

Monitoring Progress in Gender Equality: The Labor Market in Middle Income Countries

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Abstract

How to monitor international progress towards gender equality? Will greater gender equality in the labor market hurt male workers or can it result in gains for all in the long run that could in turn be used for financing gender equality policies in the short-run? How can the international community help? These are the three main questions addressed in this paper whose statistical analysis focuses mainly on middle income countries.

Monitoring progress in gender equality is not as simple as it appears even for some easily quantifiable indicators (such as education). For example, school enrolment rates is a straightforward indicator but misses gender differences with respect to the contents of education – such as subjects studied. These difficulties get further complicated in the case of monitoring the progress in gender equality in the labor market and women’s empowerment as both represent outcomes of very complex and often contradictory processes. For example, an increase in the participation of women in the wage sector needs to be examined against whether women’s role in the invisible economy (and at home) has been reduced accordingly. Thus using indicators for single dimensions of the labor market can be misleading. In addition, even such simple indicators are not readily available in many countries or, when available at the national level, they are not reported to the international community. *The paper contributes to this discussion by examining the strengths and weakness of existing and potential indicators and concludes that, while for the time being existing indicators can continue to be employed, the search for better alternatives should continue.*

The paper also examines the effects of achieving equality “efficiently” in the labor market, that is, if observed gender differences in employment and pay were eliminated because women have the same labor supply characteristics as men (such as education and propensity to work in the open labor market – assuming that all else is shared equally between women and men in the family) and there is no discrimination by employers, policies or norms. The empirical results suggest that this can lead to significant output gains through increases in productivity that would in turn raise female wages significantly at small losses in male wages (in the short run). And as productivity increases over time, male wages need not be decreased in the long-run. *Thus removing barriers to women’s labor supply and eliminating discriminatory practices in the private and public spheres can be self-financed and enhance economic efficiency and benefit both women and men.*

These two issues, that is, the availability of useful statistical information and the introduction of gender equality policies, are of course a national responsibility that can only be supplemented, but not substituted, by international efforts. Thus gender equality policies and monitoring the MDGs should start at the national and sub-national levels reaching communities and families. However, the international community can also play a significant role by helping countries to build statistical capacity, improve the collection and analysis of sex-disaggregated national statistics, provide technical assistance to support countries on demand for policies and reforms leading to gender equality, help with analytical work and impact evaluations of programs, and assist with dissemination of good practices and public information campaigns. This can be further facilitated by greater harmonization/coordination of donor activities.

1. INTRODUCTION

Key to achieving the MGD objectives is the removal of barriers to women's economic participation, including in the area of employment. The Millennium Declaration aims to promote gender equality and the empowerment of women as basic human rights. The Declaration also maintains that giving women their fair share is the only way to effectively combat poverty, hunger and disease and to stimulate development that is truly sustainable. Thus gender is an area where human rights and economics converge, and the paper aims to provide some additional insights to the latter. The focus of this paper is mainly the middle-income countries though the gender challenges facing low-income countries are of course greater. This selectivity should be seen only as an additional step toward a better understanding of gender dynamics in the labor market, rather than an omission.

The paper is critical about the barriers to women's employment but also notes some positive developments in the reduction of gender inequality in the labor market. The barriers are many but not all stem from the labor market: many are the result of complex social, legal, cultural and political factors. Thus the gender employment target of the MDGs requires policies and indicators that go beyond the labor market. This is increasingly acknowledged by the international community and additional strategic policy areas and indicators are currently being discussed. But the paper also notes some improvements in the position of women in the labor market (in the sense of reduced segregation or increasing female earnings). It goes further by examining what can happen in the future, if the process of equalization continues and gender equality is hypothetically achieved. The empirical results (based on simulations) indicate that there will be substantial economic gains (measured as increases in GDP). These gains can materialize as the result of a more efficient functioning of the labor market that would increase productivity of all workers (men *and* women). Thus policies for greater gender equality in the labor market can be self-financed by the efficiency gains such policies would create.

Having provided an, admittedly, incomplete assessment of the labor markets, the paper also examines the usefulness of targets and indicators for increasing gender equality. The so far agreed MDG3 indicator in the area of employment monitors progress in the share of women in paid employment in the non-agricultural sector. More recently discussed indicators, though yet to be agreed, could track increases in women's earnings and reductions in occupational segregation. The paper examines the conceptual clarity and relevance of these indicators. It argues that using the share of employment in the non-agricultural sector as a positive indicator of progress is more appropriate for the long-run and, in any case, a rather narrow metric. If it were to be expanded (to include employment shares of other activities) it can become cumbersome for international comparisons. Still, such indicators fail to benchmark the position of women in the labor market (relatively to men or the particular development context and stage of the concerned economy). This is why the paper experiments with a more comprehensive measure of the difference in the employment distributions of women and men (the Duncan index) but inferences proved to be limited given the many data limitations at the international level. Furthermore, the paper warns that too much reliance on what happens in the visible part of the labor market misses the point that still much of women's welfare depends on agriculture and the rural non-farm sectors¹. This risks diverting the focus of some policies towards areas that are not immediately relevant for the

¹ About 70 percent of the MDGs' target group live in rural areas, particularly in Asia and Africa (World Bank, 2005). Thus, for most of the rural poor, agriculture is a critical component for the successful attainment of the MDGs.

empowerment of women at large. Though the case of measuring earnings is more straightforward, there are very few countries reporting wage statistics useful for international comparisons.

The paper recommends that, in the absence of better readily available indicators, the existing indicators can serve some useful purposes at the international level. This should be supplemented by a greater effort to develop labor market statistics at the national level. Surely, not all data are or should be collected by all developing countries. However, at present, even when countries do collect many data, they do not tabulate and systematically report them to the international agencies.

The development and collection of data is of course something that calls for capacity-building in the area of labor force statistics, as does also the need for greater sharing of international experiences in combating gender discrimination in the labor market. As the paper argues, the introduction of policies to combat labor market discrimination and additional resources spent to increase the human capital of women can be self-financed at the national level. But the need for better statistics and greater knowledge for designing and implementing egalitarian policies would require greater reliance on support from the donor community.

Donor assistance can therefore be critical. Donor interventions can help by building statistical capacity, improving the collection and analysis of sex-disaggregated national statistics, providing technical assistance to support countries on demand for policies and reforms leading to gender equality, helping with analytical work and impact evaluations of programs, assisting with dissemination of good practices and public information campaigns. This can be further facilitated by greater harmonization/coordination of donor activities.

In assessing the findings of this paper, one should bear in mind that the middle-income countries constitute a very diverse group. This group includes countries whose per capita incomes range from about \$770 to \$9,400, are found in all continents, have different resource bases and strikingly different laws and regulations, cultures and practices. Thus the paper should be seen as an attempt to establish some general patterns and issues that are common to the middle income countries and useful for monitoring the MDGs at the international level rather than providing specific insights to any particular country.

The paper is organized as follows. The next section provides an overview of the MDGs that puts in context the presentation (in Section 3) of the empirical findings on the gender gaps in the labor market as well as the discussion of the relevant employment metrics. In particular, Section 3 goes beyond the examination of one dimension of female employment (i.e. the share of wage employment in total employment) examines segregation in broader terms as well as two other labor statistics, that is, informality and labor force participation. Then Section 4 summarizes the barriers, in the labor market and elsewhere, to the equitable participation of women in the labor market and Section 5 provides an empirical analysis (with the aid of economic modeling) of “what if” barriers were removed and gender equality were achieved in the world today. Finally, Section 6 concludes and provides recommendations.

2. OVERVIEW OF THE MDGs

In 2000 members of 189 states of the United Nations adopted the Millennium Declaration that sets eight Millennium Development Goals (MDGs) most of which are to be achieved by 2015. The Declaration commits the international community and member states of the UN to the:

1. Eradication of extreme poverty and hunger
2. Achievement of universal primary education
3. Promotion of gender equality and empowerment of women
4. Reduction of child mortality
5. Improvement in maternal health
6. Combating HIV/AIDS, malaria and other diseases
7. Ensuring environmental sustainability
8. Developing a global partnership for development.

In addition to gender being included as a stand alone goal (MDG3) in affirmation to women's rights and gender equality as core values of development, gender has an important role for achieving all MDGs. Achieving gender equality—in education, health, labor markets, political life, and social opportunities—is fundamental to achieving all MDGs, including reducing poverty, ensuring environmental sustainability, and developing global partnerships for development². Thus, attempting to achieve the MDGs without promoting gender equality will both raise the costs and decrease the likelihood of achieving the other goals³.

Progress towards achieving the MDGs is to be monitored by 18 targets and 48 indicators defined in internationally comparable terms to facilitate tracking at global, regional and national levels. These 66 targets and indicators, if uniformly distributed among the MDGs, average at nearly 8 metrics for each MDG. However, for monitoring purposes the MDG3 is officially associated with only:

- a single *target*: the elimination of the gender disparity in primary and secondary education preferably by 2005, and at all levels by 2015; and
- two additional *indicators*, one in the area of employment (“the share of women in wage employment in the non-agricultural sector”) and another in the area of political decision-making (“the proportion of seats held by women in national parliament”).

Unlike other goals, the MDG3 is not specific to any particular sector or issue, since gender equality and women's rights underpin all other goals⁴. This presents difficulties in identifying a relevant metric for the employment indicator of the MDG3. The useful inferences one can draw from monitoring and comparing the employment indicator across countries (the subject of this paper) are limited and potentially misleading. Leaving aside that the employment indicator is a partial one (as it excludes unpaid work and also agricultural work which can be prevalent in many developing countries), women's employment outcomes usually

² Though the feasibility of achieving all or some of the MDGs within the agreed deadline may be questionable, MDGs should be seen as a strategic end-point for governments and the international community to strive and be held accountable for.

³ Carlsson and Valdivieso (2003).

⁴ For example, children's nutritional status tends to be more linked to the mother's earnings than the father's, and the link is even stronger for female headed households with no additional adult support (Buvinic, Lycette and McGreevy, 1983)

depend on the complex interaction of family arrangements, norms and laws, productive endowments and development processes that vary between the various economies.

Box 1. Proposed* Indicators for Tracking Progress Made in Strategic Priorities

Education

- The ratio of female to male gross enrolment rates in primary, secondary and tertiary education.
- The ratio of female to male completion rates in primary, secondary and tertiary education.

Sexual and Reproductive Health and Rights

- Proportion of demand satisfied
- Adolescent fertility rate

Infrastructure

- Hours per day (or year) women and men spend fetching water and collecting fuel

Property Rights

- Land ownership by sex
- Housing title, disaggregated by male, female or jointly held

Employment

- Share of informal employment (waged and self-employed, by sex in non-agricultural employment).
- Gender gaps in earnings in paid and self-employment.

Participation in National Parliaments and Local Government Bodies

- Percentage of women held seats in national parliament
- Percentage of women elected to local government bodies

Violence against Women

- Prevalence of domestic violence

* Includes the already agreed indicators; Proposed by the United Nations Millennium Project Task Force on *Education and Gender Equality*. Final Report. Taking Action: Achieving Gender Equality and the Empowerment of Women, October 2004.

Hence, intense discussions are rightly taking place with the view to improving the way the international community conceptualizes and monitors the MDG3. For example, the Millennium Project Task Force Report, *Taking Action*, proposed that empowering women and redressing gender inequalities will require the use of monitorable indicators in the following seven strategic priority areas:

1. strengthening opportunities for post-primary education for girls while simultaneously meeting commitments to universal primary education;
2. increasing adolescents' and women's access to a broad range of sexual and reproductive health information and services, including maternal health care, sex education, family planning services and, where legal, safe abortion services;
3. investing in infrastructure designed to reduce women's time burdens, particularly water and sanitation, energy and transport infrastructures;
4. guaranteeing women's and girls' property and inheritance rights;
5. eliminating inequality in employment by decreasing women's reliance on informal employment, closing gender gaps in earnings, reducing occupational segregation, and otherwise eliminating labor market discrimination;
6. increasing women's share of seats in national parliaments and local governmental bodies; and
7. significantly reducing violence against girls and women.

Thus, the discussions about the MDG relating to gender equality and empowerment are moving in the right direction. The gender indicators are being expanded (Box 1) and, with respect to the employment indicator of the MDG3, additional dimensions have been added to include information on earnings (wage discrimination) and segregation (employment discrimination) along with the gender indicator of the share of in wage non-agricultural employment that relates to the duality between formal and informal employment (a concern for both female and male workers).

This is a welcome development and this paper contributes to the debate by examining global patterns and trends of employment and wages in high-income and developing (mainly middle-income) countries in order to assess their economic significance and reliability of the indicators aiming to monitor progress in gender equality in the labor market.

3. GENDER DIFFERENCES IN THE LABOR MARKET

Employment, Segregation and Wages

Though female labor force participation rates are still lower than men's, they have been increasing over time and more than half of women around the world are in the labor force today, and women constitute globally approximately four out of ten of all workers. However, much of the work performed by women is not paid – an outcome of the traditional division of labor within the household or the nature of employment in family farms. These differences in employment and wages outcomes of women and men are examined below.

When women are in the labor force, they usually perform different tasks and work in different sectors than men. The conditions of women's employment tend also to be "atypical" (i.e., part-time, temporary, or casual work, work in the home and subcontracting). In terms of occupations, for example, nearly two-thirds of women in manufacturing are categorized as laborers, operators and production workers while only a few can be found in the administrative and managerial positions that are predominantly held by men. Women workers are usually employed in a limited number of industrial sectors: more than two-thirds of the global labor force in garment production is female--accounting for almost one-fifth of the total female labor force in manufacturing. With respect to employment status, the majority of family workers are female and, it may be added, often unpaid.

Even when men and women work in the same sector, they carry out different tasks at different levels of responsibilities. This phenomenon, *sex segregation* in the labor force, makes female and male workers work in "compartmentalized" activities that usually lead to different rewards and different career opportunities even though workers may have comparable labor market attributes.

Sex segregation is a multidimensional concept and, concentrating on only one dimension of employment (such as the share of women in non-agricultural employment) is bound to leave many other dimensions unmasked. In addition, international comparisons based on only one dimension can provide only limited insights as different countries have different economic and social characteristics and structures. This difficulty is now recognized among the agencies dealing with the MDG3 and additional dimensions of employment indicators are being considered, for example, by adding indicators of shares of women in other sectors, too (see Appendix Table A-1). However, as the layout of the appendix table suggests, the presentation of international data of various dimensions of employment can quickly become very complex.

In addition, considering just one female characteristic of employment but not the corresponding measure for men or the development stage of the specific country in which women workers operate may provide misleading information. For example, is a 30 percent share of women in wage non-agricultural employment a good or a bad thing? Assessing the value of this figure may depend critically on whether the share of women in employment (agricultural and non-agricultural) is 20 or 40 percent. If the former (20 percent), then a 30 percent share in non-agricultural employment can be generally thought of a good. If the latter (40 percent), it may or may not be so – if, for example, wage employment comes with less flexibility in working conditions. Alternatively, in terms of changes over time, what can one infer by the finding that, say, the share of women in wage non-agricultural employment increased by 10 percent? Not much in the absence of other information – such as about the labor force participation rate: If the female labor force participation rate increased by much more than 10 percent, then this increase in women’s share in wage non-agricultural employment means more informalization – assuming constant male labor force participation rates.

An alternative can be to use some summary statistic that would evaluate differences in the whole distribution of women and men across different sectors. This would be closer to measuring gender segregation and is what the paper does below utilizing information from the ILO employment data on the employment distribution of women and men by industries and occupations (at the 2-digit level).

A. Segregation and the Duncan Index

Differences in the employment distributions of women and men in the labor market can be summarized in many different ways but for current purposes the paper uses the Duncan index.⁵ This is an index of employment *dissimilarity* between any two groups of workers. In the case of women and men the Duncan index, D , takes the form

$$D = \frac{1}{2} \sum_{i=1}^N |f_i - m_i|$$

where $i = 1, 2, \dots, N$ is the total number of sectors of interest (for example, industries or occupations), f_i and m_i are ratios of female and male employment in sector i to the number of women and men in their respective labor forces, and the summation refers to the absolute differences between women's and men's ratios within each sector. The minimum value of the index is zero; it occurs when women and men have identical employment distributions across sectors, i.e., when the percentage of women or men in each sector is the same as their percentage in total employment. The maximum value, unity, occurs when there is complete dissimilarity (no women and men work in the same sector)⁶.

⁵ Duncan and Duncan (1955).

⁶ Naturally, the value of the Duncan index is sensitive to the number of categories (“digits”) adopted and the classifications used. Therefore, choices about how many digits to consider and which classification to adopt are affecting comparisons both over time and across countries. This is why the paper splits the time period in two (corresponding to a change in the industrial and occupational classification) and comparing separately the initial and end points of the first and the second period.

The paper calculates the value of the Duncan index, first, in the longer historical context (from the 1950s till the 1980/early 1990s) based on information derive from national censuses; and, second, in the more recent period (1980s till today) based on labor force surveys and establishment surveys. This is driven by the fact that the data come from different sources (censuses or surveys) and classifications have changed over time. For example, the census information comes primarily in the form of seven comparable over time industries and seven occupations. The survey data use industrial (ISIC) and occupational (ISOC) classifications as they were revised over time. By examining the behavior of the Duncan index at different points in time and on the basis of different classifications provides a better understanding of the segregation and the role statistics can play for monitoring its changes over time.

Historical Trends 1950s-1980s

Census data suggest that the gender industrial segregation for all types of workers declined worldwide for both all workers and for workers in paid employment only. For all workers the value of the Duncan index declined from 0.35 to 0.31 the 1950s/1960s and the 1970s/1980s (Table 1). The industrial segregation for employees declined much faster. Albeit higher initially (0.40 in the earlier period), the value of the Duncan index for employees became practically equal to that for all workers in the latter period (0.31).

Though occupational segregation among all workers registered practically no change between the two periods under consideration (0.39 and 0.38), the employment dissimilarity among employees declined from 0.44 to 0.40. One explanation for the more rapid decline in segregation among employees compared with all workers may be that market forces are less discriminating against women than non-economic factors: It may be more difficult for women to break sex stereotypes in self-employment and family work that is undertaken more often at the village or community level⁷.

Though from historical perspective gender segregation in employment has shown a tendency to decline, this understates the narrowing of the gender employment differentials over time due to aggregation biases. The calculations above are based on seven occupations and seven industries which are too broad (see note to table 1). Thus changes in the composition of employment within individual sectors go very much unnoticed in the aggregate statistics. For example, domestic service was the biggest single occupational category for women in Britain from the first census enumeration (1851) till World War II. This “social, community and personal services” industry continued to be the largest employer of women in the post-war era though domestic servants became a practically extinct group.

⁷ Note, however, that the Duncan index is affected both by shares of workers in different sectors as well as the size of the sectors. Changes in the value of the index over time can therefore refer genuine changes in the sectoral shares of workers but also structural effects arising from the different growth rates of different sectors (for example, a decline in the share of agriculture and an increase in the share of services). Thus the resilience of the value of the Duncan index for all workers may be affected by changes from both, for example, a change in the share of the self-employed in the total labor force as well as changes in the share of women and men in self-employment. It is unclear to what extent these two elements can compensate each other.

Table 1: World Value of Duncan Index (gender employment segregation)		
	Early period (1950-1960s)	Late (1970s-1980s)
Industry		
All workers	0.346	0.306
Employees	0.395	0.310
Occupations		
All workers	0.386	0.380
Employees	0.442	0.403
<p>The reported values are unweighted averages of country values of the Duncan index calculated at two points in time in 61 countries (for industries) and 45 countries (for occupations). The country values are calculated over 7 industries (agriculture, mining, manufacturing, construction, utilities, transport and services) and 7 occupations (professional, administrative, clerical, sales, services, farmer and production). All workers refers to wage employment, self-employment and family work.</p> <p>Sources: ILO (International Labour Organization) (1990) Yearbook of Labour Statistics: Retrospective Edition on Population Censuses 1945-1989. Geneva: ILO.; Tzannatos (1999)</p>		

As will become clearer shortly, a few broad industrial or occupational categories (though better than just using, say, the share women in wage employment or some other unique dimension of the labor market) are still too broad for monitoring progress in gender equality. The next section examines the behavior of the Duncan index since the 1980s as this is more relevant at this point of time. This can also shed some additional light whether the use of more recent and refined sectoral classifications may capture better production realities in the era of globalization.

The 1980s and the Start of Globalization

In the more recent period, the paper assesses the value of the index again for two different groupings of workers (all workers and those in paid employment only) but for six different classifications. First, *all workers* are classified according to two separate industrial classifications (ISIC 1968 and ISIC 1990) and then two occupational classifications (ISCO 1968 and ISCO 1988)⁸. These four groups are complemented by two more based on the industrial classification of only on *paid workers* (employees). Each group is observed at two points in time and consists of countries whose number in the sample varies from 41 to 79. The ISIC68 and ISCO68 are earlier classifications and in our sample cover on average the period from 1979 to 1996. The ISIC90 and ISCO88 typically cover the period from around 1996 to 2003. A worldwide picture of value of the index at the individual country level is presented in Appendix Table A-2.

In terms of global trends (irrespective of country income level) the main conclusion from examining the more recent period is that segregation is rather resilient. The data presented in the last column of Table 2 indicate that the value of the index has changed rather little since the 1980s (see also Appendix Table A-2 for trends in individual countries).

Somewhat paradoxically, in some cases segregation seems to be lower in middle-income countries compared to high-income ones. For example, this applies to the occupational classification for all workers and the industrial classification for employees only. Though it is hard to ascribe much faith to this finding, this provides some warning about the precarious nature of comparing international statistics on employment. This point is further elaborated in Box 2.

⁸ See Annex 1 for a description of the various industrial and occupational classifications.

When disaggregated further by country income level, the index for all workers seems to have moved more or less the same way over time for both high- and middle-income countries and also in terms of both the industrial and occupational classifications. In turn, when examining employees only, the value of the index is again comparable between high- and middle-income countries though somewhat declining for the high income countries. The converse is true when the later industrial classification is used, and the value of the index seems to be increasing for high-income countries.

	Average Early Year	Duncan 1	Average Late Year	Duncan 2	Change in Duncan	
					Total*	Annual*
ISIC68 / All Workers						
MI – 26	1982	0.371	1998	0.368	-0.4%	0.0%
HI 23	1976	0.286	1996	0.284	-0.2%	0.0%
ISIC903 /All Workers						
MI 50	1997	0.337	2002	0.343	0.6%	0.1%
HI 29	1994	0.314	2003	0.321	0.7%	0.1%
ISCO68 / All Workers						
MI – 21	1981	0.389	1997	0.379	-1.0%	-0.1%
HI – 20	1976	0.353	1995	0.352	0.0%	0.0%
ISCO88 All Workers						
MI – 51	1997	0.348	2003	0.326	-2.2%	-0.4%
HI – 38	1994	0.360	2004	0.364	0.4%	0.0%
ISIC68 / Employees						
MI – 30	1980	0.244	1996	0.256	1.2%	0.1%
HI – 24	1977	0.251	1996	0.237	-1.4%	-0.1%
ISIC90 Employees						
MI – 37	1996	0.342	2003	0.340	-0.1%	0.0%
HI – 28	1995	0.301	2003	0.319	1.8%	0.2%
Total = simply difference between Duncan 1 and Duncan 2; Adjusted = Total divided by the time difference between the two values of the index.						
Notes: (a) MI refers to Middle income countries and HI means high income countries followed by the number of countries in the sample for each group.						
Sources: Calculated from Appendix Table A-2.						

These findings, and the previous ones derived in a more historical context, suggest that aggregate examinations of employment structures in different countries, that are probably the ones that the internationally community will have to rely on for comparative purposes, fail to capture important distinctions and trends at the national level. As an example, using the industrial classification of 1968 (ISEC68), the value of the index for Sweden was .42 in 1969 and had fallen to .27 by 1994. However, using the more recent industrial classification (ISIC90) the value of the index was .40 in the very same last year (1994) and was reduced only to .39 by 2004 (See Appendix Table A-2). This suggests substantial artificial differences in terms of levels and trends of segregation when different aggregations are used, even for a country that is ranked among the top ones in the world in the areas of statistics and gender equality.

One possible explanation for decline in the value of the Duncan index from the 1950s to the 1980s but not since then is that the newer classifications reflect more accurately the nature of production in the globalization era. As employment and industrial organizations have become

more complex over time in the wake of the knowledge economy and the emergence of flexible arrangements including subcontracting and outsourcing and so on, changing classifications can capture better the changing economic environment and thus measure gender segregation in more meaningful terms. When this is done, as in the case of focusing on only the last decade, progress towards gender equality was shown to be smaller.

Box 2: The mismeasured female worker

Sweden, where – as in a few other countries - gender equality is today as close as it can be, provides a striking example on the mis-measurement of female work. Women’s participation in agricultural activities was initially excluded from the measurement of the labor force (only 751 such women were included in the statistics against nearly a quarter-of-a-million married male farmers in 1930). The situation continued to be very much the same after the end of World War II. The situation changed somewhat in the censuses of the 1950 and in 1960. In the earlier date women's work in agricultural households counted only if the work was the responsibility of another member of the household (this referred in effect to grown-up daughters or domestic workers). In 1960 the definition expanded to include those who spent half of the normal working time on work. The increase in the share of male farmers with working wives was significant (it more than doubled, from 3 percent to 8 percent) but still small in absolute numbers. The situation changed radically in the 1960s and the 1965 census expanded the definition of work to include agricultural activities (such as caring of animals, milking and so on). The "increase" in the number of working women was dramatic, from 8 percent to 52 percent.

Working Farmers in Sweden, Various Censuses

	1930	1945	1950	1960	1965
Female	751	151	5217	10387	58283
Male	221,777	212,594	195,764	135,263	104,823
% of farmers with working wives	0	0	3	8	56
Source: Tzannatos (1999) adapted from Nyberg (1993).					

Similarly, according to the Dominican census of 1981 rural female labor force participation was 21 percent but a study conducted three years later suggested a figure of 84 percent: The difference was due to the exclusion from the census estimates of activities such as garden cultivation and animal care. In India, narrow and broad definitions of what constitutes work result in estimates of participation rates that range between 13 percent and 88 percent respectively. Finally, according to the Turkish census of 1980 there were 40,000 carpet weavers but estimates based on annual carpet production and number of looms in operation bring the figure of carpet weavers to around half a million most of them women.

Such errors in measuring the labor force have unavoidable implications for all other dimensions of employment, including segregation as well as the measurement of earnings and wages.

Sources: Berik, 1987 ; ILO, 1994.

In fact, some evidence points to the fact that an increase in segregation is not necessarily synonymous with immediately poorer opportunities or labor market outcomes for women. In Puerto Rico, segregation patterns have been found to be consistent with median annual earnings of women that are quite close to those of men (Presser and Kishor, 1991). An explanation for this is that women are offered more opportunities for upward mobility when production is organized around strictly segregated occupations than when women and men work together. Under such an

arrangement, women will be required to supervise other women and get better jobs than they would otherwise have, while in male occupations some men simply have to accept low status/pay jobs. On similar grounds, horizontal desegregation does not unambiguously represent an improvement in the labor market position of women: the feminization of previously male dominated jobs can be associated with deteriorating employment conditions due to the increase in *total* labor supply that in turn depresses wages for both women and men in those jobs⁹. This may also lead to an increase in vertical segregation if men move up to top positions.

Informality

The focus on wage employment by the MDG3 may overemphasize the role of the formal sector for women's empowerment, as the informal sector remains *de facto* the most important source for generating means (often in kind, rather than income) for survival. The female share of nonagricultural wage employment is less than 50 percent in 96 out of 105 countries for which data are available. Development policies can hardly afford not to take into account how welcome changes in the formal sector are linked with the invisible economy. For example, an increase in the share of paid employment may be detrimental to women if it comes with no compensatory decline in their responsibilities in the non- monetized economy. The role of the distributional "rules" for women's and men's time allocations within the household and in the informal sector should not be overlooked.

Yet, economists typically define the informal sector as a “residual” (“all but formal work”) and tend to treat it as a uniform entity. This can be highly misleading as informality involves different legal definitions (which can divert from economic ones), different legislation (a legal framework that is nonexistent, inadequate or not enforced), different practices (implicitly, behavior), different economic activities (from agriculture or domestic work to consultancy services), different persons with different motivations (workers and employers) and different economic units (independent households and enterprises).

Furthermore, there are many *legal* activities that fall outside the normal cover of the *labor law*¹⁰. These activities involve workers in autonomous/independent/self-employed workers or workers on their own account, family members, members of producer cooperatives (since there is no dependent relationship), artisans, persons in religious activities, workers engaged in voluntary or charitable activities, many workers whose employer is the State (armed forces and police; civil servants and judges), or are in specific sectors (agriculture, maritime work, air transport and so on).

Lumping as informal workers those not covered by labor law involves many who come under different facets of economic informality and legal informality (e.g. not covered by the labor imply does not imply immunity form civil laws). Such an approach is bound to measure

⁹ Horizontal segregation exists when women and men are employed in different occupational groups such as management and the professional and technical vocations. Vertical segregation exists when men and women work in the same occupational group, such as teachers, but men do the more skilled, more responsible and better paid activities while women perform complementary activities, for example, within the teaching profession the majority of headmasters are men, within healthcare fields the majority of women are nurses. Though this distinction is followed in much of the literature on segregation, treating vertical and horizontal segregation as separable, that is as mathematical concepts suggesting two unrelated dimensions, is not always appropriate, for often the same social processes lead to both vertical and horizontal segregation.

¹⁰ de Medina (2005).

“apples and oranges” and masks distinctions between what can be "informal work in some agreed sense" at some places at some times, unregulated work, illegal work, immoral activities, undetectable/ underground work and so on.

In conclusion, while informality is an elusive term, it needs to be examined as part of monitoring the progress towards women’s empowerment at the national level – even though it does not render itself easily to international comparisons in the context of the MDG 3. In addition to its importance in quantitative terms, the informal sector can be “good” for women in as much as it constitutes a viable alternative via, for example, agricultural activities. It can of course be “bad” if participation in the informal sector is the result of a ‘failure’ to access the formal labor market¹¹.

Labor force participation.

How far can one assess the position of women in the labor market by ignoring one of the grand ratios in economics: the labor force participation rate? The improvement in the earnings and employment outcomes of female workers in the labor market in today’s high income countries was more or less closely associated (if only after an initial lag) with rising numbers of women in the labor force¹². Can the labor force participation rate then be included as an additional indicator for monitoring the employment MDG3? On the one hand, it goes without saying that the labor market outcomes of women cannot be measured only in qualitative terms or only in relative terms as shares or in comparison to men’s outcomes. The labor force participation rate provides the envelop within which all other employment indicators take place.

On the other hand, the use of the labor force participation rate can be questionable. For example, an increase in the female labor force participation rate can signify increased need and poverty in the sense that one earner is no longer enough for a family. Alternatively, it can indicate more choices for women or simply greater cultural admission that women can work openly (see above, Box 2) or may simply tell us little if discouraged workers (included in out of the labor force) or unemployment (included in the labor force participation) are mismeasured. These issues make comparisons across countries difficult.

Though the debate on this is far from settled, the labor force participation rate is effectively the *sine qua non* for the other labor market outcomes of women. Though in itself it is not a statistic void of problems, what it calls for is for its better measurement and greater consideration of its role in the analytical evaluations of the gender situation in individual countries in the context of the MDGs.

¹¹ While it is unclear whether formal or informal employment is more advantageous to women amidst the prevailing conditions in many developing countries in the short-run, formal employment does have some advantages over informal employment in the long run. See, for example, Maloney (2004).

¹² More generally and on a global basis, the male participation rates have shown some tendency to decline over time. This is mainly because of increasing education enrollments among the young and the availability of pensions for older workers. In contrast, the female participation rate have increased over time. During the last three-four decades, the working age population and the male labor force increased by nearly two percent per annum. The female labor force increased by nearly twice as much (3.5 percent per annum). Today, nearly half of women aged 20-59 are in the labor force compared to only one-third in the 1950s. The gender gap in labor force participation rates has narrowed significantly.

B. Wages

In addition to gender differences in employment, pay differences are also significant. So far, the paper concentrated on the employment dimension of gender differences but perhaps more important is what do women get in return for offering their labor in the labor market. Even when it attracts pay, women's work is valued less than men's. Typically women's earnings average around two-thirds of men's. Overall, perhaps *no more than one-fifth of the world's wages accrue to women* because fewer women than men work for wages, women are usually engaged in the low-paying sectors and, even in these sectors, women are usually paid less than men doing the same job.

As a general rule, female relative (to male) wages tend to increase over time. The unweighted average in our sample¹³ of annual changes in relative wages comes to 0.3 of one percent per annum. This implies that for every ten years, female relative wages will increase by nearly 14 percent. The average female relative wage of the examined countries stood at 80 percent of male wages – thus assuming linear and uniform growth over time, the worldwide average would be around 92 percent in ten years from now¹⁴.

However, monitoring wage trends at the international level is no less complicated than the case of employment segregation. This can be explained by differences in the definitions, survey design and sectoral composition of employment that affect the calculation of the reported economywide average wages. In addition, the data may refer to the urban sector, non-agricultural employment or the whole economy and so on.

The data show that there is significant cross-country variation in female relative wages. For example, while the trend is mainly positive (middle column in Table 3), of the 55 countries for which information exists, 12 (including some high income countries) experienced a statistical decrease in female relative (to male) wage. However, in only six countries (Bahrain, Colombia, Botswana, NL Antilles, Kazakhstan and Thailand) the decrease was more than one percent per annum. For three of these six countries (Colombia, NL Antilles and Thailand) the observation period is rather short, four years or less. Thus, this negative finding may reflect more a short-run variation than a consistent trend¹⁵. In fact, the only two regions that have seen a decline in female relative wages in the recent period are the ones that have the highest relative earnings (MENA and Africa: Table 3).

¹³ The paper uses again the relevant ILO database that provides usable information for 55 countries at two points in time (Appendix Table A-3).

¹⁴ The difficulty in making generalization of this sort can be manifested that in our sample female relative wages averaged 76 percent in 1990 (the average year of our early observations) compared to 80 percent in 2000 (the average year of our late observations). This calculation gives an average annual rate of growth of nearly 0.5 of one percent.

¹⁵ The correlation coefficient between changes in female relative wages and number of years to which these changes relate is positive and significant (.20) suggesting that indeed female relative wages tend to increase in the longer run.

1980s/1990s		% change between the two periods	1990s/2000s	
MENA	0.95	-2%	MENA	0.93
AFR	0.89	-2%	EA/ Other	0.90
Other Asia	0.88	3%	AFR	0.87
Nordic	0.83	1%	Nordic	0.84
LAC	0.77	1%	LAC	0.78
ECA	0.72	7%	ECA	0.77
Other Europe	0.71	7%	North EU/AUS/NZ	0.76
North EU/AUS/NZ	0.70	9%	Other Europe	0.76
East Asia/High Income	0.60	23%	EA/High Income	0.74

Note: the country groups are as follows: Nordic: Finland, Iceland, Norway, Sweden; North EU etc: Australia, New Zealand, Austria, Belgium, Denmark, France, Luxembourg, Netherlands, Switzerland, United Kingdom; Other Europe: Gibraltar, Ireland, Malta, Portugal, Cyprus; EA High Income: Hong Kong, Japan, Korea, Singapore; ECA: Belarus, Bulgaria, Hungary, Latvia, Lithuania, Turkey, Ukraine, Georgia, Kazakhstan; LAC: Brazil, Colombia, Costa Rica, El Salvador, Guadeloupe, Mexico, Netherlands Antilles, Paraguay; MENA: Bahrain, Jordan, West bank and Gaza strip, Egypt; Africa: Botswana, Kenya, Swaziland, Tanzania; Other Asia: Mongolia, Philippines, Sri Lanka, Thailand.

Source: Calculated from Appendix Table A-3

These international comparisons are however rather crude and can be misleading. What can one infer about gender equality from the fact that women in the regions usually associated with greatest gender differences (such as MENA, Africa and the low income Asian countries) have higher female relative earnings than, say, the high income European or East Asian economies? Is this an indication of greater equality or just the result of selectivity because only the most productive women are working? Here the earlier comment on the need to take into account the overall rate of female labor force participation is relevant: it is likely that female wages are observed mainly for those women facing high rewards in the labor market while male wages are based on all male workers, that is, those who have high wages and those who have low wages. Also, it is probable that the high relative earnings of women in paid employment in developing countries are affected disproportionately by those who are engaged in government jobs. This is manifested by the fact that some developing countries reported average female earnings in paid employment exceed those of men or are close to parity with men's wages¹⁶.

4. BARRIERS TO THE PARTICIPATION OF WOMEN IN THE LABOR MARKET

Why are women's outcomes in the labor market inferior to those of men? Though the case of wage and employment discrimination in the labor market is compelling, there are also factors that operate before women enter the labor market (pre-market discrimination) or outside the labor market when women do actually work. Some of these factors are listed below.

Often gender inequality starts early, before women join the labor market, and keeps women at a disadvantage throughout their lives. In some countries, infant girls are less likely to survive than infant boys because of parental discrimination and neglect – even though

¹⁶ For example, countries that report female relative earnings in excess of 90 percent are Bahrain, Costa Rica, Hong Kong, Kenya, Panama, the Philippines, Tanzania, Swaziland and Mongolia.

biologically infant girls should survive in greater numbers. Girls are more likely to drop out of school and to receive less education than boys because of family discrimination, education expenses, and household duties.

In all, women's potential (and empowerment) is restricted because they control fewer resources, face more constraints and have fewer opportunities than men. When in the labor market, married women have less control of their earnings than men – often very little or none depending on norms and legal and cultural treatment of family resources. Some differences arise from differences in the reproductive spheres¹⁷ that manifest themselves in the historically lower female labor force participation rates than men's that reduce women's attachment to the labor force and creates gender specific expectations for future generations (including less investment in the human capital of girls) or induces employers to consider women as marginal workers in whom it will not be worth providing firm specific training or extent senior positions.

Though there are many factors affecting the labor market outcomes of women, some important ones include¹⁸:

Differential treatment of women in the labor market:

- 1) Employer based discrimination
- 2) Discriminatory labor laws
- 3) Conditioning taxation and social insurance on gender/family
- 4) Unequal access to finance and microcredit
- 5) Differential mobility (internal/external migration).

Public policies and practices:

- 6) Lack of gender sensitive budgeting (for better allocation of resources)
- 7) Lack of gender disaggregated data for informed analysis, design of policies, planning, monitoring and evaluation
- 8) Education (e.g. curricula or differential public provision due to norms)
- 9) Health (population policies, sexual and reproductive health, protection against violence and harassment)
- 10) Limited child care and support for the elderly or the disable – areas traditionally catered by women's unpaid labor (that increase women's "time-poverty")
- 11) Lack of adequate infrastructure (housing, energy, water and environment)
- 12) Discriminatory provisions in family and civil laws; land registration, inheritance etc).

¹⁷ Standard theory for the empowerment of minorities may give us insufficient guidance as unlike other minority groups (say, race or religion) women are found in the majority group in equal proportions as men. To put it graphically, there is quite a difference if inequality is the result of class-based production or sex-based reproduction.

¹⁸ The effects of these factors can be intensified by globalization to the extent that rapid economic changes are not accompanied by equally rapid changes in social arrangements or the introduction of effective laws and public policies that can mitigate the costs of adjustment. On the other hand, there can be differential treatment that can contribute to equality, for example, if microcredit schemes provide preferential access to women.

Family and broader social arrangements:

- 13) Less education for girls
- 14) Early marriages
- 15) Polygamy
- 16) Inheritance
- 17) Norms
- 18) Limited awareness and representation in decision making.

Why do these barriers and discriminatory provisions exist? The answers are complex but in general terms countries have their own social values and face historical, political and economic constraints. The same way one cannot abolish child labor in the absence of viable economic alternatives, changing the visible economic role of women entails changes in the invisible economy as well as in institutions and norms. Some of the barriers simply require political will/mandate and can be done at a stroke of a pen – though compliance may remain elusive for some time. But others require measures that have - in political – heavy economic costs. For example, “socializing” the costs of reproduction” (as many northern European countries have done) requires elaborate tax/benefit structures and heavy institutional capacity. Finally, in addition to political and economic implications, removing what appears to be barriers to women may be locally accepted on the basis of religion and cultural norms.

In this complex environment, the move to expand the monitoring of progress towards the MDG3 with the use of additional indicators is the right one. In addition to indicators for female education, actions and monitoring progress in the areas of sexual and reproductive health, infrastructure designed to reduce women’s time burdens, women’s and girls’ property and inheritance rights as well as political participation and violence are all in the right direction.

Of course, this expansion should be based on a gender (rather than just a “women’s”) approach. For example, it is a sad fact that women’s education attainment often lags behind that of men’s, and the importance of policies *to reduce the under-education of girls* cannot be overstated. However, *human development policies* that aim to build up the human capital of a country can also benefit from a better understanding why in many countries men’s enrolments lag behind those of women’s (see Annex 3). Similarly, while maternity protection and minimizing the conflict between work and family are both desirable, solutions can be also sought in changing work patterns more broadly. For example, a model based on long working hours (such as in the US and the UK) can reinforce gender roles as men can afford or are expected to work a long week but women with children cannot. Determining the right amount of weekly working hours, making more part-time available to women *and men*, and breaking the stigma of the man working part-time remain big challenges for re-balancing gender roles in and out of the working place even in the developed countries¹⁹.

What is therefore important is for equality to be achieved by improving women’s position rather than reducing that of men. This is the issue addressed in the next section: if barriers to women’s employment were to be removed and gender equality to be achieved, would this mean a loss to men? Or would the process towards equality in the labor market lead to output gains from an economic perspective and losses to men from a political economy perspective? Though an increase in output can be agreed to be desirable by all, if greater gender equality means that men

¹⁹ Similarly, expanding maternity leave to paternity leave can contribute to greater equality both in the labor market and within the family, especially when paternity leave is not transferable from father to mothers, and fathers lose whatever part of such leave they do not take up.

would be adversely affected, this can lead to resistance by men who are more populous in the labor market and more empowered at the political level.

5. WHAT IF THE BARRIERS WERE REMOVED?

This section examines what would happen to national output and male wages if women workers ceased to be concentrated in the female dominated jobs (elimination of occupational segregation) reduction of segregation) and female wages were equalized to male wages. This is answer with the aid of some economic modeling²⁰ whose only certain outcome is to predict, obviously, that women would be clear winners in such a scenario.

More formally, women's crowding in certain sectors and jobs reduces their wages as well as output while men gain in relative (to women's) terms and possibly in absolute terms. If gender differences in the labor market are the result of discrimination and women are excluded, for example, from some occupations and crowded in others, then, by virtue of the distorted relative labor supply across occupations, pay would be higher in male-dominated occupations and lower in female-dominated occupations than it would be under nondiscriminatory conditions. Another effect of segregation would be a welfare loss (reduction in total output) arising from the misallocation of the labor force: in plain terms, competent female workers are excluded from the most productive activities they can do which are then undertaken by less able (compared to women) men.

To find out the effects of achieving equality in the labor market, one has first to estimate output under current conditions, compare it to the new level of output under equality and then examine the distributional sequences on employment and wages separately for women and men. The difference between these two estimates of output provide an indication of the potential (maximum) welfare gains that could be achieved, if women had the same characteristics and preferences as men, and they had the same occupational wages within the same industries as men. This process will not necessarily lead to the same economywide average wages between women and men as the model assumes that differences in the industrial distribution of women and men remain the same (see Annex 2 for a formal derivation of the model as well as its underlying assumptions and qualifications).

A prerequisite for the achieving gender equality is not just the removal of the "labor demand" discrimination but also the removal of the many other barriers mentioned. The results of the current exercise are indicative of what can happen in the *long-run* when (1) women and men are equally endowed with human capital, (2) there is no employer discrimination, (3) family constraints are no more binding upon women than men, and (4) the gender specific effects of social norms and other institutional factors have withered away.

Though, obviously, subject to a series of qualifications and rather suggestive, the results of the simulations suggest that women's wages can increase significantly at practically little loss in male wages. The regional results are presented in Table 4 (columns 1 and 2) and by income in Figure 2. The results are based on the ILO data on industrial employment that include information on female and male wages separately for different industries. Each industry is assumed to have two occupations, a low pay one as proxied by the female employment in the concerned industry, and a

²⁰ A method to evaluate the wage and output effects under conditions of discrimination has been proposed in the context of racial segregation (Bergmann, 1971). This method can be extended to apply in a gender context (Tzannatos, 1988). See explanations in Annex 2.

high pay one, as proxied by the male employment. What stands out in the results is that, under the assumptions of the model, female wages can increase significantly at low costs to male wages.

In fact, in the process of achieving greater equality, male wages need not decrease at all in the long run. Part of the explanation rests on the fact that there can be significant output gains (column 3). In other words, a reduction in segregation is not a purely redistributive issue; the "size of the pie" increases with women claiming a bigger share. In fact, given that the economy grows over time, men's wages need not decline in absolute terms--a point worth noting because with zero-sum gains the losers (in this case men) may devise strategies for forestalling equality. This phenomenon has been emphasized in the political economy literature and is known as "the reversal rest": Those losing from economic change can bribe the winners and forestall the move toward a potentially Pareto-efficient outcome.

Region	Increase in Female Wages	Decrease in Male Wages	Output (GDP) gains	% of LF to be reallocated
Nordic	9	-4	2	18
North EU/AUS/NZ	18	-6	3	26
South Europe	28	-5	5	29
East Asia, High Income	38	-6	6	32
East Europe	19	-5	4	26
LAC	18	-3	3	15
Country average (unwghtd)	22	-5	4	25

Notes: Nordic = Denmark, Finland, Norway, Sweden; North EU etc: Australia, Belgium France, the Netherlands, New Zealand, Switzerland, UK; South Europe = Cyprus, Ireland, Portugal, Gibraltar; East Asia High Income: Japan, Singapore, South Korea and Taiwan; East Europe = Lithuania, Croatia, Latvia, Bulgaria, Kazakhstan, Ukraine, Georgia; LAC = Brazil, Costa Rica, Mexico.
Sources: Appendix Table A-4

So, a reduction in equality can have beneficial effects on women and men. However, a point that need to be mentioned is that it may take considerable time before equality is achieved: Column 4 indicates the percentage of the labor force that would have to be reshuffled to achieve the gains estimated in the current exercise. The mere size of labor reallocations (the shift of women to men's jobs and vice versa) is not something that can be achieved in the short-run given that the main avenue for changes of existing labor market patterns are through annual *flows* to the labor force, and these are usually only a fraction of the labor force *stock*.²¹

The regional variation of the results suggest that the Nordic countries would be the least to benefit from gender equalization, and this is expected as these group of countries are closer to equality than others. This is also true, but to a lesser extend, for the most industrialized countries of Europe, Australia and New Zealand. The high income countries in the sample from East Asia (Japan, Singapore, South Korea and Taiwan) seem to be characterized by the greatest gender differences in the labor market, if the results of the simulation are taken at face value. Recalling

²¹ The unweighted average for the sample countries examined in this section comes to 21 percent in crease in female wages against a 5 percent reduction in male wages and an output gain of 4 percent. The percentage of the labor force (women and men) that would have to change employment to achieve these hypothetical effects comes to 25 percent, not a small number, especially in the short-run.

that the data used in the simulation are based on wage employment only (and therefore relate to the more formal part of the labor market) the results for Latin America and East Europe countries are not that dissimilar to those of the most industrialized countries in Europe, though South European countries come in between this group and the East Asian one.

Table 5: Simulated changes (%) in female and male wages and GDP under conditions of equality using
(a) actual employment and wage data;
(b) if the wage gap was increased by 10 percent, assuming actual employment levels and
(c) if female employment increased by 10 percent, assuming actual wage levels

Country Income Group*	actual data			if the wage gap increased			if female employment increased		
	Average change in			Average change in			Average change in		
	Female wages	Male wages	Output	Female wages	Male wages	Output	Female wages	Male wages	Output
Middle Income	19	-5	4	28	-6	6	18	-5	4
High Income	22	-5	4	33	-6	6	22	-6	4
All countries	21	-5	4	31	-6	6	21	-5	4

* Based on 10 middle income countries and 19 high income countries; unweighted averages.

Source: Appendix Table A4

All in all, however, and with the exception of the Nordics, gender differences seem to be quite pervasive across the world. The individual country results reported in Appendix Table A4 and summarized in Table 5, suggest that, though some variation exists, there is no discernible pattern of the simulation results among the countries of different income levels. In fact, a sensitivity analysis examining how the results would be affected if the wage difference between women and men were increased by 10 percent or female employment were increased also by 10 percent showed that the effects would be broadly similar in all countries studied, irrespective of country income level. The sensitivity analysis additionally showed that decreases in the gender wage gap have a much greater effect than increases in female employment. This suggests that getting the wages right in the labor market (alternatively said: increasing female productivity) may be a more important factor for increasing output than increases in the share of women in the labor force.

6. CONCLUSIONS AND RECOMMENDATIONS

The MDG3 focuses on eliminating inequality in employment by reducing occupational segregation and closing the gender gaps in earnings. Measures to accelerate the process of gender equality, and in all fronts – not just the labor market, are now widely accepted in principle, and indicators have been developed to track progress across a wide range of outcomes. The findings of this paper suggest that women's status in the labor market has improved in recent decades. However, gender inequalities remain pervasive in middle-income countries and, the findings of the paper also suggest, if more equality were to be achieved in the labor market, then output would increase thus benefiting both women and men.

The MDG3 also aims to reduce reliance of women on employment in the informal sector. The increase in formal attachment to the labor force increases women's experience and skills and makes them "persistent" (compared to casual or secondary) workers. This increases the incentives for employers to offer training to female workers and enhances women's career opportunities and results in greater earnings. This in turn increases the incentives for families to invest in girl's education.

The current indicator (“share of women in wage employment in the non-agricultural sector”) can be maintained for regular, international monitoring exercises but it can be supplemented by additional indicators measuring changes in the distribution of women and men by employment type. The purpose of additional national indicators can in general be to facilitate interpretation of the internationally agreed indicator by the users of the information. Such additional dimensions can include separating non-agricultural employment into formal and informal. This would of course require to initially develop and test questions in countries and subsequently prepare methodological guidelines before any large scale collection of data can be made.

In short, it seems sensible and desirable to have indicators for monitoring progress in the position of women in the labor market but this should be something more than the “share of women in wage employment in the non-agricultural sector”. One possible extension could be to use additional distinctions between female and male employment that break down agricultural and non-agricultural employment by type and by formal and informal employment²². This can provide more insights about, for example, family workers and domestic employment. Both group are very relevant to gender analysis and often overlooked. However, the presentation of many partial indicators may not readily lend itself to global monitoring as it is difficult to make comparisons based on many different indicators across the wide range of developing countries (see for example, Appendix Table A-1).

Ideally, new indicator(s) for female employment should take into account the same information for male employment. The value of the indicator *per se* can be meaningless: For example, what does a 30 percent share of women in wage employment mean in an economy where the share of all wage employment to total employment is 20 percent and the female labor force participation rate is 40 percent? The issue does not rest so much on these relative values but *on knowing what is happening in the national labor market at large* before a specific value of this indicator becomes meaningful in the national context and subsequently for international comparisons.

Care should be exercised to rightly interpret what a change in an indicator to one direction or another implies for women’s labor market status and empowerment. For example, under certain conditions, it may not be necessarily empowering to move into non-agricultural wage employment. As mentioned earlier, a reduction in segregation may imply some (at least in the short term) losses for women²³. In short, it is difficult to qualify a positive trend or make inferences about empowerment by looking at a “share of an employment indicator” alone.

It should be also noted that focusing on formal employment only may be largely irrelevant for many developing countries where wage employment in the non-agricultural sector is only a small percentage of total employment. The agreed indicator does not distinguish between the different types of non agricultural wage employment, some of which may be better in terms of earnings and protection than others (for example, employment in the public sector compared to manufacturing or the private services sector). In addition, focusing only on the formality of female employment may miss changes in women’s (invisible) work, including work at home. Even if other forms of women’s work remain unchanged, increased formality may imply

²² Inter-Agency and Expert Group on MDG Indicators, 6th Gender Indicators Sub-group meeting, New York, 26 September, 2005.

²³ An empirical economic analysis of gender outcomes in six countries over time showed that, despite increases in segregation, women’s earnings still increased in five of these countries relatively to men (Tzannatos, 1995).

more rigidity in employment obligations and care should be exercised not to ignore the burden on women arising from their dual role as productive family members, disproportional bearers of the reproduction costs and care givers.

There is no reason why improvements in the position of women in the informal sector should not be considered empowering or promoting gender equity (least in the short run).

For example, microfinance arrangements operate primarily in the informal sector. This area is essential to progress in meeting many aspects of the MDGs as women often prove to be more financially responsible with better repayment performance than men and are more likely than men to invest increased income in the household and family wellbeing. Perhaps most importantly, access to financial services can empower women to become more confident, more assertive, more likely to participate in family and community decisions, and better able to confront systemic gender inequities.

Like the monitorable employment indicators in the context of the MDGs, this paper looked very much at the visible part of the labor market but throughout most of the developing world, but particularly in Sub-Saharan Africa, women are mainly statistically invisible farmers. The empowerment of women – a critical dimension of the MDGs – cannot be seen in isolation of agriculture: broad welfare benefits can only be expected to emerge when women are given the opportunity to participate profitably in the sector. In turn, the empowerment of women farmers and reductions of the time burden on women for domestic tasks can increase their role in paid employment, an indicator of the MDGs²⁴.

In addition to agriculture, the rural nonfarm sector and self employment are important dimensions of economic development but not monitored under the MDG3. During successful rural economic growth, the emergence and rapid expansion of the (mainly private) nonfarm economy in rural areas and the towns can serve a major source of growth in incomes and employment. From a relatively minor sector, often largely part-time and subsistence-oriented in the early stages of development, the rural nonfarm economy can develop to become a major motor of economic growth in its own right, not only for the countryside but for the economy as a whole. Like in the case of agriculture, the nonfarm employment has important implications for the welfare of women and poor households, sometimes helping to offset inequities that can arise within the agricultural sector²⁵. In much of the developing world, the rural nonfarm sector has been largely ignored by policymakers at least until recently, and the international focus on formal employment indicators may perpetuate this bias. The rural nonfarm economy is especially important to the rural poor. Landless and near landless households everywhere depend on nonfarm earnings. Low-investment manufacturing and services—including weaving, pottery, gathering, food preparation and processing, domestic and personal services, and unskilled nonfarm wage labor—typically account for a greater share of income for the rural poor than for wealthier rural residents. And self-employment is often classified as informal but it is no necessarily disadvantageous. For example, in Gujerat in India the SEWA (Self Employed Women Association) program has trained local women, most of whom are poor themselves, to educate people how to use local mobile services for reproductive health. This is an example of the synergies in the MDGs areas of employment and health and ultimately poverty.

²⁴ Another area where information is largely lacking relates to the extent of women’s involvement in providing “social services” within the household (in tasks related to teaching and nursing the children, health and caring for the old).

²⁵ In Asia, for example, the rural nonfarm economy accounts for 20–50 percent of total rural employment and 30–60 percent of total rural income.

With respect to pay differences between female and male workers, wages are easier to measure than employment differences but the available data are not readily usable for meaningful comparisons. Among the 55 countries for which information exists and formed the basis of our analysis, most report monthly earnings but 8 countries report information on hourly wages, 4 for daily wages and another 4 for weekly wages²⁶. *None of the 16 countries that reported wages for a shorter period of time than one month registered a decline in female relative earnings over time.* This shows that using a more precise measure wages can provide a more reliable measure for comparing the “unit price” of female labor to that of men.²⁷

Ultimately, what matters however for the welfare and empowerment of women is not just their wage rate but their labor earnings. For example, the female wage rate can be high but women may be prevented from working or, when they work, other work benefits (such as pensions) may not be accessible to them²⁸. Thus, in terms of international statistics, information on wages and earnings should cover more countries, use comparable definitions, be undertaken regularly and presented in a way that would enable meaningful tracking of this aspect of the MDG3.

In conclusion, the development and collection of data is of course something that calls for capacity-building in labor force statistics, and this can be facilitated by donor funding for technical cooperation activities that will enable more countries to collect and/or process the data needed for international comparisons. Surely, not all data are or should be collected by all developing countries. However, at present, even when countries do collect many data, they do not tabulate and systematically report them to the international agencies. In fact, the absence of information on some high income countries in the ILO database is notable.

However, in addition to statistics and their useful role in monitoring and tracking key indicators of women’s empowerment, an equal important function of the MDG3 (and the other MDGs) should be to facilitate systematic policy dialogue on critical development challenges and build a supportive environment for translating commitments into actual results on the ground. Ideally, the MDG drive should involve all national actors including communities, civil society groups and the media while initiating wider debate and dialogue around key development choices and enabling citizens to demand accountability from their governments. The MDG process should therefore be extended to sub-national level and be localized²⁹.

To be effective, governments, other national stakeholders and the international community should coordinate both in the area of policies as well as the choice, collection and dissemination of the relevant statistics and indicators. Ultimately, political commitment and determination at the highest levels of international agencies and national governments are

²⁶ Additional noise in that data comes from the fact that some countries report average wages for all paid workers while others report wages for only some sub-groups (e.g. some report wages for only the secondary industries – such as mining, quarrying, manufacturing, gas, electricity and water, while others exclude the primary sector – such as agriculture and fishing).

²⁷ Of course, the fact that women work fewer hours is an important issue in itself. The way this fact can be interpreted varies, however. It may mean that women are not as fully engaged in paid employment as men because of other “forced” commitments or women combine work and other activities in a “voluntary” way.

²⁸ Labor earnings if broadly defined (as they should) present some additional problems for international comparisons as they include cash payments as well in-kind benefits and are also affected by gender differences in hours worked (in addition to the effect arising from different wage rates).

²⁹ UNDP (2003).

required to end gender inequality and empower women. The paper argued that indeed increases in female wages through greater efficiency (such as more female education or less gender discrimination) can only be welcome as it contributes to greater family welfare and increased national output, thus reducing poverty and inequalities (including gender ones) in the whole economy. However, a positive increase in female relative wages can also be observed, if the main outlet for women's increasing labor force participation rates over time is, for example, the public sector, by decree and wrong incentives, rather than by choice and the efficient functioning of the labor market. The two scenarios can be statistically equivalent but they have very different interpretations and policy implications. *Distinguishing between the two scenarios depends more on "local knowledge" and this knowledge should find ways to be reported in a standardized way to enable international comparisons.*

Donor assistance can be useful in many ways. It can help by building statistical capacity, improving the collection and analysis of sex-disaggregated national statistics, providing technical assistance to support countries on demand for policies and reforms leading to gender equality, helping with analytical work and impact evaluations of programs, assisting with dissemination of good practices and public information campaigns. This can be further facilitated by greater harmonization/coordination of donor activities.

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ANNEX 1: Data Description

The empirical analysis in this report uses data extracted from the International Labor Organization (ILO) database³⁰ on employment by industry and occupation and on earnings by industry.

A. Employment by industry is derived both from Labor Force Surveys and Establishment Surveys. The workers are grouped according to the International Standard Industrial Classification (ISIC) reviewed in 1968 (ISIC-68) and in 1990 (ISIC Rev3). The former distinguishes between 10 economic activities compared to 18 in the latter. A comparison between the two classifications is shown in the table below.

ISIC-68 (1968)		ISIC Rev 3 (1990)	
Categories	Coding	Categories	Coding
Agriculture, Hunting, Forestry and Fishing	1	Agriculture, Hunting and Forestry	1
		Fishing	2
Mining and Quarrying	2	Mining and Quarrying	3
Manufacturing	3	Manufacturing	4
Electricity, Gas and Water	4	Electricity, Gas and Water Supply	5
Construction	5	Construction	6
Wholesales and Retail Trade, Restaurants and Hotels	6	Wholesale and retail Trade; Repair of motor Vehicle, Motorcycles and Personal and Household Goods	7
		Hotels and Restaurants	8
Transport, Storage and Communication	7	Transport, Storage and communications	9
Financing, Insurance, Real Estate and Business Services	8	Financial Intermediation	10
		Real Estate, Renting and Business Activities	11
Community, Social and Personal Services	9	Public Administration and Defense; Compulsory Social Security	12
		Education	13
		Health and Social Work	14
		Other Community, Social and Personal Service Activities	15
		Private Households with Employed Persons	16
		Extra-Territorial Organizations and Bodies	17
Activities not Adequately Defined	0	Activities not Adequately Defined	0

B. The occupational data are derived from Labor Force Surveys and other official estimates. Occupations are defined by the International Standard Classification of Occupations (ISCO) revised in the years 1968 (ISCO-1968) and 1987 (ISCO0-88). The number of groupings defined amounts respectively to 8 and 10. The different categories and their equivalent underlined by both ISCOs are described in the following table:

³⁰ The figures can be found on laborsta.ilo.org

ISCO (1968)		ISCO-88 (1987)	
Categories	Coding	Categories	Coding
Professional, Technical and related workers	1	Professionals	2
		Technicians and associate professionals	3
Administrative and managerial workers	2	Legislator, senior officials and managers	1
Clerical and related workers	3	Clerks	4
Sales workers	4	Service workers , shop and market sales workers	5
Service workers	5		
Agriculture, animal husbandry and forestry workers, fishermen and hunters	6	Skilled agricultural and fishery workers	6
Production and related workers, transport equipment operators and laborers	7/8/9	Craft and related trade workers	7
		Plant and machine operators and assemblers	8
		Elementary occupations	9
Workers not classified by occupations	0	Armed forces	0

C. The data on industrial earnings by sex are derived from Establishment Surveys and Social Insurance Records. The latter provide figures on the earnings of insured individuals in employment. Earnings in this case include (as defined by ILO) wages, salaries, compensation for time not worked, bonuses, housing and family allowances paid by the employer directly to the employee.

ANNEX 2: The Simulation Model

It is assumed that in each industry i (omitted for notational simplicity) output is given by a function:

$$Y = f(L_m^m, L_m^f) \quad (1)$$

Where Y = output in industry i ; L = labor in industry i ; and superscripts m, f refer to male and female labor respectively that are employed initially in completely segregated occupations.

On the assumption that all factors of production other than male and female are fixed, these other factors are not introduced explicitly into the production function.

Secondly, it is assumed that in each industry each occupation is paid its marginal product:

$$w^s = \theta Y / \theta L^s \quad (2)$$

where

$$s = m \text{ or } f$$

The problem now is to find the optimal amount of labor, levels of wages and output if reallocation of female labor is allowed from the female occupations to the male occupations, such that:

$$Y^* = f(L^{m*}, L^{f*}) \quad (3)$$

$$w^{m*} = w^{f*} \quad (4)$$

$$L^{m*} + L^{f*} = L^m + L^f \quad (5)$$

where the asterisk indicates the new (optimal) value of the appropriate variable.

To solve the system of equations (3) to (5) we assume that within each industry the different occupations can be aggregated into a constant elasticity of substitution production function of the form:

$$Y = A \left[\sum \alpha L^{m-\rho} + \sum \beta L^{f-\rho} \right]^{-1/\rho} \quad (6)$$

Where ρ is a parameter which depends on the elasticity of substitution (σ) of female for male labor (see below), α and β are parameters which depend on the nature of the occupation to which women are restricted (the smaller the value of β the more rigorous the restriction) and A

is a constant which takes into account the contribution to output of factors of production other than labor.

Taking into account condition (2) and the explicit formulation of the production function (equation 6), the system can be solved for the optimal values of labor, wages and output.

The solution is given by the following formulae³¹:

$$L^{m*} = \left[\frac{\alpha^\sigma}{\alpha^\sigma + \beta^\sigma} \right] [L^m + L^f]$$

$$L^{f*} = L^m + L^f - L^{m*}$$

$$Y^* = \sum w^m \left[\frac{L^m}{L^{m*}} / Y \right]^{\rho+1} L^m + \sum w^f \left[\frac{L^f}{L^{f*}} / Y \right]^{\rho+1} L^{f*}$$

$$w^{m*} = w \left[\frac{L^m}{L^{m*}} \right]^{\rho+1} \left[\frac{Y^*}{Y} \right]^{\rho+1}$$

$$w^{f*} = w^{m*}$$

where sigma is the elasticity of substitution between female and male labor,

$$\sigma = 1/(1 + \rho)$$

and α and β can be estimated from the formulae:

$$\alpha = w^m \left[\frac{L^f}{Y} \right]^{\rho+1}$$

$$\beta = w^f \left[\frac{L^f}{Y} \right]^{\rho+1}$$

The Data, Assumption and Qualifications of the Model

The empirical estimates are based on reported earnings as a proxy for marginal products. It is well known that in a conventional competitive regime, economically fitted production functions, when differentiated, need not give marginal productivity conditions that equal observed earnings. This should not, however, produce unacceptable results in our case, if the proportional discrepancy between earnings and their respective marginal products is the same for both sexes.

At this point, there is no information available on the different educational levels and work experiences attained by men and women in the studied industries. This does not allow to refine the estimates by differences arising from the different human capital levels held by women and men and the results relate to achieving wage equality under the assumption that women and men are equally productive.

³¹ For a more detailed presentation see Bergmann (1971) and Tzannatos (1988).

The model itself does not allow for complementarity between non-labor inputs and different categories of labor. This need not adversely affect our results, to the extent that sectoral levels of inputs are being kept constant. However, this can be important in the longer run, if reallocation of capital were allowed as a response to changes in the returns to capital.

The assumption of a common elasticity of substitution may distort the pattern of optimal industrial allocation of labor although it does not alter significantly the estimate of the overall gains. Nevertheless, there is wide agreement that all pairwise elasticities of substitutions are substantially greater than unity, ranging usually between three and nine. *The paper therefore reports results based on the value of the elasticity of substitution being six* and other results (based on elasticity values between 1 and infinity) are available from the author. In general terms, the value of six produces mid-point estimates as simulated effects flatten out asymptotically above the value of six.

The assumption of fixed industrial output prices implies that there is an infinitely elastic demand for the product of each industry. This implies in turn that we are in an open and relatively small economy and/or that industrial output changes are sufficiently small to leave the relative prices of the final output unchanged.

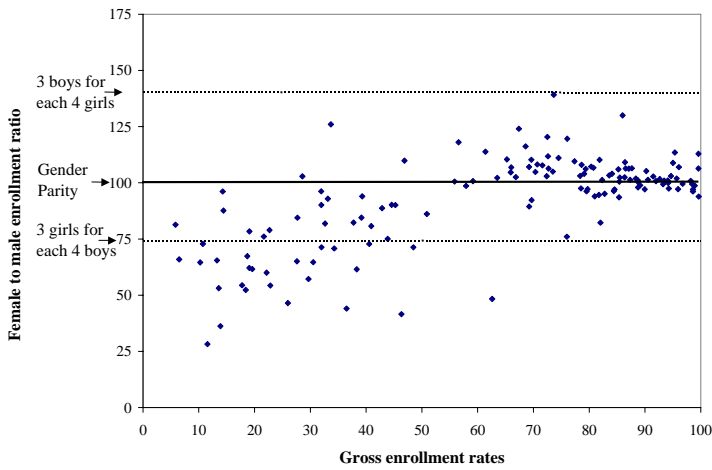
Finally, the results are based on the assumption that complete equalization of male and female labor is achieved. This is not likely to happen in real life as the economy-wide structure of the labor market will also depend on decisions made by the suppliers of labor. If households “prefer” women to work in certain sectors or restrict the trade-off between family responsibilities and market, the optimal allocation of labor would be constrained from an economic perspective. Thus, the estimates provide, as in all other similar studies, an upper bound of possible long-run effects upon a hypothetical society where production and reproduction is equally shared between men and women.

The usefulness of the exercise stems from the fact that women have historically improved their position in the labor market, partly through increasing their labor force attachment and working in the same sectors as men. If this trend continues, then the labor market may asymptotically adjust to the values indicated by the simulations. The fact that the model is based on a simulation (for the same reason that all similar studies have adopted this procedure, that is, due to the lack of adequate data) implies that the picture emerging from the model and its underlying assumptions should be interpreted cautiously.

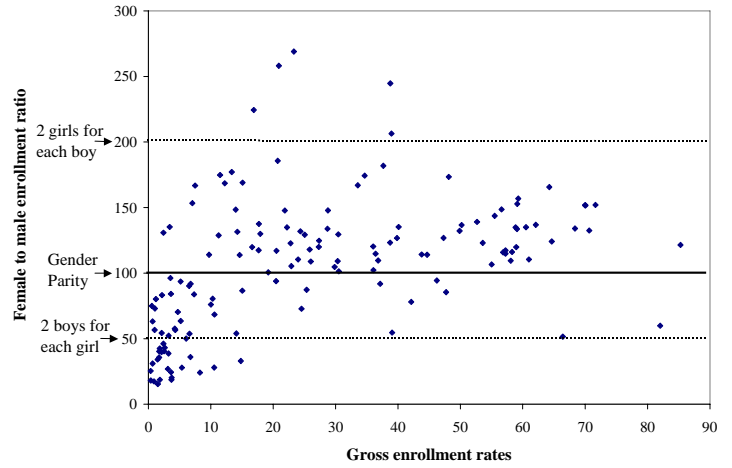
ANNEX 3: Gender Differences in School Enrolment Rates

Figure A1. Gender parity in secondary and tertiary education
(Source: World Bank, 2004)

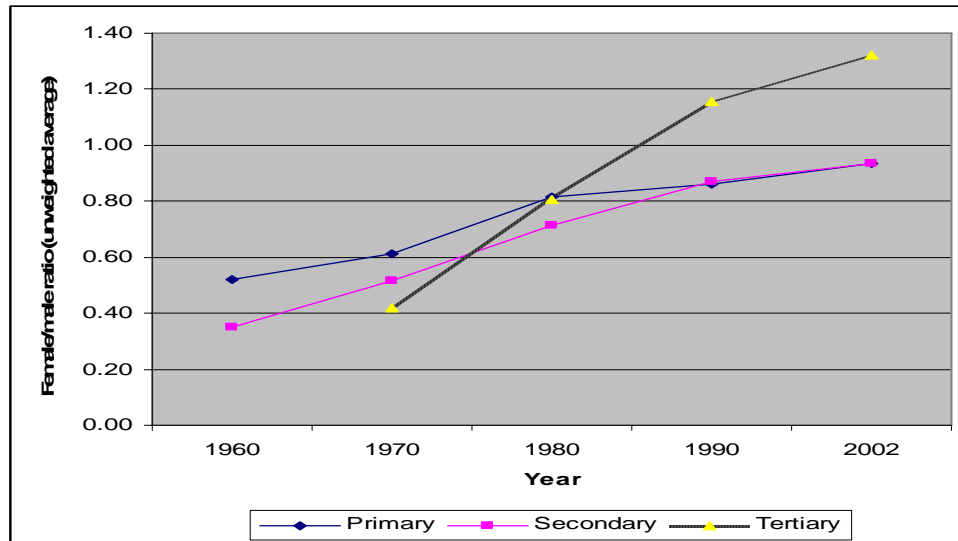
Secondary school



Tertiary school



**Figure A2. Female/male Ratio, Gross Enrolment Rates in Education:
MENA (regional unweighted average)**
(Source: MENA Education Strategy, World Bank, forthcoming)



Appendix Table A1: Share of women in employment by type of employment

Country	Year	% of women in ...							
		Total employment	Agricultural employment	Non-agricultural wage employment			Non-agricultural self-employment		
				Total	Informal	Formal	Total	Informal	Formal
Albania	2001	37.6	40.2	39.3			40.2		
Algeria	2004	17.4	18.7	1.6			19.8	25.5	
Bahamas	2004	48.4	4.9	52.5			38.6	93.7	
Brazil	2003	41.5	32.2	46.6	52.9	43.3	37.1	37.7	26.6
African Republic	2003	46.8	51.1	15.2	15.2	15.2	42.0	58.9	
Chile	2004	34.9	15.4	34.1			43.4	65.6	
Costa Rica	2004	44.3	12.0	41.7		41.7	44.2	66.7	42.4
Ethiopia	2004	43.0	25.2	42.5			49.7	54.2	24.7
Egypt	2003	15.1 *	10.0*	15.1	20.0	11.2			
Georgia	2004	48.1	50.3	50.4			33.6	54.2	
Israel	2004	45.8	18.8	48.8			30.6	75.0	
Jamaica	2004	41.9	20.6	46.2			34.8	73.5	
Kazakhstan	2004	48.2	46.3	49.3			48.6		
Korea, Rep. of	2004	41.5	47.4	41.6			39.5	88.5	
Kyrgyzstan	2003	43.9	43.6	44.6	39.1	46.7	42.1	41.9	53.2
Macao	2004	47.3	50.0	49.5			31.2	14.7	
Mali	2004	41.6	29.2	38.2	36.6	41.3	55.4	60.5	18.1
Malaysia	2004	35.9	25.9	38.3			34.9	72.9	
Mauritius	2004	32.7	26.8	35.4			24.2	32.2	17.2
Mexico	2005	35.6	11.4	39.1	38.0	40.9	41.5	44.3	32.0

Morocco	2004	27.2	35.8	24.4			13.2	23.4	
Pakistan	2003-04	16.9	26.5	10.3	9.8**	10.9***	8.8	9.0	1.3
Palestine	2004	18.1	38.4	18.0			6.6	16.8	
Panama	2004, Aug.	35.3	9.3	38.4	31.1	40.6	36.9	37.4	28.1
Paraguay	2004	39.0	28.6	30.5			47.2	54.3	
Philippines	2004	37.5	24.9	40.4			54.2	65.5	
Rep. of Moldova	2004	52.0	51.6	54.5	51.0	55.2	36.1	31.2	42.6
Romania	2004	45.2	45.4	46.6			25.8	50.0	
Russian Federation	2004	49.2	38.2	50.9	46.9	51.1	41.0	42.0	34.1
South Africa	2004	43.6	34.9	44.5	50.0	37.9	45.7	53.3	27.3
Sri Lanka	2004	31.7	38.0	29.4			26.1	56.9	
Syria	2003	17.1*	30.1*	12.4	4.2	14.7			
Tonga	2004	40.9	5.9	38.6	29.0	40.0	84.6	93.1	
Turkey	2004	26.5	44.6	19.9	19.0	20.3	9.6	14.7	4.5
Turkey	2003	27.9	48.1	20.6	19.3	21.1	8.7	13.2	4.7
Ukraine	2003	49.1	43.6	51.0	36.2	51.1	37.9	35.1	
Uruguay	2004	42.7		47.0	53.7	44.5	37.2	73.2	
Venezuela	2004	38.4	7.0	41.8	42.3**	41.6***	42.5	45.2	29.1
Average		38.8	31.2	36.6	33.9	36.3	35.9	49.2	25.7

* Wage employment only

** Wage employment in informal sector enterprises

*** Wage employment in formal sector enterprises

Source: ILO

Appendix Table A2a: ALL WORKERS, Country Duncan Values for Industrial Employment Based on ISIC 1968

<i>Country</i>	Early Year	Duncan	% of W in LF	% of W to Change	% of LF to change	Late Year	Duncan	% of W in LF	% of W to Change	% of LF to change	No. of Inds.
Australia	1969	0.327	0.316	0.248	0.156	1994	0.277	0.426	0.159	0.135	9
NZL	1986	0.277	0.415	0.162	0.134	1998	0.282	0.451	0.155	0.140	10
Bolivia	1989	0.358	0.437	0.202	0.176	1992	0.389	0.412	0.228	0.188	10
Brazil	1981	0.358	0.312	0.246	0.154	2001	0.300	0.407	0.178	0.145	8
Canada	1969	0.342	0.323	0.283	0.183	1997	0.280	0.451	0.153	0.138	9
Chile	1980	0.369	0.295	0.260	0.153	2004	0.364	0.349	0.237	0.165	10
Domnncn Rp	1991	0.368	0.286	0.263	0.150	1996	0.332	0.298	0.233	0.139	10
Ecuador	1990	0.308	0.356	0.198	0.141	1998	0.309	0.390	0.188	0.147	10
El Salvador	1975	0.623	0.284	0.284	0.253	1998	0.456	0.396	0.396	0.218	9
Honduras	1985	0.183	0.423	0.106	0.089	1999	0.515	0.360	0.330	0.237	10
Jamaica	1974	0.446	0.389	0.272	0.212	1992	0.362	0.430	0.206	0.178	8
Mexico	1991	0.361	0.304	0.252	0.153	1995	0.344	0.320	0.234	0.150	10
Montserrat						1991	0.480	0.422	0.277	0.234	10
Panama	1974	0.719	0.409	0.425	0.347	1992	0.671	0.404	0.400	0.323	10
Paraguay	1982	0.941	0.180	0.101	0.893	1996	0.938	0.229	0.134	0.858	10
Trnndd Tbg	1971	0.324	0.269	0.237	0.127	2002	0.367	0.373	0.230	0.172	10
USA	1969	0.290	0.373	0.215	0.160	2002	0.269	0.466	0.144	0.134	10
Uruguay	1984	0.259	0.389	0.158	0.123	2000	0.314	0.426	0.180	0.153	10
Venezuela	1975	0.375	0.273	0.272	0.149	2002	0.374	0.384	0.230	0.177	10
Bangladesh	1983	0.672	0.087	0.613	0.106	2000	0.294	0.375	0.184	0.138	10
Cyprus	1976	0.230	0.345	0.151	0.104	1995	0.179	0.393	0.109	0.086	10
Hong Kong	1978	0.215	0.352	0.139	0.098	2004	0.284	0.450	0.157	0.141	10
Indonesia	1976	0.096	0.386	0.059	0.046	1999	0.144	0.382	0.089	0.068	10
Japan	1969	0.183	0.394	0.122	0.096	2002	0.228	0.410	0.134	0.110	10
Korea	1969	0.103	0.353	0.092	0.065	1994	0.213	0.404	0.127	0.102	8
Malaysia	1980	0.186	0.336	0.123	0.083	2000	0.226	0.347	0.148	0.103	10
Philippines	1971	0.393	0.325	0.265	0.172	2000	0.397	0.379	0.247	0.187	10

Singapore	1974	0.208	0.318	0.142	0.090	1993	0.168	0.402	0.101	0.081	10
Thailand	1971	0.075	0.464	0.040	0.037	2001	0.138	0.448	0.076	0.068	8
Ecuador	1983	0.333	0.384	0.205	0.157	1994	0.322	0.426	0.185	0.158	10
Belgium	1988	0.317	0.367	0.201	0.147	1992	0.328	0.394	0.199	0.157	10
Denmark	1972	0.343	0.410	0.203	0.166	1993	0.314	0.465	0.168	0.156	10
Finland	1970	0.299	0.446	0.165	0.148	1995	0.351	0.472	0.185	0.175	10
Germany	1991	0.278	0.416	0.162	0.135	1994	0.306	0.418	0.178	0.149	9
Greece	1981	0.236	0.314	0.162	0.102	1992	0.220	0.348	0.143	0.100	10
Ireland	1986	0.332	0.320	0.226	0.145	2004	0.381	0.420	0.221	0.186	18
Italy	1977	0.200	0.305	0.139	0.085	1992	0.202	0.351	0.131	0.092	9
Lithuania	1982	0.340	0.524	0.162	0.169	1991	0.355	0.538	0.164	0.176	8
Luxembourg	1983	0.404	0.329	0.271	0.178	1990	0.388	0.341	0.256	0.174	8
Malta	1969	0.229	0.197	0.203	0.080	1999	0.142	0.289	0.101	0.058	10
Netherlands	1977	0.369	0.275	0.267	0.147	1994	0.296	0.405	0.176	0.143	10
Norway	1972	0.568	0.441	0.223	0.197	1995	0.573	0.403	0.297	0.239	10
Portugal	1974	0.196	0.401	0.118	0.094	1993	0.230	0.442	0.128	0.113	10
San Marino	1978	0.182	0.340	0.120	0.082	1993	0.241	0.395	0.146	0.115	8
Spain	1969	0.261	0.246	0.180	0.088	1993	0.321	0.337	0.213	0.144	10
Sweden	1969	0.428	0.387	0.262	0.203	1994	0.365	0.487	0.187	0.182	10
Turkey	1988	0.443	0.304	0.308	0.188	1999	0.369	0.288	0.263	0.151	10
Ukraine	1999	0.253	0.486	0.130	0.127	2001	0.269	0.487	0.138	0.134	10
U.K	1969	0.304	0.360	0.191	0.137	1993	0.256	0.457	0.139	0.127	10
Grenada	1988	0.339	0.430	0.193	0.166	1998	0.408	0.404	0.243	0.197	10

Notes:

- 1) “% of W in the LF” refers to the share of women in the labor force.
- 2) “% of W (LF) to Change” refers to the percentage of women (labor force) who should change sector to achieve equality between the sectoral distributions of employment of women and men.
- 3) “No. of Inds.” Refers to the number of available industries for applying the Duncan index.

Appendix Table A2b: ALL WORKERS, Country Duncan Values for Industrial Employment Based on ISIC Rev3 (1990)

<i>Country</i>	Early Year	Duncan	% of W in LF	% of W to Change	% of LF to change	Late Year	Duncan	% of W in LF	% of W to Change	% of LF to change	No. of Inds.
Australia	1994	0.287	0.426	0.165	0.141	2004	0.279	0.446	0.155	0.138	18
New Caledonia	1996	0.351	0.385	0.216	0.166						16
Samoa						1976	0.377	0.322	0.256	0.165	9
NZL	1998	0.284	0.451	0.156	0.140	2004	0.301	0.457	0.163	0.149	18
Anguilla	1999	0.393	0.469	0.209	0.196	2001	0.387	0.459	0.209	0.192	18
Argentina	1991	0.366	0.360	0.234	0.169	2003	0.370	0.430	0.211	0.181	18
Aruba	1994	0.355	0.416	0.208	0.173	1997	0.286	0.434	0.162	0.141	17
Bahamas	1991	0.308	0.474	0.162	0.153	2003	0.298	0.489	0.152	0.149	18
Belize	1993	0.440	0.312	0.303	0.189	1999	0.460	0.312	0.316	0.197	15
Bolivia	1992	0.439	0.414	0.257	0.213	2000	0.441	0.441	0.246	0.218	18
Brazil	2002	0.340	0.413	0.199	0.165	2003	0.336	0.414	0.197	0.163	18
Canada	1997	0.292	0.451	0.160	0.145	2004	0.298	0.468	0.159	0.148	17
Dominica	1997	0.396	0.433	0.224	0.194						15
Ecuador	1999	0.345	0.387	0.212	0.164	2004	0.334	0.407	0.198	0.161	18
El Salvador	1998	0.477	0.396	0.288	0.228	2004	0.484	0.409	0.286	0.234	14
Guyana	1997	0.238	0.331	0.159	0.105	1997	0.238	0.331	0.159	0.105	17
Jamaica	1992	0.363	0.430	0.207	0.178	2004	0.460	0.420	0.267	0.224	10
Mexico	1995	0.348	0.320	0.237	0.152	2004	0.324	0.353	0.209	0.148	18
NL Antilles	1992	0.393	0.425	0.226	0.192	2000	0.338	0.476	0.177	0.169	16
Panama	2001	0.455	0.330	0.305	0.201	2004	0.425	0.352	0.275	0.194	17
Peru	1996	0.375	0.409	0.222	0.181	2004	0.391	0.407	0.232	0.189	16
Saint Lucia	1994	0.358	0.442	0.200	0.177	2000	0.353	0.448	0.195	0.175	16
Suriname	1990	0.305	0.385	0.188	0.144	1999	0.347	0.344	0.228	0.157	10
USA	2003	0.281	0.468	0.150	0.140	2004	0.285	0.465	0.152	0.142	10
Uruguay	2000	0.376	0.426	0.216	0.184	2003	0.375	0.429	0.214	0.184	10
Azerbaijan	1999	0.171	0.477	0.090	0.085	2004	0.212	0.476	0.111	0.106	16
Bangladesh	2003	0.336	0.222	0.261	0.116						14
Cyprus	1999	0.275	0.381	0.170	0.130	2004	0.315	0.435	0.178	0.155	10
Georgia	1998	0.209	0.482	0.108	0.104	2004	0.198	0.480	0.103	0.099	18
Iran Is. Rep	1996	0.466	0.121	0.410	0.099						18

Israel	1995	0.349	0.425	0.201	0.170	2003	0.335	0.460	0.181	0.166	16
Japan	2003	0.274	0.411	0.161	0.133	2004	0.276	0.413	0.162	0.134	16
Kazakhstan	2001	0.244	0.482	0.126	0.122	2004	0.243	0.482	0.126	0.121	16
Korea	1994	0.260	0.404	0.155	0.125	2004	0.294	0.415	0.172	0.143	16
Kyrgyzstan	1996	0.159	0.457	0.086	0.079	2001	0.153	0.444	0.085	0.075	16
Macau	1989	0.290	0.411	0.171	0.141	2004	0.272	0.473	0.143	0.135	18
Malaysia	2001	0.265	0.353	0.172	0.121	2003	0.266	0.359	0.170	0.122	16
Maldives	1995	0.573	0.270	0.419	0.226	2000	0.531	0.335	0.353	0.237	12
Mongolia	1993	0.152	0.483	0.079	0.076	2004	0.139	0.509	0.068	0.070	16
Oman	1993	0.522	0.075	0.482	0.073	2000	0.598	0.137	0.516	0.141	18
Philippines	2001	0.404	0.391	0.246	0.192	2004	0.397	0.375	0.248	0.186	16
Qatar	1997	0.722	0.135	0.624	0.168	2001	0.695	0.142	0.597	0.169	16
Saudi Arabia	1999	0.776	0.142	0.666	0.189	2002	0.772	0.135	0.668	0.180	16
Singapore	1985	0.286	0.364	0.182	0.132	2003	0.283	0.449	0.156	0.140	13
Syria	2002	0.463	0.184	0.377	0.139						7
Thailand	2002	0.152	0.449	0.084	0.075	2004	0.158	0.448	0.087	0.078	18
UAE	1995	0.601	0.116	0.532	0.123	2000	0.601	0.127	0.525	0.133	18
Uzbekistan	1991	0.087	0.485	0.045	0.043	1995	0.025	0.453	0.014	0.013	2
WB & Gaza	1996	0.425	0.149	0.362	0.108	2004	0.503	0.181	0.412	0.149	16
Yemen Rep. of	1999	0.460	0.246	0.347	0.170						16
Algeria	2001	0.474	0.142	0.407	0.115	2004	0.443	0.174	0.366	0.127	18
Botswana	1995	0.321	0.451	0.176	0.159	2001	0.400	0.409	0.366	0.193	17
Egypt	1997	0.327	0.191	0.264	0.101	2003	0.349	0.191	0.278	0.000	17
Ethiopia						2004	0.340	0.431	0.194	0.167	16
Madagascar						2002	0.069	0.489	0.035	0.035	14
Mauritius	1995	0.315	0.3.4	0.216	0.136	2004	0.309	0.327	0.208	0.136	22
Morocco	2002	0.309	0.252	0.232	0.117	2003	0.289	0.263	0.213	0.112	12
Namibia						2000	0.215	0.475	0.113	0.107	18
South Africa	2000	0.282	0.455	0.153	0.140	2003	0.306	0.446	0.169	0.151	12
Tanzania						2001	0.513	0.506	0.001	0.254	9
Austria	1994	0.344	0.426	0.198	0.168	2004	0.323	0.449	0.178	0.160	16
Belgium	1994	0.343	0.393	0.208	0.164	2003	0.318	0.431	0.181	0.156	20
Bulgaria	2003	0.256	0.471	0.135	0.127	2004	0.258	0.469	0.137	0.128	14
Croatia	1996	0.244	0.456	0.133	0.121	2004	0.279	0.446	0.154	0.138	16
Czech Rep	1993	0.265	0.439	0.149	0.131	2004	0.279	0.434	0.158	0.137	16
Denmark	1994	0.339	0.455	0.185	0.168	2004	0.335	0.466	0.179	0.167	18

Estonia	1989	0.311	0.491	0.159	0.156	2004	0.313	0.498	0.157	0.157	16
Finland	1995	0.375	0.471	0.198	0.187	2004	0.375	0.476	0.196	0.187	17
Germany	1995	0.311	0.419	0.180	0.151	2004	0.308	0.448	0.170	0.152	17
Greece	1993	0.225	0.350	0.147	0.102	2003	0.261	0.383	0.161	0.123	17
Iceland	1991	0.335	0.456	0.183	0.166	2002	0.338	0.471	0.179	0.168	17
Ireland	1986	0.332	0.320	0.226	0.145	2004	0.381	0.420	0.221	0.186	18
Italy	1993	0.241	0.341	0.159	0.109	2003	0.256	0.378	0.159	0.120	
Latvia	1996	0.279	0.481	0.145	0.139	2004	0.325	0.488	0.167	0.163	13
Lithuania	1997	0.231	0.472	0.122	0.115	2004	0.287	0.489	0.147	0.143	16
Macedonia	2002	0.205	0.389	0.125	0.097	2004	0.254	0.387	0.156	0.120	16
Malta	2000	0.260	0.301	0.182	0.110	2004	0.267	0.302	0.186	0.112	17
Moldova	2000	0.172	0.507	0.085	0.086	2004	0.207	0.520	0.099	0.103	17
Netherlands	1995	0.326	0.408	0.193	0.158	2002	0.302	0.436	0.170	0.149	18
Norway	1996	0.607	0.629	0.225	0.283	1996	0.607	0.629	0.225	0.283	17
Portugal	1992	0.276	0.435	0.156	0.136	2003	0.303	0.455	0.165	0.150	16
Romania388	1994	0.212	0.462	0.114	0.105	2004	0.194	0.456	0.106	0.096	15
Russian Fed	1997	0.307	0.474	0.161	0.153	2004	0.329	0.491	0.167	0.164	17
San Marino	1995	0.303	0.383	0.187	0.143	2004	0.289	0.409	0.171	0.140	14
Slovakia	1994	0.291	0.444	0.162	0.144	2004	0.332	0.450	0.182	0.164	17
Slovenia	1993	0.233	0.467	0.124	0.116	2004	0.259	0.459	0.140	0.129	16
Spain	1993	0.328	0.334	0.218	0.146	2004	0.361	0.392	0.220	0.172	17
Sweden	1994	0.400	0.487	0.206	0.200	2004	0.391	0.481	0.203	0.195	16
Switzerland	1991	0.278	0.426	0.159	0.136	2004	0.308	0.451	0.169	0.153	13
Turkey	2000	0.401	0.269	0.293	0.158	2004	0.386	0.265	0.284	0.150	17
Ukraine	1999	0.253	0.486	0.130	0.127	2003	0.276	0.491	0.140	0.138	16
UK	1993	0.328	0.450	0.181	0.162	2004	0.333	0.463	0.179	0.165	18

Notes: See notes to Appendix Table A2a.

Appendix Table A2c: ALL WORKERS, Country Duncan Values for Occupation Employment Based on ISCO 1968

<i>Country</i>	Early Year	Duncan	% of W in LF	% of W to Change	% of LF to change	Late Year	Duncan	% of W in LF	% of W to Change	% of LF to change	No. of Inds.
Australia	1969	0.468	0.316	0.354	0.224	1993	0.398	0.425	0.229	0.195	7
NZL	1987	0.403	0.421	0.233	0.196	1991	0.364	0.440	0.204	0.180	8
Barbados	1981	0.322	0.427	0.185	0.158	1995	0.270	0.475	0.141	0.134	8
Canada	1973	0.455	0.343	0.299	0.205	1997	0.345	0.451	0.189	0.171	7
Chile	1980	0.471	0.295	0.332	0.196	2004	0.441	0.349	0.287	0.201	8
Colombia	1975	0.419	0.366	0.266	0.194	2000	0.315	0.452	0.172	0.156	8
Costa Rica	1980	0.460	0.243	0.348	0.169	1996	0.411	0.294	0.290	0.171	8
Ecuador	1990	0.375	0.356	0.241	0.172	1994	0.375	0.383	0.231	0.177	7
El Salvador	1980	0.489	0.332	0.326	0.217	1992	0.345	0.456	0.188	0.171	8
Honduras	1985	0.259	0.423	0.149	0.126	1999	0.435	0.360	0.279	0.200	8
Mexico	1991	0.379	0.304	0.264	0.160	1995	0.343	0.320	0.233	0.149	8
Panama	1974	0.592	0.264	0.230	0.230	1999	0.502	0.337	0.224	0.224	8
Paraguay	1982	0.396	0.400	0.238	0.190	1994	0.473	0.413	0.278	0.230	8
Puerto Rico	1975	0.367	0.327	0.247	0.162	1998	0.377	0.412	0.222	0.183	7
Trn & Tob	1973	0.441	0.273	0.321	0.175	1990	0.444	0.323	0.301	0.194	8
USA	1970	0.442	0.378	0.275	0.208	2002	0.321	0.466	0.171	0.160	7
Uruguay	1986	0.371	0.387	0.227	0.176	1999	0.440	0.424	0.253	0.215	8
Venezuela	1976	0.477	0.280	0.343	0.192	2002	0.478	0.384	0.295	0.226	8
Bangladesh	1983	0.617	0.087	0.564	0.098	2000	0.283	0.375	0.177	0.133	8
Hong Kong	1978	0.077	0.352	0.050	0.035	1993	0.343	0.369	0.217	0.160	8
Israel	1970	0.339	0.294	0.240	0.141	1994	0.416	0.417	0.242	0.202	8

Japan	1970	0.215	0.393	0.130	0.103	2004	0.260	0.414	0.153	0.126	8
Korea	1970	0.213	0.367	0.135	0.099	1993	0.220	0.402	0.131	0.106	7
Malaysia	1980	0.182	0.335	0.121	0.081	2000	0.249	0.347	0.163	0.113	7
Pakistan	1985	0.300	0.096	0.271	0.052	2000	0.294	0.140	0.253	0.071	8
Philippines	1971	0.340	0.325	0.230	0.149	2000	0.400	0.379	0.248	0.188	8
Saudi Arabia	1999	0.549	0.142	0.471	0.133	2001	0.547	0.134	0.474	0.127	8
Singapore	1974	0.165	0.318	0.112	0.071			0.401	0.136	0.109	8
Thailand	1971	0.076	0.464	0.041	0.038	2004	0.166	0.448	0.092	0.082	11
Austria	1984	0.426	0.399	0.256	0.204	1994	0.432	0.426	0.248	0.211	8
Belgium	1983	0.382	0.344	0.251	0.172	1992	0.400	0.394	0.242	0.191	8
Denmark	1981	0.492	0.476	0.258	0.245	1993	0.420	0.469	0.223	0.209	
Finland	1977	0.396	0.483	0.205	0.198	1999	0.402	0.471	0.213	0.200	9
Greece	1981	0.258	0.313	0.177	0.111	1992	0.259	0.348	0.169	0.117	8
Ireland	1983	0.440	0.311	0.303	0.189	1991	0.438	0.338	0.290	0.196	8
Netherlands	1977	0.436	0.280	0.314	0.176	1994	0.347	0.409	0.205	0.168	8
Norway	1977	0.486	0.393	0.295	0.232	1995	0.420	0.459	0.228	0.209	8
Portugal	1974	0.217	0.399	0.130	0.104	1992	0.285	0.439	0.160	0.140	8
San Marino	1978	0.288	0.340	0.190	0.129	1993	0.302	0.395	0.183	0.144	7
Spain	1976	0.285	0.286	0.203	0.116	1993	0.402	0.337	0.267	0.180	8
Sweden	1970	0.460	0.394	0.279	0.219	1996	0.346	0.481	0.180	0.173	8
Turkey	1982	0.381	0.121	0.334	0.081	1988	0.448	0.304	0.311	0.189	7

Notes: See notes to Appendix Table A2a.

Appendix Table A2d: ALL WORKERS, Country Duncan Values for Occupational Employment Based on ISCO 1988

<i>Country</i>	<i>Early Year</i>	<i>Duncan</i>	<i>% of W in LF</i>	<i>% of W to Change</i>	<i>% of LF to change</i>	<i>Late Year</i>	<i>Duncan</i>	<i>% of W in LF</i>	<i>% of W to Change</i>	<i>% of LF to change</i>	<i>No. of Inds.</i>
Australia	1997	0.389	0.433	0.221	0.191	2004	0.375	0.446	0.208	0.185	10
NZ	1992	0.367	0.441	0.205	0.181	2004	0.378	0.457	0.205	0.187	10
Argentina	1998	0.351	0.390	0.214	0.167	2003	0.306	0.430	0.175	0.150	11
Aruba	1994	0.387	0.415	0.226	0.188	1997	0.314	0.434	0.178	0.154	10
Bahamas	1991	0.412	0.480	0.214	0.205	2003	0.383	0.489	0.196	0.192	10
Barbados	1995	0.292	0.475	0.153	0.146	2004	0.347	0.483	0.179	0.173	10
Belize	1993	0.563	0.320	0.383	0.245	1994	0.505	0.326	0.340	0.222	6
Bolivia	1993	0.398	0.434	0.226	0.196	2000	0.479	0.441	0.267	0.236	9
Brazil	2002	0.340	0.413	0.200	0.165	2002	0.340	0.413	0.200	0.165	11
Canada	1997	0.377	0.451	0.207	0.187	2004	0.378	0.469	0.201	0.188	10
Costa Rica	1997	0.412	0.308	0.285	0.176	2004	0.269	0.339	0.178	0.121	10
Dominica	1997	0.408	0.434	0.231	0.200						10
Domin. Rep	1991	0.414	0.286	0.296	0.169	1996	0.433	0.298	0.304	0.181	7
Ecuador	2000	0.311	0.384	0.192	0.147	2004	0.274	0.407	0.162	0.132	10
El Salvador	1995	0.276	0.378	0.172	0.130	2004	0.252	0.409	0.149	0.122	9
Jamaica	2000	0.446	0.409	0.263	0.216	2004	0.461	0.420	0.267	0.225	8
Mexico	1995	0.364	0.320	0.248	0.159	2004	0.312	0.353	0.202	0.143	11
NL Antilles	1992	0.410	0.425	0.236	0.200	2000	0.366	0.477	0.191	0.183	10
Panama	2001	0.455	0.330	0.305	0.201	2004	0.425	0.352	0.275	0.194	9
Peru	1996	0.316	0.409	0.187	0.153	2004	0.343	0.406	0.204	0.165	10
Puerto Rico	1996	0.355	0.413	0.208	0.172	2004	0.382	0.438	0.215	0.188	9
Saint Lucia	1994	0.324	0.442	0.181	0.160	2000	0.326	0.448	0.180	0.161	10
Trin & Tob	1990	0.314	0.322	0.212	0.137	2002	0.377	0.373	0.236	0.177	10
USA	2003	0.322	0.468	0.172	0.160	2004	0.324	0.465	0.174	0.161	6
Uruguay	2000	0.377	0.425	0.217	0.184	2003	0.354	0.429	0.202	0.174	10
Bangladesh	1983	0.617	0.087	0.564	0.098	2000	0.283	0.375	0.177	0.133	8
Bangladesh	2003	0.175	0.222	0.136	0.060						7
Cambodia	2000	0.106	0.519	0.051	0.053	2001	0.111	0.517	0.053	0.055	10
Cyprus	1999	0.417	0.380	0.259	0.197	2004	0.412	0.435	0.233	0.203	10
Georgia	1998	0.215	0.482	0.111	0.107	2004	0.201	0.480	0.105	0.100	11
Hong Kong	1994	0.348	0.380	0.216	0.164	2004	0.345	0.450	0.190	0.171	10
Iran Is. Rep.	1996	0.381	0.121	0.335	0.081						10
Israel	1995	0.386	0.425	0.222	0.189	2003	0.354	0.460	0.191	0.176	9
Kazakhstan	2001	0.248	0.482	0.128	0.124	2004	0.284	0.482	0.147	0.142	10

Korea	1993	0.249	0.402	0.149	0.120	2004	0.309	0.415	0.181	0.150	9
Kyrgyzstan	2002	0.203	0.432	0.115	0.100						9
Macau	1996	0.293	0.449	0.162	0.145	2004	0.242	0.473	0.128	0.121	
Malaysia	2001	0.199	0.353	0.129	0.091	2003	0.223	0.359	0.143	0.103	9
Maldives	2000	0.365	0.335	0.243	0.163						11
Mongolia	2000	0.204	0.460	0.110	0.101						10
Oman	1993	0.404	0.075	0.374	0.056	2000	0.349	0.137	0.301	0.083	10
Pakistan	2001	0.263	0.140	0.226	0.063	2002	0.240	0.146	0.204	0.060	9
Philippines	2001	0.349	0.391	0.212	0.166	2004	0.345	0.375	0.215	0.162	10
Qatar	1997	0.478	0.135	0.414	0.112	2001	0.494	0.142	0.424	0.120	9
Saudi Arabia	2002	0.497	0.135	0.430	0.116						7
Singapore	1985	0.311	0.364	0.198	0.144			0.448	0.197	0.176	10
Sri Lanka	2002	0.151	0.335	0.100	0.067	2003	0.118	0.316	0.081	0.051	10
UAE	1995	0.508	0.116	0.449	0.104	2000	0.508	0.127	0.444	0.113	11
WB & Gaza	1996	0.412	0.147	0.352	0.103	2004	0.490	0.181	0.401	0.145	10
Yemen Rep.	1999	0.477	0.246	0.359	0.177						11
Algeria	2001	0.387	0.142	0.332	0.094	2004	0.333	0.174	0.275	0.096	10
Botswana	1995	0.223	0.452	0.122	0.110	2001	0.292	0.409	0.173	0.141	10
Egypt	1997	0.315	0.191	0.255	0.097	2003	0.334	0.191	0.270	0.103	10
Ethiopia	1999	0.444	0.433	0.252	0.218	2004	0.198	0.431	0.113	0.097	10
Mauritius	1995	0.271	0.314	0.186	0.117	2004	0.221	0.327	0.149	0.097	10
Namibia						2000	0.220	0.475	0.116	0.110	11
Tanzania						2001	0.072	0.506	0.036	0.036	9
Austria	1995	0.387	0.425	0.223	0.189	2004	0.346	0.449	0.191	0.171	10
Belgium	1995	0.339	0.400	0.203	0.163	2003	0.349	0.431	0.199	0.171	11
Bulgaria	2003	0.292	0.471	0.154	0.145	2004	0.296	0.469	0.157	0.147	10
Croatia	1996	0.309	0.456	0.168	0.153	2004	0.317	0.446	0.176	0.157	11
Czech Republic	1993	0.405	0.439	0.227	0.199	2004	0.384	0.434	0.217	0.189	11
Denmark	1994	0.402	0.455	0.219	0.199	2004	0.387	0.466	0.206	0.192	11
Finland	2000	0.405	0.470	0.215	0.202	2004	0.409	0.476	0.215	0.204	11
France	2003	0.401	0.454	0.219	0.199	2004	0.382	0.456	0.208	0.190	11
Germany	1993	0.425	0.415	0.249	0.206	2004	0.392	0.448	0.216	0.194	11
Greece	1993	0.289	0.350	0.188	0.132	2003	0.329	0.383	0.203	0.156	11
Hungary	1995	0.412	0.443	0.230	0.203	2004	0.394	0.457	0.214	0.195	11
Iceland	1991	0.350	0.457	0.190	0.174	2002	0.399	0.470	0.212	0.199	10
Ireland	1987	0.376	0.333	0.251	0.167	2004	0.414	0.419	0.240	0.202	11
Italy	1993	0.284	0.341	0.187	0.128	2003	0.302	0.378	0.188	0.142	10
Latvia	1996	0.380	0.479	0.198	0.190	2004	0.365	0.488	0.187	0.182	9

Lithuania	1997	0.337	0.472	0.178	0.168	2004	0.335	0.489	0.171	0.168	10
Macedonia	2002	0.187	0.389	0.114	0.089	2004	0.185	0.387	0.113	0.088	10
Moldova	1999	0.267	0.505	0.132	0.133	2004	0.278	0.520	0.133	0.139	11
Netherlands	1995	0.356	0.408	0.211	0.172	2002	0.345	0.436	0.194	0.170	11
Norway	1996	0.439	0.459	0.237	0.218	2004	0.384	0.472	0.203	0.191	10
Poland	1995	0.352	0.453	0.193	0.174	2004	0.345	0.452	0.189	0.171	10
Portugal	1992	0.270	0.435	0.153	0.133	2003	0.340	0.455	0.186	0.169	11
Romania	1994	0.297	0.462	0.160	0.148	2004	0.240	0.456	0.130	0.119	9
Russian Fed	1997	0.389	0.474	0.205	0.194	2004	0.369	0.491	0.188	0.185	9
San Marino	1995	0.317	0.383	0.196	0.150	1999	0.354	0.394	0.214	0.169	10
Slovakia	1994	0.392	0.444	0.218	0.194	2004	0.381	0.450	0.210	0.189	11
Slovenia	1993	0.323	0.467	0.172	0.161	2004	0.311	0.459	0.168	0.154	11
Spain	1994	0.337	0.338	0.223	0.151	2004	0.388	0.392	0.236	0.185	10
Sweden	1997	0.410	0.479	0.214	0.205	2004	0.367	0.481	0.190	0.183	11
Switzerland	1991	0.400	0.419	0.232	0.194	2004	0.375	0.447	0.207	0.185	11
Turkey	2001	0.385	0.277	0.279	0.154	2004	0.334	0.265	0.245	0.130	10
Ukraine	1998	0.304	0.511	0.149	0.152	2004	0.213	0.493	0.108	0.107	9
UK	1991	0.393	0.436	0.222	0.193	2004	0.376	0.463	0.202	0.187	10

Notes: See notes to Appendix Table A2a.

Appendix Table A2e: EMPLOYEES ONLY, Country Duncan Values for Industrial Employment Based on ISIC Rev2 (1990)

<i>Country</i>	Early Year	Duncan	% of W in LF	% of W to Change	% of LF to change	Late Year	Duncan	% of W in LF	% of W to Change	% of LF to change
Australia	1969	0.132	0.290	0.160	0.093	1996	0.153	0.423	0.088	0.074
NZ	1991	0.292	0.478	0.153	0.146	2000	0.293	0.505	0.145	0.147
Fiji	1980	0.253	0.183	0.207	0.076	1998	0.178	0.336	0.118	0.079
Bermuda	1978	0.192	0.419	0.111	0.093	1994	0.196	0.498	0.098	0.098
Brazil	1992	0.244	0.359	0.145	0.118	1999	0.406	0.396	0.236	0.198
Canada	1969	0.184	0.185	0.533	0.198	1997	0.287	0.473	0.151	0.143
Costa Rica	1981	0.125	0.325	0.084	0.055	1996	0.215	0.344	0.141	0.097
El Salvador	1978	0.433	0.229	0.334	0.153	1996	0.216	0.319	0.147	0.094
Mexico	1980	0.096	0.246	0.072	0.035	1986	0.091	0.288	0.065	0.037
Panama	1972	0.176	0.329	0.118	0.078	1991	0.147	0.410	0.087	0.071
Paraguay	1983	0.203	0.349	0.132	0.092	1994	0.223	0.340	0.147	0.100
Trin & Tob	1987	0.184	0.305	0.131	0.075	2002	0.351	0.388	0.211	0.168
USA	1969	0.113	0.364	0.071	0.052	2000	0.108	0.484	0.056	0.054
Bahrain	1987	0.499	0.066	0.466	0.061	2004	0.238	0.114	0.211	0.048
China	1987	0.158	0.368	0.100	0.074	1999	0.161	0.392	0.098	0.077
Cyprus	1976	0.423	0.286	0.302	0.172	1991	0.391	0.323	0.265	0.171
Hong Kong	1972	0.212	0.447	0.117	0.105					
India	1975	0.265	0.113	0.235	0.053	2003	0.229	0.184	0.187	0.069
Israel	1986	0.161	0.365	0.102	0.075	1994	0.164	0.395	0.099	0.079
Japan	1969	0.235	0.267	0.536	0.286	2002	0.242	0.406	0.144	0.117
Jordan	1973	0.108	0.151	0.092	0.028	1993	0.353	0.227	0.272	0.124
Korea	1980	0.141	0.340	0.100	0.058	1994	0.129	0.312	0.084	0.059
Macau	1988	0.036	0.616	0.014	0.017	1997	0.266	0.508	0.131	0.133
Malaysia	1989	0.398	0.375	0.249	0.187	1993	0.405	0.363	0.258	0.187
Philippines	1977	0.491	0.182	0.402	0.146	2000	0.392	0.376	0.245	0.184
Singapore	1974	0.338	0.336	0.225	0.151	1993	0.223	0.358	0.143	0.102

Sri Lanka	1971	0.344	0.369	0.217	0.160	1994	0.237	0.482	0.123	0.118
Botswana	1976	0.280	0.187	0.228	0.085	1995	0.214	0.382	0.132	0.101
Chad	1986	0.249	0.053	0.236	0.025	1991	0.418	0.058	0.394	0.046
Egypt	1989	0.337	0.165	0.282	0.093	1995	0.358	0.177	0.295	0.105
Kenya	1977	0.200	0.171	0.166	0.057	1997	0.224	0.306	0.155	0.095
Malawi	1970	0.292	0.082	0.268	0.044	1995	0.279	0.208	0.221	0.092
Mauritius	1970	0.221	0.197	0.177	0.070	2000	0.332	0.371	0.209	0.155
Swaziland	1970	0.289	0.173	0.239	0.083	1986	0.293	0.280	0.211	0.118
Zimbabwe	1975	0.264	0.168	0.219	0.074	2002	0.263	0.239	0.200	0.096
Austria	1975	0.263	0.387	0.161	0.125	1993	0.315	0.411	0.186	0.153
Belgium	1970	0.348	0.049	0.331	0.033	1992	0.293	0.119	0.259	0.061
Croatia	1981	0.279	0.395	0.169	0.133	1996	0.281	0.468	0.150	0.140
Czech Rep	1987	0.095	0.437	0.054	0.047	1994	0.075	0.402	0.045	0.036
Estonia	1980	0.310	0.502	0.154	0.155	1989	0.325	0.498	0.163	0.163
Finland	1969	0.206	0.276	0.472	0.261	1995	0.191	0.438	0.108	0.094
Gibraltar	1980	0.409	0.239	0.312	0.149	2004	0.245	0.415	0.143	0.119
Greece	1981	0.408	0.196	0.328	0.129	1992	0.358	0.232	0.275	0.128
Ireland	1986	0.314	0.374	0.197	0.147	2004	0.352	0.471	0.186	0.175
Macedonia	1982	0.305	0.321	0.207	0.133	2001	0.294	0.409	0.174	0.142
Netherlands	1987	0.140	0.151	0.119	0.036	1994	0.155	0.179	0.128	0.046
Norway	1977	0.190	0.198	0.153	0.061	1995	0.162	0.240	0.123	0.059
Portugal	1974	0.360	0.287	0.256	0.147	1993	0.323	0.330	0.217	0.143
San Marino	1978	0.093	0.343	0.061	0.042	1993	0.112	0.364	0.071	0.052
Slovakia	1986	0.287	0.456	0.156	0.142	2004	0.331	0.488	0.170	0.166
Spain	1973	0.143	0.231	0.109	0.052	1993	0.178	0.269	0.125	0.074
Sweden	1987	0.401	0.501	0.200	0.201	2004	0.384	0.506	0.190	0.192
Switzerland	1975	0.127	0.279	0.091	0.051	1986	0.108	0.288	0.077	0.044
Ukraine	1988	0.176	0.409	0.104	0.085	2000	0.066	0.352	0.043	0.030
UK	1971	0.135	0.376	0.088	0.061	1993	0.166	0.429	0.092	0.082

Notes: See notes to Appendix Table A2a.

Appendix Table A2f: EMPLOYEES ONLY, Country Duncan Values for Industrial Employment Based on ISIC Rev3 (1990)

<i>Country</i>	Early Year	Duncan	% of W in LF	% of W to Change	% of LF to change	Late Year	Duncan	% of W in LF	% of W to Change	% of LF to change
Australia	1993	0.297	0.442	0.165	0.146	2004	0.278	0.463	0.149	0.138
NZL	1997	0.296	0.482	0.153	0.148	2004	0.314	0.489	0.160	0.157
Argentina	1991	0.386	0.366	0.245	0.179	2003	0.389	0.472	0.205	0.194
Bermuda	1994	0.254	0.498	0.128	0.127	2004	0.268	0.480	0.139	0.134
Brazil	1999	0.303	0.391	0.184	0.144	2003	0.458	0.433	0.260	0.225
Canada	1997	0.299	0.473	0.158	0.149	2004	0.294	0.491	0.149	0.147
Colombia	1992	0.233	0.428	0.133	0.114	2004	0.358	0.422	0.207	0.175
Costa Rica	1996	0.397	0.321	0.270	0.173	2004	0.381	0.348	0.248	0.173
Ecuador	2002	0.389	0.362	0.248	0.180	2004	0.395	0.366	0.251	0.183
Mexico	1991	0.364	0.342	0.240	0.164	2004	0.312	0.351	0.203	0.142
Panama	1992	0.405	0.393	0.246	0.193	2004	0.403	0.400	0.241	0.193
Peru	1996	0.312	0.310	0.215	0.133	2004	0.314	0.345	0.206	0.142
USA	2000	0.243	0.480	0.126	0.121	2004	0.264	0.485	0.136	0.132
Uruguay	2000	0.436	0.453	0.239	0.216	2002	0.443	0.444	0.246	0.219
Cyprus	1995	0.211	0.389	0.129	0.101	2004	0.355	0.479	0.185	0.177
Georgia	1998	0.378	0.485	0.195	0.189	2004	0.419	0.494	0.212	0.209
Iran Is. Rep.						1996	0.471	0.126	0.411	0.104
Israel	1995	0.355	0.451	0.195	0.176	2003	0.336	0.487	0.172	0.168
Japan	2003	0.290	0.408	0.171	0.140	2004	0.293	0.411	0.172	0.142
Kazakhstan	2001	0.375	0.452	0.206	0.186	2004	0.352	0.467	0.188	0.175
Korea	1994	0.271	0.382	0.167	0.128	2004	0.320	0.419	0.186	0.156
Macau	1998	0.330	0.474	0.174	0.165	2004	0.279	0.531	0.131	0.139

Philippines	2001	0.411	0.382	0.254	0.194	2004	0.403	0.366	0.256	0.187
Singapore	1993	0.235	0.432	0.133	0.115	2003	0.289	0.477	0.151	0.144
Sri Lanka										
Taiwan	1993	0.150	0.425	0.086	0.073	2002	0.179	0.442	0.100	0.088
WB & G	1996	0.479	0.153	0.406	0.124	2004	0.512	0.176	0.422	0.149
Yemen Rep.	1999	0.460	0.082	0.422	0.069					
Botswana	1995	0.327	0.440	0.183	0.161	2002	0.228	0.420	0.132	0.111
Egypt	1997	0.407	0.177	0.335	0.118	2003	0.403	0.187	0.328	0.123
Mauritius	1999	0.366	0.368	0.231	0.170	2004	0.347	0.359	0.223	0.160
Swaziland	1970	0.289	0.173	0.239	0.083	1986	0.293	0.280	0.211	0.118
Andorra	2003	0.265	0.454	0.145	0.132	2004	0.268	0.454	0.146	0.133
Austria	1996	0.125	0.318	0.085	0.054	2004	0.336	0.442	0.188	0.166
Belgium	1993	0.391	0.411	0.230	0.189	2003	0.338	0.443	0.189	0.167
Bulgaria	1996	0.265	0.512	0.129	0.133	2003	0.238	0.523	0.114	0.119
Croatia	1996	0.318	0.460	0.172	0.158	2004	0.310	0.454	0.169	0.154
Czech Rep	1993	0.278	0.458	0.151	0.138	2004	0.289	0.466	0.154	0.144
Denmark	1995	0.341	0.461	0.184	0.170	2004	0.329	0.484	0.169	0.164
Estonia	1989	0.326	0.489	0.166	0.163	2004	0.312	0.516	0.151	0.156
Finland	1989	0.378	0.501	0.189	0.189	2004	0.377	0.503	0.187	0.189
France	1990	0.293	0.436	0.166	0.144	2004	0.289	0.470	0.153	0.144
Germany	1995	0.340	0.429	0.194	0.167	2004	0.337	0.464	0.181	0.168
Greece	1993	0.273	0.361	0.174	0.126	2003	0.331	0.403	0.197	0.159
Iceland	1991	0.347	0.503	0.172	0.173	2002	0.335	0.515	0.163	0.168
Italy	1993	0.286	0.361	0.183	0.132	2003	0.302	0.409	0.179	0.146
Lithuania	1995	0.547	0.386	0.336	0.259	2004	0.330	0.503	0.164	0.165
Luxembourg	1997	0.360	0.365	0.229	0.167	1998	0.358	0.364	0.228	0.166
Macedonia	2001	0.278	0.409	0.164	0.134	2003	0.310	0.430	0.177	0.152

Malta	2000	0.267	0.323	0.181	0.117	2004	0.254	0.329	0.170	0.112
Netherlands	1995	0.342	0.414	0.200	0.151	2002	0.314	0.447	0.174	0.179
Norway	1996	0.354	0.473	0.187	0.177	2004	0.369	0.488	0.189	0.184
Poland	1995	0.349	0.465	0.186	0.173	2004	0.353	0.468	0.188	0.176
Portugal	1993	0.300	0.444	0.167	0.148	2003	0.340	0.465	0.182	0.169
Romania	1994	0.314	0.411	0.185	0.152	2004	0.294	0.457	0.159	0.146
Russian Fed.	2000	0.330	0.485	0.170	0.165	2004	0.344	0.496	0.173	0.172
San Marino	1995	0.319	0.398	0.192	0.153	2004	0.311	0.415	0.182	0.151
Slovenia	1993	0.262	0.485	0.135	0.131	2004	0.294	0.472	0.155	0.147
Spain	1993	0.357	0.339	0.236	0.160	2004	0.379	0.409	0.224	0.183
Switzerland	1991	0.300	0.436	0.169	0.148	2004	0.298	0.449	0.164	0.148
Turkey	2000	0.282	0.195	0.227	0.089	2004	0.277	0.204	0.220	0.090
Ukraine	2002	0.293	0.515	0.142	0.146	2004	0.322	0.528	0.152	0.161
UK	1993	0.305	0.503	0.151	0.152	2004	0.279	0.492	0.142	0.140

Notes: See notes to Appendix Table A2a.

Appendix Table A3: Relative (Female/Male) Wages by Country

COUNTRY	YEAR	REL.WAGE	YEAR	REL.WAGE	CHANGE	TYPE	Remarks
<i>Oceania</i>							
Australia	1969	0.647	2004	0.864	0.8%	Hourly	B
Fr. Polynesia	1995	0.873	2003	0.893	0.3%	Hourly	A
New Caledonia			1999	0.813		Hourly	A
New Zeland	1974	0.718	2004	0.859	0.6%	Hourly	C
<i>Europe</i>							
Austria	2000	0.536	2001	0.534	-0.3%	Monthly	A
Belarus	1995	0.790	2003	0.796	0.1%	Monthly	A
Belgium	1999	0.833	2003	0.828	-0.1%	Monthly	B
Bulgaria	1996	0.689	2003	0.812	2.4%	Monthly	A
Croatia			2003	0.895		Monthly	A
Denmark	1995	0.829	2003	0.857	0.4%	Hourly	B
Finland	1999	0.794	2003	0.804	0.3%	Monthly	B
France	1999	0.736	2002	0.744	0.3%	Monthly	A
Gibraltar	1980	0.659	2003	0.678	0.1%	Weekly	B
Hungary	1992	0.808	2003	0.877	0.7%	Monthly	A
Iceland	1998	0.825	2004	0.814	-0.2%	Monthly	B
Ireland	1999	0.638	2003	0.662	0.9%	Weekly	D
Isle of Man	1995	0.629	2004	0.676	0.8%	Hourly	A
Latvia	1994	0.770	2004	0.846	1.0%	Monthly	A
Lithuania	1994	0.696	1999	0.819	3.3%	Monthly	A
Luxembourg	1980	0.497	1996	0.640	1.6%	Monthly	A
Malta	2000	0.870	2004	1.000	3.6%	Hourly	A
Netherlands	1994	0.776	2004	0.817	0.5%	Monthly	A
Norway	1997	0.854	2002	0.853	0.0%	Monthly	B
Portugal	1997	0.706	1998	0.728	3.0%	Monthly	B
Romania			2003	0.812		Monthly	A
Sweden	1993	0.862	2004	0.883	0.2%	Hourly	A
Switzerland	1994	0.730	2002	0.755	0.4%	Monthly	B
Turkey	1988	0.858	2001	0.983	1.1%	Daily	A
Ukraine	1993	0.617	2004	0.686	1.0%	Monthly	A
UK	1995	0.701	2004	0.744	0.7%	Weekly	A
<i>Asia</i>							
Bahrain	1987	1.386	2004	1.095	-1.4%	Monthly	A
Cyprus	1988	0.681	2004	0.731	0.5%	Monthly	A
Georgia	1999	0.521	2003	0.526	0.2%	Monthly	A
Hong Kong	1987	0.763	2004	0.912	1.1%	Monthly	B
Japan	1969	0.485	2003	0.668	0.9%	Monthly	B
Jordan	1980	0.836	1999	0.885	0.3%	Daily	B
Kazakhstan	1998	0.758	2004	0.619	-3.3%	Monthly	A
Korea	1976	0.470	2002	0.639	1.2%	Monthly	B
Mongolia	2000	0.924	2004	0.895	-0.8%	Monthly	A
Philippines	1993	0.928	1999	0.934	0.1%	Monthly	A
Qatar			2001	0.994		Monthly	A
Singapore	1989	0.697	1997	0.760	1.1%		B

COUNTRY	YEAR	REL.WAGE	YEAR	REL.WAGE	CHANGE	TYPE	Remarks
Sri Lanka	1975	0.792	2004	0.916	0.5%	Daily	B
Thailand	2000	0.863	2001	0.852	-1.2%	Monthly	A
West Bank and Gaza	1996	0.832	2004	0.833	0.0%	Daily	A
<i>Americas</i>							
Brazil	1988	0.695	1997	0.754	0.9%	Monthly	B
Colombia	2002	0.842	2004	0.753	-5.4%	Monthly	A
Costa Rica	1987	0.821	2004	0.911	0.6%	Monthly	A
El Salvador	1998	0.771	2003	0.774	0.1%	Monthly	A
Guadeloupe	1998	0.891	2001	0.903	0.4%	Hourly	A
Mexico	1991	0.728	2004	0.842	1.1%	Monthly	A
NL Antilles	1983	0.723	1986	0.646	-3.7%	Monthly	B
Panama	1998	0.979	1998	0.980		Monthly	A
Paraguay	2000	0.674	2003	0.689	0.7%	Monthly	A
Peru			1995	0.570		Weekly	B
Virgin Islands			1994	0.849		Hourly	A
<i>Africa</i>							
Botswana	1998	0.971	2003	0.798	-3.8%	Monthly	A
Egypt	1969	0.750	1978	0.889	1.9%	Monthly	B
Eritrea			1996	0.585		Monthly	B
Eritrea			1996	0.815		Monthly	E
Eritrea			1996	0.490		Monthly	F
Eritrea			1996	0.858		Monthly	G
Kenya	1977	0.935	1997	0.847	-0.5%	Monthly	B
St. Helena	1994	0.744	2002	0.874	2.0%	Monthly	Total
Swaziland	1972	0.303	1997	0.926	4.6%	Monthly	H
Swaziland	1977	0.705	1997	0.913	1.3%	Monthly	I
Tanzania	1972	0.963	1981	0.917	-0.6%	Monthly	B

Note: A = Total

B = Excluding agriculture and fishing

C = Excluding agriculture, fishing, Private households with employed persons and extra-territorial organizations and bodies

D = Only Mining, Quarrying, Manufacturing, Electricity, Gas and Water Supply

E = Only Construction, Electricity, Gas and Water Supply

F = Trade, Hotels and Restaurants

G = Education, Social work, Health and Community Work

H = Total: Skilled Labor

I = Total: Unskilled Labor

Source: ILO

Appendix Table A4: Simulated changes (%) in female and male wages and GDP and percentage of the labor force who should be reallocated to achieve equality using (a) actual employment and wage data; (b) if the wage gap was increased by 10 percent, assuming actual employment levels and (c) if female employment increased by 10 percent, assuming actual wage levels													
Country	Year	Actual Data				If the wage gap increased				If female employment increased			
		Change in Female Wages	Change in Male Wages	Change in GDP	Required Reallocations of the LF	Change in Female Wages	Change in Male Wages	Change in GDP	Required Reallocations of the LF	Change in Female Wages	Change in Male Wages	Change in GDP	Required Reallocations of the LF
Australia	2004	9	-4	1	17	17	-6	3	26	8	-4	1	17
Belgium	2003	18	-4	2	18	29	-4	4	23	18	-4	2	19
Brazil	2002	23	-5	4	24	33	-5	6	30	22	-5	4	25
Bulgaria	2003	16	-6	4	28	25	-8	6	37	15	-7	4	29
Costa Rica	2004	11	-2	2	14	20	-4	3	21	11	-3	2	15
Croatia	2003	12	-5	2	21	21	-6	4	30	12	-5	2	22
Cyprus	2004	28	-6	6	33	39	-6	8	38	27	-6	6	35
Denmark	2003	9	-4	1	17	16	-6	3	25	9	-5	1	17
Finland	2003	15	-6	3	27	24	-7	6	35	15	-6	3	28
France	2002	21	-6	4	30	32	-7	7	36	21	-6	4	31
Georgia	2003	30	-5	6	33	42	-5	8	38	30	-5	6	34
Gibraltar	2003	18	-5	3	28	28	-6	5	31	17	-5	3	26
Ireland	2003	39	-4	5	26	53	-4	7	28	39	-5	5	27
Japan	2003	48	-5	7	31	62	-5	10	33	47	-5	8	33
Kazakhstan	2004	32	-6	7	30	45	-6	10	36	32	-7	7	31
Korea	2002	45	-6	9	35	59	-6	11	37	44	-6	9	37
Latvia	2004	12	-4	2	20	20	-6	4	28	12	-5	3	20
Lithuania	1999	11	-5	2	20	18	-6	4	28	10	-5	2	20
Mexico	2004	19	-3	3	19	29	-4	5	25	18	-3	3	20

Appendix Table A4 (continued): Simulated changes (%) in female and male wages and GDP and percentage of the labor force who should be reallocated to achieve equality using (a) actual employment and wage data; (b) if the wage gap was increased by 10 percent, assuming actual employment levels and (c) if female employment increased by 10 percent, assuming actual wage levels													
		Actual Data				If the wage gap increased				If female employment increased			
Country	Year	Change in Female Wages	Change in Male Wages	Change in GDP	Required Reallocations of the LF	Change in Female Wages	Change in Male Wages	Change in GDP	Required Reallocations of the LF	Change in Female Wages	Change in Male Wages	Change in GDP	Required Reallocations of the LF
Netherlands	2003	19	-6	4	28	30	-6	6	34	19	-6	4	29
New ealand	2004	16	-6	3	27	25	-7	6	35	15	-6	4	27
Norway	2002	9	-4	1	18	17	-6	3	27	9	-5	1	18
Portugal	1998	24	-5	4	28	35	-6	7	33	23	-6	5	29
Singapore	2003	36	-6	7	33	49	-7	10	37	35	-7	7	35
Sweden	2004	4	-2	0	8	9	-4	1	17	4	-3	0	9
Switzerland	2002	20	-7	4	29	29	-7	7	36	19	-7	4	30
Taiwan	2002	22	-6	4	29	33	-7	6	35	21	-6	4	30
UK	2003	25	-7	6	33	36	-7	8	39	25	-7	6	35
Ukraine	2004	21	-7	5	28	31	-7	7	35	20	-7	5	29

Notes: See Annex 2