16			0.59	1.25			7.11			2.33
1984								1.79	0.98		0.56	0.66	1.24				0.62	1.44	
1985			0.52	0.25				1.74	0.88										1.52
1986			0.68	0.30					1.13				2.08						0.64
1987		0.23	0.78	0.34			5.12		1.52				0.60	0.31					0.74
1988			0.77	0.41					1.52				0.99	0.36					1.60
1989			0.72	0.80					1.44				1.07	0.47					
1990			0.80	0.85		2.29			1.62			0.66							
1991				0.88		2.71			1.66			0.75	0.94						
1992				0.91		2.10			1.77			0.75	0.61						
1993				1.11		2.33			1.98		0.45	0.81	1.15						0.47 0.81
1994	0.19	0.23		1.13	0.11	4.56			2.21		0.29	0.80							0.54
1995	0.22	0.24		1.22	0.16	3.81			2.45		0.42	0.46	1.34						0.56 0.76
1996	0.25			1.17					2.55		0.63	0.47			5.40				0.79
1997	0.31			1.14		4.60			2.45		0.67	0.53			5.75				1.02 0.85
1998	0.27	0.23		1.12		4.36			2.31		0.53	0.53			3.43				0.79
1999	0.19	0.22		1.15		4.43			2.39		0.49	1.09							0.84
2000	0.19	0.22		4.83		4.20			2.31		0.56	1.34							0.86
2001	0.21			4.64		4.24			2.24		0.22	1.54							0.89
2002	0.30			4.82		4.31			2.25		0.33	1.62							0.90
2003	0.37			5.23		4.63			2.68			1.53							
2004	0.53			5.52		5.20			2.86			1.52							
2005	0.63	0.25				6.63			2.78			1.43							
2006	0.75			41.81		7.49			2.73			1.48							
2007	0.97			43.50		8.42			2.80	3.16		1.53							
2008	1.30					8.36			3.46	3.98		1.56							

y0	y1																		
	NL	NO	NP	NZ	PE	PF	PG	PH	PK	PL	PM	PR	PS	PT	RO	RU	RW	SB	SC
1983	5.36	5.50	0.37	4.19	0.51		1.92	0.39	0.39		4.11	4.50		0.78					2.05
1984	4.79	5.28		4.36	0.49		2.21	0.36			7.14	4.71					0.86		1.72
1985	4.91	5.42		4.31	0.49			0.17			7.72	7.28		0.67	0.77		0.85		1.81
1986	6.87	6.83		5.46				0.40			9.81	6.01		0.91	0.81			0.87	
1987	8.47	7.81		7.40	1.47	9.91		0.40			12.22	6.58		1.12					1.08
1988	8.79	8.89		8.69	0.66	12.53		0.49			12.34	8.64		1.24		3.35	1.13		
1989	8.36	8.73		8.30		12.22		0.57			10.33	6.62		1.30		2.93	1.08		1.83
1990	10.05	10.06	0.30	8.79		15.01		0.55				7.16		1.65	0.79		1.04		2.16
1991		10.02		8.64	1.55			0.57			14.36	7.65		1.90	0.91	*	0.69		2.32
1992		10.66						0.66				7.97		2.29	0.69	0.22			
1993		9.43			1.17		3.87	0.67				8.02		2.04	0.96	0.70			
1994		9.64			1.36			0.75				9.17		2.05	0.90	0.90			
1995		11.15			2.02		2.61	0.85				9.10			0.94	0.94			
1996		11.37			2.27		2.56	0.48		1.58		9.93		5.04	0.96				
1997		10.76			2.29			1.23				8.81		4.51	0.83				
1998		11.02			2.11			0.37		2.03		9.39		4.71	1.00				
1999		10.72			1.85			1.11	0.39	2.44		9.84		4.71	0.89	0.39			
2000		10.21			1.81			0.38	0.37			9.73		4.11	0.91	0.48			
2001		11.57			1.88			1.11	0.32	2.63		10.67			0.94				
2002		13.14			2.26			1.07	0.53	2.73		10.42		4.38	1.01				
2003		14.54						1.04	0.58			10.09		4.20	1.22	1.21			
2004		15.91			2.36			0.95	0.59	3.61		10.49		6.00	1.51	1.36			
2005		18.26			2.30			1.03				10.69		6.28	2.02	1.58			
2006		19.13			2.48			1.11		4.86		11.01		6.51	2.32				
2007		22.63			2.57			1.72				11.58	2.17	7.45	3.23	2.52			
2008		24.72			3.42			1.60				12.23	2.17		3.89				

y0	TO	TR	TT	TW	TZ	UA	UG	US	UY	VC	VE	VG	VI	YA	YU	ZA	ZM	ZR	ZW
1983					0.29			9.12			4.41	4.40			1.03			0.44	1.77
1984	0.71							10.52			2.90				0.89		0.37		1.78
1985	1.33		6.62					9.30	1.19			6.93			0.85		0.42		
1986			4.70					9.83	1.44		2.66				1.25		0.25		
1987			4.53					10.35	1.74						1.32				1.86
1988			4.24					10.58	1.95				8.57		0.99		0.43		
1989								11.11	2.13		0.89		8.30		1.03		0.47		
1990		3.13	3.86					11.66	2.23		0.95		8.97		2.25		0.42		
1991		2.24						11.95	2.75						*		0.46		
1992		2.47						12.38	3.07						*				
1993							0.42	12.76	3.79							3.13			
1994		2.11						12.67	4.33	3.26						3.13			
1995								13.28	4.82	3.27				1.62			0.57		
1996			2.84			0.63		13.46		3.31				0.71			0.58		
1997			3.53			0.76		15.39		3.56	1.24								
1998								16.79		3.63	1.44								
1999			3.10			0.40		16.71		3.79	1.60								
2000			3.18					16.62			1.57								
2001								18.96			1.57								0.99
2002				5.41				20.13		4.62									1.57
2003				5.36				20.19		4.65									
2004				5.51				20.05											
2005								20.05									0.46		
2006		4.05						20.48									0.88		
2007								21.34											
2008																			

Note: reported wages are based on type 3 standardization (lexicographic weighting).

* = exchange rate not available in IMF IFS

Table C2. Average monthly wage rates for adult workers in US \$

y0	AG	AI	AN	AO	AR	AS	AT	y1 AU	AZ	BB	BD	BE	BF	BG	BH	BI
1983	335.8					592.5	655.8	1348.9		517.5		793.6				
1984			1024.0		717.7	462.4	612.3	1391.6		577.1	28.0	761.4			940.6	105.6
1985			1018.5		286.1		652.9	1180.2		654.3		714.4	178.4		724.3	145.3
1986				108.8	485.8	790.4	924.9	1183.8		686.0	45.0	949.4	221.9			148.2
1987			1058.3		883.7		1171.4	1294.3		756.1	28.2	1154.1	255.7		998.1	164.1
1988		607.0	1074.9		1084.0		1224.0	1554.7		826.4	46.9	1197.5	220.4		1307.2	156.7
1989	637.6		837.8		309.0		1182.5	1610.7		803.2	46.7	1169.3	205.7		795.4	140.7
1990	554.9	696.5					1443.8	1538.3		820.7	45.0	1444.7	231.9	177.8	836.7	133.3
1991		749.2			245.9		1466.1	1761.9		879.0	55.0	1484.0	191.6		873.3	126.3
1992	625.9	663.4					1643.8	1681.1		889.3	55.1	1639.3			818.0	107.8
1993	705.8	664.1			431.6		1610.7	1617.7		917.5	55.1	1572.0			802.6	
1994	736.5	714.6			443.4		1702.4	1824.4		919.3		1666.9			854.6	
1995	831.4	767.4			452.0		2011.7	1916.0		933.1		1908.0			882.3	
1996	790.9	824.1		313.6			1954.5	2131.1	47.5			1849.0			868.0	
1997		851.7		175.3			1710.2		74.3		105.0	1637.3	96.0			
1998		849.9		141.8			1733.1	1852.5	70.9		98.2	1633.6	95.0		974.3	
1999		833.3		50.5			1691.3		64.9			1591.8	100.0			
2000		871.2					1476.9	1844.3	62.6			1422.1	86.7		1099.9	
2001							1482.8		63.4			1437.2			1005.6	
2002		500.2			365.5		1493.7	1840.9	102.7			1554.4		133.3	1136.1	
2003					416.6							1484.8			1258.1	
2004					458.0			2769.8	133.9			2137.2				
2005					557.0				182.5						972.7	
2006					659.8			3174.8	249.6						907.8	
2007					791.2				372.8		63.3					
2008					974.7				482.2							

y0	BJ	BM	BN	BO	BR	BS	BW	y1 BY	BZ	CA	CF	CI	CL	CM	CN	CO
1983	128.7	1572.5					207.8		316.9	1572.8				225.6		
1984	113.5	1575.2	297.8		89.6		177.2		315.5	1527.5			448.3	239.1		
1985	132.6	1522.1							334.2	1497.9		123.6	303.8	242.3		
1986						1040.1			377.2				306.9	336.4		
1987	191.0	2250.8		132.7	245.7	1102.1			444.6		157.4			310.6		
1988	123.5	2633.2		142.2		982.4			440.1		158.8					191.3
1989		2959.2		133.9					464.0		148.3			167.1		216.8
1990	189.9	2940.9		113.2		1159.2			479.7			364.6		195.8	39.9	166.4
1991	228.8	3439.1		175.2		803.5			481.9		197.7			189.0	39.0	
1992		3362.7		180.3					501.4		212.3	263.9		201.4	51.7	
1993		2808.0		185.7					585.3		280.3				68.5	
1994		3211.6		205.6					626.8			136.5			60.3	
1995		3215.2		218.8				52.8	686.6		186.8				69.5	
1996		3210.4		208.2				73.3			189.2	215.1			87.1	
1997		3503.0		225.6				87.5		1641.6	185.3	194.8			103.3	
1998								102.3		1581.0					104.5	
1999		3163.1		255.9	422.4			99.4		1646.1					90.2	
2000		3541.2				1370.6		77.4		1715.8		158.0			100.1	
2001			340.4		359.8			94.7		1628.2		153.1				
2002			337.4					103.6		1596.8						
2003					310.1	1844.2		119.6		1876.8						
2004					411.9	1753.9		139.1		2072.8					138.9	
2005					613.2					2283.5					166.7	
2006					736.8		144.3			2522.0			793.0		207.7	
2007						2364.7	145.3	221.6		2736.7			872.2			
2008										2784.0						

y0	CR	CS	CU	CV	CY	CZ	DC	y1 DE	DJ	DK	DO	DZ	EE	EG	ER	ET
1983	112.6	219.0	*		617.0			1176.5		1349.7						
1984	173.5	185.1	*		581.6		407.1	1085.1		1279.8	212.3					
1985		177.4	*	160.7	601.3			1145.9		1438.9		572.4				
1986	187.9	206.8	*	182.8	742.3			1611.6		1925.4		626.6				
1987	184.8	229.6	*		863.4			2010.0		2491.6		612.6		215.3		
1988		220.4	*		952.3			2108.7		2429.6		501.6		235.0		
1989		210.1	*		969.7			2013.8		2342.8		393.9				
1990		181.0			1149.2			2441.0		2827.7		385.4		102.9		
1991		125.3			1222.6			2530.4		2809.9		219.3				
1992		164.5			1295.3			2820.6		3054.2		240.2		79.4		
1993	331.2				1245.3	186.5		2739.4					103.0		104.4	
1994	284.7				1365.4	218.5		2846.9					130.8	93.7		123.7
1995	398.6				1544.9	273.6		3325.0			199.9		200.8	98.8		
1996					1575.3	310.4		3207.2	519.2		198.4	191.5	216.7	89.3		
1997					1512.3	296.1		2817.3			430.6	198.3	239.1	99.5		121.6
1998						311.5		2828.6				221.1		95.0		
1999	369.9				1560.4	311.6		2620.5						116.4	104.4	
2000	426.0				1468.1	298.2		2469.3						146.9	88.5	
2001					1458.6	326.8		2438.2				160.8				
2002	453.4				1619.9	402.8		2617.8				208.7				
2003	456.2				2080.8	477.6		2500.2		5092.7		135.5				
2004	416.0				2357.6	538.2		3569.4		5599.8		146.2				
2005	416.8		*		2551.5	594.7		3640.1		5921.1		151.4				
2006	411.2		*		2517.1	692.0		3750.6		6281.6		152.7				
2007	492.6		*			832.4		4037.8		7077.6		378.7				
2008	583.6		*			1032.8		4435.3				406.3				

y0	GY	HK	HN	HR	HT	HU	ID	IE	IL	IM	IN	IR	IS	IT	JO	JP
1983	184.4	429.2	231.5				73.2	788.5	579.8	712.9	58.1		678.9	734.8	313.6	1377.7
1984	185.2	330.3	246.1		149.6			713.7	673.2		64.5		717.9		324.9	992.1
1985		384.6	287.4				74.0			673.9	48.1		679.9	738.6	305.8	1018.7
1986	180.6		289.3				55.6				52.4	801.1	852.1	990.9	349.6	1512.8
1987		555.1	311.1			150.5	44.9			999.7	56.6		1263.7	1222.5	415.2	1785.4
1988	119.8	637.3	355.9		169.5		46.2			1349.7	57.0		1489.2	1287.6	353.6	1953.0
1989		735.8					44.0				64.1		1266.1	1324.8		2040.9
1990		732.6	173.6							1589.6	67.7		1353.1	1646.9		2065.7
1991		836.2	140.8				75.7				53.6		1393.1	1733.3		2313.2
1992		939.7	169.3				76.6				142.6		1488.5	1877.1	219.3	2474.8
1993		1047.7	122.9								45.6		1301.3	1532.9	225.8	2795.3
1994		1420.5	106.5								60.4		1249.4	1525.7		248.7
1995	76.2	1536.1	123.7			279.4					70.4		1394.7	1591.0	250.6	3374.3
1996	87.1	1682.6		358.7		286.3					56.7		1454.0	1743.2		2928.5
1997	102.2	1860.3	212.1			265.2					69.1			1632.9	216.4	2609.2
1998	168.6	2093.8				279.3					65.6		1843.8	1642.5	280.7	2469.3
1999	172.7	1973.1				308.8					67.8		1863.3	1510.1		2804.2
2000	205.9	2016.5				293.7					72.8		1769.5	1404.4		2986.5
2001		2026.3				324.6					34.5		1399.0	1352.4	306.2	2655.5
2002		1956.6				405.5							1770.4	1462.9	301.2	2449.2
2003	304.9	1983.0				539.7							2417.4	1405.4	279.5	2712.1
2004	329.6	2041.1				645.8							2814.9	2034.3		2891.2
2005		1928.9				710.0	113.7							2111.9	364.3	2820.1
2006	344.2	1934.9				714.4	127.2						3567.3	2180.9	391.8	2683.8
2007	545.1	1909.0				910.8					74.1		4346.6	2379.4		2685.6
2008		2022.5									117.3		3266.4	2610.2		3046.2

y0	MG	ML	MM	MN	MO	MQ	MT	y1 MU	MV	MW	MX	MY	MZ	NA	NC	NE
1983	106.1	132.3						176.3			142.8	255.8			1067.7	
1984							310.2	152.9		105.5	136.3	253.8				104.2
1985		81.1	37.5				301.6	150.9								
1986		107.5	44.9					190.1				441.7				106.8
1987	44.4	122.2	51.7			845.8		255.7				127.1	59.3			122.8
1988		125.6	61.8					254.2				206.7	70.3			248.3
1989		117.2	121.6					240.0				212.6	91.4			
1990		136.7	128.8		480.7			276.7			164.0					
1991			133.7		569.6			286.5			185.5	191.9				
1992			137.6		438.0			297.9			187.0	126.7				
1993			168.3		487.2			327.9		79.3	199.6	252.5				
1994	37.2		171.9	22.8	849.7			362.6		52.0	197.1					
1995	39.2		185.5	31.9	729.1			402.7		83.0	114.6	271.5				
1996			177.6					420.6		120.2	116.5			936.2		
1997			172.3		964.5			399.5		128.5	131.8			996.3		
1998	41.2		169.6		914.5			377.8		100.3	131.0			595.4		
1999	38.2		174.7		930.7			386.1		88.2	229.2					
2000	38.1		732.3		881.1			376.6		106.4	293.4					
2001			703.8		889.4			367.9		46.9	331.5					
2002			730.7		904.7			368.5		65.8	349.3					
2003			790.3		972.4			438.8			331.3					
2004			834.2		1091.8			468.4			327.2					
2005	40.9				1391.3			457.3			310.6					
2006			6854.1		1572.0			441.7			318.9					
2007			7130.4		1766.9			455.6	568.1		329.0					
2008					1753.9			566.8	724.1		333.6					

y0	NG	NI	NL	NO	NP	NZ	PE	y1 PF	PG	PH	PK	PL	PM	PR	PS	PT
1983	412.9		916.0	929.0	66.3	723.0	104.6		302.7	73.9	70.3		730.3	780.7		129.2
1984	262.5		816.1	890.6		753.6	101.2		335.2	74.2			1052.0	818.8		
1985	271.5		822.9	920.7		741.9	94.6			31.4			1205.3	1190.7		141.7
1986			1148.3	1154.2		935.2				75.7			1521.6	1034.1		191.6
1987			1411.7	1276.0		1268.7	295.0	1562.3		75.4			1851.9	1118.3		237.3
1988			1462.1	1453.7		1491.0	129.5	1756.8		92.7			1868.6	1458.8		262.4
1989			1388.5	1427.6		1413.8		1726.1		119.0			1635.6	1137.2		274.0
1990			1669.9	1645.8	60.6	1495.5		2101.6		113.9				1228.6		349.3
1991				1639.9		1469.9	321.5			118.1			2083.1	1283.6		401.6
1992				1743.2						136.9				1363.7		484.8
1993	80.8	169.4		1542.6			239.5		628.7	139.8				1364.4		431.1
1994	92.9			1576.7			264.4			155.6				1557.1		432.4
1995	111.5	158.8		1825.2			450.7		448.4	176.7				1554.0		
1996		163.8		1861.6			475.3		440.4	91.8		276.5		1668.3		808.2
1997	196.4	177.3		1762.1			481.2			255.6				1506.9		723.5
1998		164.6		1805.0			444.8			70.3		347.5		1608.0		748.7
1999		174.2		1760.0			391.8			231.0	81.6	416.0		1688.0		747.0
2000		179.7		1675.1			379.7			71.0	76.4			1675.0		657.8
2001		186.1		1898.0			394.6			229.4	66.2	457.5		1829.9		
2002		187.6		2153.8			467.3			222.0	108.1	470.6		1795.8		713.0
2003				2386.3						216.0	118.7			1737.4		684.9
2004				2614.4			478.2			198.0	122.7	601.8		1795.2		980.4
2005				2999.5			470.3			213.0				1832.7		1029.8
2006				3142.5			519.3			230.1		804.5		1879.6		1064.1
2007				3718.1			536.3			356.8				1988.3	448.8	1224.9
2008				4061.1			719.2			333.2				2098.7	457.7	

y0	UY	VC	VE	VG	VI	YA	YU	y1 ZA	ZM	ZR	ZW
1983			757.0	721.3			187.1			87.6	333.6
1984			538.1				162.8		67.9		323.8
1985	186.2			1197.3			155.1		77.5		
1986	224.3		497.1				227.1		45.0		
1987	269.1						239.5				334.4
1988	295.8				1483.1		180.6		75.3		
1989	310.9		174.9		1438.1		187.3		83.4		
1990	317.7		187.5		1454.2		409.1		74.8		
1991	405.1						*		80.3		
1992	452.0						*				
1993	567.5							551.9			
1994	653.9	566.3						550.4			
1995	738.6	569.9				334.9			102.2		
1996		577.6				145.8			103.1		
1997		620.0	235.1								
1998		630.9	281.8								
1999		659.4	284.1								
2000			279.2								
2001			328.4								189.3
2002		780.7									303.0
2003		786.1									
2004											
2005									81.7		
2006									157.6		
2007											
2008											

Note: reported wages are based on type 3 standardization (lexicographic weighting).

* = exchange rate not available in IMF IFS