The Female Labor Force and Long-run Development: The American Experience in Comparative Perspective*

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1 Introduction

The nature and extent of segmentation of economic activity across genders and its changing roles during the course of economic development has been a central topic of inquiry since Ester Boserup's pioneering work on *Woman's Role in Economic Development*. This is of course a complex phenomenon and it's systematic analysis is complicated by measurement issues. Goldin's work greatly contributed to its understanding and inspired much of the subsequent work on the topic. In a series of seminal papers, Goldin establishes the existence of a U-shaped labor supply of women across the process of economic development, and the important roles played by education and the emergence of a white-collar sector in fostering the paid employment of married women.

The absence of a clear distinction between market production and work for the family affects the measurement of labor force participation in early phases of economic development, especially for women. Goldin's extensive work to fill the gaps in the historical record on women's work in the United States reveals that female labor force participation was U-shaped: it declined during the 19^{th} century, reached the bottom sometimes in the 1920s, and then it steadily increased during the 20^{th} century.

Goldin (1986, 1990) argues that, until the late nineteenth century, women in the United States worked almost exclusively in the home or as unpaid labor in family enterprises. This work involved not only the care of children and the upkeep of the house, but also goods production activities such as the cultivation and preparation of food and the manufacture of many of the goods used in the home or sold in the marketplace (clothing, canned food etc.). Women, both on farms and in cities, were active participants in the labor force when the home and work activities could be performed in the same place. But their participation declined as the nature of the production process changed and production moved from the household to factories and offices.

Official statistics, however, might not capture the full extent of female participation in the labor market going back in time, especially for married women. According to Census data, the labor participation for white women was 16.3 percent in 1890 and it increased to 24.5 percent by 1940, when the census established its labor force construct. As shown in Goldin (1990), the figure for 1890 heavily underestimates women's work, especially for married, white women whose participation rate was particularly low, 2.5 percent (data are from Goldin 1990, Table 2.1). Based on her calculations, adding paid and unpaid farm labor of married women and boardinghouse keepers would imply a labor force participation rate for white women in 1890 similar to that observed in 1940. Moreover, Goldin (1986) shows that female labor force participation in 1890 might have been considerably lower than earlier in the 19^{th} century and in the late 18th century. Thus, more inclusive measures of labor supply trace a U-shaped function: after declining for about a century, the female labor force participation rate was as high in 1940 as it was in 1890 and kept rising thereafter. The bottom of the U must have occurred somewhere between 1890 and 1940.

Goldin (1995) finds further evidence of a U-shaped female labor supply function with economic development (as measured by GDP per capita) using a large cross-section of countries observed in the first half of the 1980s. Goldin also establishes that increasing women's education and the emergence of the white-collar sector are important determinants of this pattern, both historically and across countries. Subsequent work by Mammen and Paxson (2000), Lundberg (2010) and Luci (2009) provides additional evidence of a U-shaped labor supply based on larger panels of economies observed in the 1970s and 1980s, 2005, and for the years 1965 to 2005, respectively.[1]

This paper builds on this work by providing additional evidence on the relationship between the process of economic development and women's labor force participation. Specifically, it investigates whether the United States experience was exceptional historically and whether the timing of a country's transition to a modern path of economic development affects the shape of women's labor supply.

First, the experience of the United States is studied in a comparative perspective relative to a sample of economically advanced economies. Pre-WWII data on labor force participation rates and sectoral employment by gender from the International Historical Statistics (IHS, Mitchell, 1998) are combined with comparable post-WWII data from the International Labour Organization (ILO) to construct a sample of sixteen developed economies for which data are consistently available for most of the 1890 to 2005 period. The sample includes: Australia, Belgium, Canada, Denmark, France, Finland, Germany, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, United Kingdom and the United States.[2] The analysis confirms the existence of a U-shaped female labor supply function, coming from both cross-country and within country variation.

Next, ILO data for the years 1950 to 2005 are used to study the link between female labor force participation and income in a large cross-section of countries. The analysis of this long panel confirms the findings of Goldin (1990), Mammen and Paxson (2000), Luci (2009) and Lundberg (2010). In addition, it shows that the U-shape is more muted when early OECD economies are not included in the sample. One possible explanation of this evidence is that the stigma towards married women's participation to labor market, or women's dislike for factory production, might be lower when manufacturing production is cleaner or less brawn

[1] See Blau, Ferber and Winkler (2014, Chapter 17 and 18) for a comparative discussion of a recent cross-section of world economies. This work includes an insightful discussion of the experience of the former Soviet countries as well as of differences among African economies.

[2] Far from being perfect, these data are as close as possible to being harmonized in terms of the definition of the employment construct. See section 3.1 and section 7 for a detailed discussion.

intensive than it was in the 19$^{\text{th}}$ century. For example, if, as it is the case with electronics in Asia, industrialization is associated with an increased demand for fine motor skills (in which women have a comparative advantage), then industrialization would generate an increase in women's relative wages that, by counteracting the income effect for married women, could potentially lead to a smaller drop in female labor supply. Alternatively, women's labour force participation would not drop as much if economic development is driven by a rapid expansion of the service economy in which women have a comparative advantage and whose wealth of jobs do not share the same stigma as work in factories.[3]

Lastly, the evolution of women's employment is linked to the process of *structural transformation*. This process is defined in the growth literature as the reallocation of labor across the three main sectors of production: agriculture, manufacturing and services.[4] The typical process of sectoral reallocation over the course of economic development involves a systematic fall in the share of labor allocated to agriculture, a hump-shaped change in the share of labor in manufacturing, which increases in the early stages of the reallocation process and then declines, and a steady increase in the share of labor in services. This paper establishes gender differentials in the process of sectoral re-allocation. The share of women employed in the agricultural sector drops more rapidly than that of men. The employment share in manufacturing exhibits the distinct hump-shaped profile for both genders but women's profile is much flatter than men's. The employment share in services increases much more rapidly for women than for men. Interestingly, the gender differentials are smaller in emerging economies.

Taken together, these findings seem to suggest that the timing of a country's transformation from agriculture to manufacturing and services determines whether female labor force participation experiences the first, downward portion of the U. The U-shaped association between economic development and female labor force participation seems to be a feature of economies that went through the transition from agriculture to manufacturing in the nineteenth century and whose service sector significantly expanded decades later. The cleaner, precision manufacturing of the present time and the rapidly expanding service economy in some developing countries may be less likely to trigger norms against women's work.

[3]It would be interesting to quantify the relative importance of these two alternative explanations. This analysis, which would require a more structural approach, is behind the scope of this chapter and is thus left for future work.

[4]This process has been extensively documented starting with the work by Kuznets (1966) and Maddison (1980). Recent work by Herrendorf, Rogerson and Valentinyi (2013) provides systematic evidence about the 'facts' of structural transformation for a large cross-section of countries and going back in time as far as possible.

2 Background

The relationship between gender equality and economic development has been widely investigated. On the one end, gender equality contributes to economic development, particularly when the well-being of children is involved. On the other end, economic development might foster gender equality. Among the many useful indicators of women's economic status, including women's educational attainment, health, role in politics and legal rights, labor force participation is arguably the most fundamental to the evolution of gender roles. However, in the early stages of economic development growth initially lowers female participation to the (formal) labor market, and only subsequently is associated with higher female employment. For this reason, Goldin (1995) points out that the positive relationship between women's status and economic development might be camouflaged, and opposing views on whether economic growth enhances gender equality might arise.

What do we know about the U-shaped female labor supply function and its determinants outside the United States?

A rich literature analyzes this phenomenon with reference to supply and demand factors that played an important role in the evolution of female labor force participation, and can explain the observed cross-country variation.[5] Here, the discussion is organized around the link between female labor force participation and structural transformation.

Women's influence on production across phases of economic development depends on the degree of substitution between their own labor in agricultural production and other activities, on the degree of substitution between labor and capital, and between male and female labor inputs under different production, organizational, and social conditions.

For example, the declining portion of the U-shape can be explained by the change in the nature of agricultural work as an economy moves away from subsistence agriculture. This change typically involves a shift from very labor-intensive technologies, where women are heavily involved as family workers, to capital-intensive agricultural technologies where men tend to have a comparative advantage because of the physical strength these technologies require (Boserup, 1970).[6]

The early transition to a mostly industrial economy is characterized by conflicting forces affecting women's work. For instance, in the United States, the expansion of the manufacturing sector was accompanied by a process of de-skilling as the factory system began to displace the artisanal shop in the 1820s (Goldin and Sokoloff 1982). De-skilling became rapidly more

[5]See Goldin (1990, 2006), Blau et. al. (2014, Ch. 2), Blau (1998) and Blau and Kahn (2007) for a comprehensive discussion of the factors affecting the trends in the United States at different points in time; Blau et. al. (2014, Ch.17 and 18) for international comparisons, and Lundberg (2010) for a discussion of the changing sexual division of labor with economic development.

[6]Boserup (1970) offers plough cultivation as an example. She argues that plough agriculture might originate traditional gender role attitudes that affect the gender division of labor, potentially lowering female labor force participation. Recent work by Alesina, Giuliano and Nunn (2013) proves Boserup's hypothesis right.

marked as production increasingly mechanized with the adoption of steam power after 1850 (Atack, Bateman, and Margo 2008). Goldin and Sokoloff (1984) argue that the United States agricultural areas, where the marginal products of females and children were low relative to those of adult men, were the first to industrialize. This "relative productivity hypothesis" predicts that the lower the relative productivity of females and children in the pre-industrial agricultural economy, the earlier manufacturing is likely to evolve.

Thus, it seems that with the increasing industrialization happening during the 19$^{\text{th}}$ century there was initially a greater demand for (relatively unskilled) female labor. Why then female labor force participation decreased during early industrialization?

First, as shown by Katz and Margo (2013), the demand for unskilled female workers was probably not exceedingly high. They show that the share of female workers was positively correlated with the use of steam and water power, and with capital deepening. However, the positive correlation largely disappears (and even becomes negative for steam) once they control for establishment size, which is positively associated with the percent of unskilled workers, as in Goldin and Sokoloff (1982). Moreover, "the evidence on size and relative use of female and child labor might not reflect the full extent of division of labor in nineteenth century manufacturing, because many establishments did not hire women or children, and yet were relatively large." (Katz and Margo, 2013, pg. 23)

Second, there was some kind of redistribution of employment across groups, as single women, who began to leave the house to work in factories, displaced widows handling the artisanal shop of their deceased husbands (Goldin, 1986).

Third, as emphasized in Goldin (1990), production processes in the early phases of industrialization were characterized by dirty, noisy and often physically demanding jobs. While it might be acceptable for a single woman to work in such conditions, the expectation was that a single woman would work only until her marriage. Stated differently, there was a stigma against married women working as manual laborers in factory-type work.[7] Because of the changing nature of agricultural production, as well as the stigma attached to women's employment in manufacturing, the 'income effect' dominated during this phase of development, and female labor force participation declined.

The increasing portion of the U during the transition from the industrial to the post-industrial phase of economic development is unambiguously associated with increasing female labor force participation and changing gender roles. The expansion of the service sector with its attendant white-collar jobs and/or the pervasive skilled-biased technological change in

[7] In August 1936, a Gallup Poll asked: "Should a married woman earn money if she has a husband capable of supporting her?". A resounding 82 percent answered no. A similar question was asked in October 1938 and November 1945. In both instances 78 percent of Americans disapproved of a "woman earning money in business or industry if she has a husband capable of supporting her." Given the changes in the economic outlook and female labor force participation across these years, it seems reasonable to interpret these sentiments as evidence of a strong stigma towards a working married woman.

the economy (see Goldin and Katz, 2008, and Katz and Margo, 2013) greatly facilitated this transformation (Goldin, 1990, 2006). As intellectual skills grew in importance in market production relatively to physical power, increasing relative wages lowered fertility and increased labor force participation (Galor and Weil, 1996).[8] Other types of technological progress reinforced this process by affecting women's investment in human capital and fertility choices.[9]

3 The American Experience in Comparative Perspective: Developed Economies.

I use data from sixteen high-income countries over the period 1890 to 2005 to trace the relationship between economic development and women's labor force participation. The data set is constructed using information reported from the International Historical Statistics (Mitchell, 1998) and, for the post-1950 period, the International Labour Organization (ILO).[10] The past experience of economically advanced countries is interesting. While they are similar to the United States in many ways, they transitioned across stages of economic development at different points in time. Table 1 summarizes statistics on GDP per capita expressed in 1990 international dollars (column 2), sectoral employment shares (column 3 to 5) and value added shares (column 6 to 8), for a subset of developed economies at three points in time: 1890, 1950, and 2000. The first panel in the table reports statistics for the United States followed by Belgium, the Netherlands, France, Spain, Sweden and the UK.[11].

The range of experiences spanned by these countries is quite heterogeneous. The UK had the highest GDP per capita in 1890, only 16 percent of its workers were employed in agriculture and the agricultural value added share was below 10 percent, a relatively "postindustrial" value. The manufacturing sector employed 44 percent of its workers (valued added share of 41 percent). The broad service sector employed 40 percent of its workers and had the highest value added share, 50 percent.

The other countries were well behind in the process of structural transformation. In the United States, the country with the third highest GDP per capita in 1890, the employment share in agriculture was still quite high (42 percent), although the size of the sector as

[8]Most models in this vein predict a monotonic relationship between growth and female labor force participation. Galor and Weill (1996, pg. 384-385) is an exception. They propose extensions of their model that can generate the U-shaped labor supply. For example, by adding a technology for producing market goods that is not fully rival with raising children at home and does not require capital.

[9]For example, progress in medical technologies related to motherhood (Albanesi and Olivetti, 2011), progress in contraceptive technology (Goldin and Katz, 2002, Bailey, 2006) and progress in household technologies in new domestic appliances (Greenwood, Seshadri and Yorukoglu, 2005). Changing cultural norms and attitudes towards gender roles might also have played a role (see for example, Fernandez, Fogli and Olivetti, 2004, Fogli and Veldkamp, 2011, and Fernandez, 2013.)

[10]See Data Appendix for details about data sources and measurement issues.

[11]Data on GDP per capita are from Maddison, 2010. Sectoral data are constructed and discussed in Herrendorf, Rogerson and Valentinyi (2013).

measured by its value added share was already less than 20 percent, an indication of low labor productivity in agriculture. The rest of the economically active population was equally distributed in the manufacturing sector (27 percent) and in services (30 percent), but the service sector had the largest value added share (46 percent). The remaining economies were still prevalently agricultural at the turn of the 20$^{\text{th}}$ Century. At least half of the economically active population in France, Spain and Sweden, the three countries with the lowest GDP per capita in 1890, was employed in agriculture. However, by 1950 most of these countries had industrialized and were on the verge of a phase of rapid economic growth. In all countries, except for Spain, the employment share in agriculture had dropped to less than 30 percent (with a value added share around or below 10 percent), and the log of GDP per capita was around 9, a level that is associated with the onset of the decline of the manufacturing sector and the rise of the so-called service economy (Herrendorf et al. 2013). By 2000, all the countries in the table are in a mature phase of economic development. The employment and value added shares are 5 percent or lower in agriculture, approximately 20 percent in manufacturing, and 70 percent or higher in the service sector.

Table 1 shows that, although these countries are comparable in terms of standards of living (and have been for the past few decades), they still display substantial cross-country variation in the timing of economic development and industrial transformation. Consequently, looking at the past experience of currently developed economies can contribute to our understanding of the U-shape relationship between economic development and female labor force participation.

3.1 Data and Measurement Issues

The history of women's participation in market work is complicated by measurement issues. The concept of being in the labor force is often ambiguous, and its definition can vary substantially across countries and time periods as well as over time within a country. I developed a panel data set for 16 high-income countries that contains comparable data on labor force participation for the population aged 15 and over and the sectoral distribution of workers for the period 1890 through 2005. This sample of "developed economies" includes: Australia, Belgium, Canada, Denmark, France, Finland, Germany, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, United Kingdom and the United States. The year 1890 is the first for which a starting data point is available for almost all countries. In Australia and Denmark the first available year is 1900. The end date is the latest year for which International Labour Organization (ILO) statistics are available. The data are available at 10- or 5-year intervals for most of the countries in the sample. Starting with 1990, data at 5-year intervals are available for all countries.[12]

The United States

Prior to 1940, only workers who reported an occupation were classified as 'gainfully employed' and thus included in the labor force in the United States. Starting in 1940, and consistent with the ILO construct of 'economically active' population, the definition of labor force participation was revised to include all individuals working for pay, unpaid family workers, and also the unemployed seeking work during the survey week. It is not surprising then that the International Historical Statistics (IHS), which uses the ILO definition of labor force participation, does not report data for the United States prior to 1940. To circumvent this problem, this paper combines 1890 to 1930 female labor force participation rates from Goldin (1990, Table 2.1, first row), with 1940 to 2005 data from the IHS and the ILO, in the same way as for the other countries in the sample.[13] Note that when they overlap (that is, between 1940 and 1980), the labor force participation statistics from the IHS and the ILO are almost identical to those from Table 2.1 in Goldin (1990). This perfect overlap is also noted in Goldin (1990, pg. 43). She argues that the 1940 change in the definition of employment has no effect on the participation rate of women: "Applying the labor force concept to the pre-1940 data produces approximately the same numbers as obtained by the gainful worker definition". Goldin (1990, pg. 44) also shows that the most important source of bias for female labor force participation comes from the undercounting of people working as boardinghouse keepers, unpaid family farm workers and manufacturing workers in homes and in factories. This is because women were disproportionately engaged in these activities. Section 3.2 returns to this point.

Other Countries

It is difficult to construct somewhat comparable female labor force statistics going back to the second half of the 19th Century for a relative large cross section of countries. Goldin's discussion centers on U.S. statistics, however, similar concerns about undercounting women working in family enterprises or working for very few hours generally applies. For example, Costa (2000) discusses the existence of similar measurement issues related to historical data on female participation for France and Great Britain. Here, pre-WWII data on economically active populations by gender and by industrial group, as well as population counts by gender from the IHS (Mitchell, 1998) are combined with similar post-WWII data from the ILO. Based on this data a long time series of labor force participation rates for women and men

[12] Keeping only the statistics at 10-year intervals or changing the start and end point of the sample does not significantly alter the main findings of the analysis.

[13] Labor force participation rates for men aged 15 and above for years prior to 1940 were gathered from Pencavel (1986, Tables 1.1). See section 7 for further details.

aged 15 and above can be constructed.[14] Although imperfect, these data are probably as close as possible to being harmonized in terms of the ILO definition of the employment construct. The ILO definition classifies an individual as economically active if he/she is working for pay or profit at any time during the specific reference period, *whether he/she receives wages or not*. This definition of employment varies across countries, but it generally includes unpaid family farm workers, those in family businesses, and own-account traders. According to Mitchell (1998, pg. 161), the statistics prior to 1968 were unified across different countries and different time periods to adhere to this definition as much as possible. Post-1968 IHS data were pulled directly from the ILO tables, and thus should be harmonized using sophisticated estimation and imputation procedures.[15] Recent versions of the ILO labor statistics report data starting with the 1940s. This overlap between the available ILO and IHS statistics is exploited to detect and fix inconsistencies in the data (see section 7 for details). As a consequence of this further check, some of the 19$^{\text{th}}$ Century data points had to be dropped from the sample. The resulting panel of 16 countries is analyzed below.[16] Comparisons between countries, however, must still be made with some caution owing to remaining potential differences in classification, including differences in the definition of "economically active".

3.2 Long-run trends in female labor force participation

Figure 1 displays female labor force participation rates for each of the 16 countries in the sample. Based on the figure, it is possible to loosely identify two alternative patterns for the evolution of female labor supply.

Female labor force participation grew monotonically in the United States and Canada. Only 18 percent of women in the U.S. worked for pay in 1890 and the figure had risen to around 26 percent in 1940, when the definition of the employment construct changes. By year 2000 women's participation rate in the United States was around 60 percent. However, as argued by Goldin (1990) the 1890 figure is artificially low because it undercounts the paid and unpaid work of married women within the home and on the farm. Goldin estimates a 7 percentage points adjustment in female labor force participation for 1890, mostly stemming from unpaid employment of family members in agriculture and from widespread boarding in late 19$^{\text{th}}$ Century cities (see, Table 2.9 in Goldin, 1990, p. 44). The adjustment implies that female labor force participation in 1890 was in the vicinity of 26 percent and, therefore,

[14] See section 7 for additional details. Unfortunately, the data do not allow the construction of historical labor force statistics by age.

[15] See ILO report (2011) for a discussion of the difficulties collecting high quality data for women's labor force participation.

[16] For a few of these countries, namely Belgium, the Netherlands and the UK, it is possible to calculate labor force participation rates by gender going as far back as 1840-1850. The trade-off is that the statistics for the earlier decades of the 19$^{\text{th}}$ Century, especially pre-1870, are only available for a very small subset of countries. Using 1890 as a start date delivers the most balanced panel of countries going as far back in time as possible. The results of the analysis are basically unchanged if the sample starts in 1870 or 1880.

is as high as in 1940.[17] Goldin (1990, pg. 45) argues that the "obvious implication is that the labor force activity of adult and married women must have reached a minimum point sometime just after the turn of the century, falling before that time and rising after. Thus the participation of married women in the labor force may well be somewhat U-shaped over the course of economic development."[18] Although the monotonicity of female labor supply might be genuine for Canada, it is reasonable to think that undercounting of womens paid or unpaid work at home and on the farm might be also be plaguing these estimates.

In most of the remaining countries, the trends in female labor force participation are U-shaped, although in some cases the U is more muted than in others. Women's participation rates in Great Britain were the same in the early 1960s as they were in the past two decades of the 19$^{\text{th}}$ Century. This pattern is consistent with the analysis in Costa (2000). In Belgium female labor force participation hovers around 41 percent from 1890 to 1910, and then drops substantially and starts increasing again in the 1950s, reaching 41 percent again only by the mid-1990s. Ireland's trend is very similar to that observed for Belgium. Spain, Portugal and Italy also exhibit a U-shaped female labor supply although at lower levels of female labor force participation. The female participation rate in Spain was the same, around 23 percent, in 1890 as in 1970. In Italy women's labor force participation in year 2000 was still 13 percentage points lower than in 1900.[19] The time path of female labor supply is also U-shaped in Australia, the Netherlands, and Sweden, although the U is more muted in these countries. Finally, France and Finland both display a slightly N-shaped pattern for female labor supply. Female labor force participation in France was around 44 percent at the turn of the 20$^{\text{th}}$ Century, peaked at 53 percent in 1920, and then dropped and rose again during the course of the 20$^{\text{th}}$ century. Yet, by year 2000 female labor force participation was still lower than in 1920.[20] Finland's trend is very similar to France's, although the peak of the N occurs twenty years later, in 1940.[21]

[17]Most of the adjustment comes from white married women. Goldin (1990), estimates a rate of omission of 10 percentage points for this group. This implies a 12.5 percent labor force participation rate for white married women in 1890, as opposed to the 2.5 percent figure from the Census.

[18]In other work, Goldin (1986) shows that female labor force participation might have been even higher at the turn of the 19$^{\text{th}}$ century, thus implying an even stronger U-shape. Using data from 26 cities and business directories for Philadelphia, she estimates that in 1800 the labor force participation rate for female head of households (mostly widows) was around 65 percent, dropping to approximately 45 percent by 1860.

[19]Denmark's female labor supply is also U-shaped. The apparent W-shape observed in Figure 1 is due to a blip in 1940. This 'deviation from trend' in the labor force participation series is observed both for men and for women. This suggests that it might be driven by factors other than gender. In any case, the 1940 data point for Denmark should be used with caution.

[20]Costa (2000, figure 2) documents the same pattern for France using a different data source. She argues that the N-shape can be explained by the fact that the French agricultural sector was large and employed many women (more than in Great Britain or in the United States) and that France industrialized very slowly. Costa also observes that this could be a common feature of economic development across countries. That is, If we go back in time, womens participation may have more of an N-shape."

[21]Similar to France, Finland's experience is associated with a larger and more female-intensive agricultural sector and a slower rate of industrialization (than in Britain or the United States).

3.3 Female labor force participation and economic development

Having discussed the trends, Figure 2 plots the relationship between female labor force participation and log GDP per capita. The distinct U-shape relationship between the two series is apparent. Female participation rates tend to be high, above 40 percent, both at low and at high levels of income per capita, and dip below 40 percent in between.

Table 2 reports the results of a quadratic regression of labor force participation against log GDP per capita and its square term. Columns 1 to 3 report the results obtained for women as we progressively add year and country fixed effects. Column 4 displays the estimates for men based on the full specification.

Column 1 displays the estimates for the fitted U-shaped line shown in Figure 2. All coefficients are statistically significant at the 1 percent level. This result is based on comparing women's labor force participation in a set of countries observed over multiple time periods and it could be driven by some other (common) aggregate factors that are changing over time. Thus the specification in column 2 adds year fixed effects, something akin to comparing repeated cross sections of countries by year. The estimates are statistically significant at the 5 percent level, though the U becomes slightly more muted in this case. Column 3 reports the results when instead we add both year and country fixed effects. This specification shows the relationship within countries over time while controlling for differences across years that are common to all countries. The main finding is confirmed, although the U-shape is slightly more muted than in the previous cases and the point estimates on log GDP per capita and its square are now statistically significant only at the 10 percent level. Finally, column 4 reports the estimates for males using the same specification as in column 3. Males can be seen as a placebo group since almost all men aged 15 or above work and this is true at all levels of economic development spanned by this panel of countries.[22] Consistent with this hypothesis, I find no clear relationship between male labor force participation and economic development. The coefficient estimates are very small and not statistically significant.[23]

To ease the interpretation of the results in Table 2, Figure 3, Panel A, graphs the implied relationship between labor force participation and income based on the estimates in column 2 and 3.[24] The figure shows that the country fixed effects estimates produce a slightly more muted U-shape, but the two curves are not substantially different from each other. Thus, a quadratic can capture equally well the evolution of female labor force participation across

[22]With the caveat that in all countries there is a declining trend in male labor supply driven by increasing years of education and early retirement.

[23]To mitigate concerns that the results in Table 2 might be driven by cross-country differences in employment classification, a specification is also run where the dependent variable is the female-to-male labor force participation ratio (miss-measurement should be, at least in part, common across genders within a country). The results confirm the main findings based on levels.

[24]Because the level of the U in the country and year effect specification differs across countries, the vertical position of the function is scaled so that it lies at the average position of the curve across all countries.

countries and for individual countries as they grow. This is not surprising in light of the finding that in many of the countries in this sample female labor force participation traces a U-shape *over time* (see Figure 1) but, as shown in the next section, this is not a pattern that generally holds for the post-WWII period.

As discussed in section 2, one of the regularities established in the literature on structural transformation is that the manufacturing share peaks when log GDP per capita is around 9 (Herrendorf et al. 2013). This peak corresponds to the onset of the expansion of the so-called service economy. Based on the estimates in Table 2, we can compare the trough of the U-shaped labor supply function to the peak of the manufacturing share. The lowest female labor force participation rate is 29 percent for the regression with year effects and 32 percent for the country effect specification, corresponding to a log GDP per capita of 8.04 and 7.98, respectively (equivalent to 1990 international dollars 2,900 and 3,100). These estimates indicate that the growth in female labor force participation precedes the acceleration in the growth of the service sector. Men may gain from the shift away from agriculture initially, with more robust manufacturing growth, but women who concentrate in service sector jobs are well positioned in what will eventually be the leading sector.

4 Female Labor Force Participation and Economic Development: 1950-2005

Next I analyze a full sample of advanced and emerging economies for the period 1950 to 2005.[25] The purpose of repeating the analysis for this larger sample is twofold. First, it enables the further investigation of the relationship between female labor force participation and economic development by using information on education and labor force participation rates by age group that is not available for the longer data series. Second, it enables to study whether the findings in the previous section apply more generally.

Table 3 presents the results of this analysis. Column (1) reports the coefficients for the basic regressions with no controls, column (2) and (3) include year effects, column (4) to (6) include both year and country fixed effects. Following Goldin (1995), column (3) and (5) add the log gender differential (male-female) in years of schooling. Finally, column (6) reports the results for males. The concept of labor force participation in the first panel is the fraction of economically active women aged 15 to 64. The second panel reports the results for women aged 45 to 59. Fertility is higher in countries with lower living standard and, at the same time, it is inversely related to female labor force participation in a cross section of developed

[25] Labor force participation data were pulled directly from the ILO web page, see section 7 for details. Note that the analysis in this paper is consistent with that by Goldin (1995), and Mammen and Paxson (2000) based on the United Nations WISTAT collection. This is because the labor statistics in WISTAT are taken from the ILO. Data on educational attainment by gender are from Barro and Lee (2010).

and developing economies (Feyer, Sacerdote and Stern, 2008). The 45-59 age restriction, also used by Goldin (1995) and Mammen and Paxson (2000), helps minimizing the confounding effect that cross-country differences in fertility might have on the correlation between female labor force participation and GDP per capita.

Entries in Table 3 confirm the results obtained for the historical sample of developed economies. Every specification shows a statistically significant U-shaped relationship between female labor force participation and log GDP per capita, though the U is more muted once we control for country fixed effects. This effect holds controlling for the gender gap in years of schooling and for both measures of female labor force participation. However, as predicted by the theory, the U-shape is more marked for women past their childbearing age. At any level of economic development, female labor force participation is lower when women have fewer years of schooling relative to men (column 3), although the coefficient is not significant when adding country effects (column 5). There is no evidence of a U-shaped labor supply for men. If anything, consistent with trends in early retirement, labor force participation of men aged 45 to 59 declines at higher levels of economic development.

Table 4 reports the results when countries that joined the OECD before 1973 are excluded from the sample (see footnotes to Table 4 for the list of countries). The results in column 1 to 3 are broadly similar to those observed in Table 3, except for the fact that the U-shape is now more muted, especially when we use labor force participation of women aged 15 to 64. However, unlike in the previous two tables, the U-shape disappears once we control for country effect (column 4 and 5). In other words, for non-OECD economies, female labor force participation does not drop as much as in the full sample as income per capita increases. In contrast to the full sample and the sample for developed countries, the labor supply of older men does not decline with GDP (column 6). This indicates that early retirement is not a staple of emerging economies, although it is common in more advanced economies.[26]

To ease the comparison of the results across samples, Figure 3, Panel B and C, illustrates how the U-shape varies, within and across countries, based, respectively, on the estimates for the 1950-2005 full sample (column 2 and 4, table 3), and for the sample that excludes early OECD economies (column 2 and 4, table 4). The figure highlights differences in the predicted relationship between female labor force participation and income, both across panel B and C and relatively to the results in Panel A. For all samples, the solid line traces a significant U-shape that becomes more muted once we keep only countries that were not part of the OECD as of 1973. In both panel B and C, participation rates are at least 50 percent, both at low and high levels of income. The trough of the U occurs when log GDP per capita is 8.1 (in panel B) and 8.4 (panel C). The corresponding female labor force participation rate

[26]The results of a series of non-parametric regressions show that female labor supply is U-shaped in all decades. For the pre-1980 period, the estimates are not statistically significant, this is due to sample imbalance: There are fewer observations for the earlier years and they are skewed toward relatively richer economies.

is around 35 percent and 38 percent, respectively. Differences across samples emerge once we add country fixed effects. For the full-sample (panel B), the U-shape predicted by the regression with country effect is flatter relative to the specification with only year effects.[27] Moreover, the difference between the solid and the dashed line is larger than that observed for the sample of developed countries. For the sample of non-OECD economies (panel C), the line predicted by the regression with country effect is flat. If anything it declines slightly. For the specification with country and year effects, the bottom of the U corresponds to a female labor force participation rate of 34 percent observed when log GDP per capita is equal to 8.4 (in panel B), and to a 42 percent female labor force participation rate when log GDP per capita equals 9.4 (panel C). Interestingly, for the sample that drops OECD economies the GDP level corresponding to the through of female labor force participation roughly coincides with the peak of the manufacturing employment share.

The findings are summarized in Figure 3, which suggests that the presence of a U-shaped female labor supply might depend on the specifics of the process of structural transformation of an economy. One possibility is that the nature of manufacturing production might be cleaner or less brawn intensive for countries that industrialize in the 20$^{\text{th}}$ century relative to developed economies that went through the transition in the 19$^{\text{th}}$ century. For example, industrialization could be associated with an increased demand for fine motor skills, in which women have a comparative advantage, as is the case with electronics in Asia. Alternatively, in some countries, like India, the process of economic development could be associated with the expansion of the service economy in which women have a comparative advantage. In either case industrialization would generate an increase in women's relative wages that, by counteracting the income effect for married women, could potentially lead to a smaller drop in female labor supply with economic development.[28]

Before turning to the sectoral analysis, it is interesting to study the interplay between income, occupational composition and women's participation to the labor market. Goldin (1995) suggests that one reason for the existence of a U-shaped female labor supply function is the relationship between female education, increased white-collar employment and economic development. At low levels of economic development, education increases for males far more than for females, and women are under-represented in the clerical sector. Goldin argues that in these cases, women's absence as clerical workers might be explained by their own extremely low level of educational attainment rather than by their education gap relative to men. This

[27] Mammen and Paxson (2000, Figure 2) show a similar pattern for a panel of 90 countries observed in 1970, 1975, 1980, and 1985.

[28] A valid concern, raised by the discussant, is that there might not be enough within country variation to identify the U in this sample. This, legitimate, concern is partly mitigated by the fact that for *all* the non-OECD countries there are at the very least four data points spanning 1990 to 2005 (in many cases one can go back to the 1980s). Further investigation of this pattern with a longer data series and including a larger set of controls is left for future work.

conjecture finds support in the data (see Table 1, Goldin, 1995, pg. 77). Table 5 reproduces this analysis for the sub-sample of countries for which ILO data on occupation are available (see data appendix for details). The results confirm Goldin's findings. The ratio of female-to-male clerical workers is positively correlated with the percentage of women with secondary education and negatively correlated with the ratio of male to female total years of education. As pointed out by Goldin (1995, pg. 74) this is consistent with Boserup's observation that competition from men serves to force women out of clerical employment. The coefficient on female education looses significance once we control for country effects, indicating that the level of female education is an important determinant of cross-country differences in women's work outcomes.

5 Gender and structural transformation

The relationship between the process of structural transformation and women's involvement in the labor market has been noted by several authors, especially in relation to the increasing importance of the service sector in the economy. The idea is that production of goods is relatively intensive in the use of 'brawn' while the production of services is relatively intensive in the use of 'brain'. Since men and women may have different endowments of these factors, with women having a comparative advantage in 'brain' activities, the historical growth in the service sector may impact female participation in the labor market.

Goldin (1995, 2006) notes that service jobs tend to be physically less demanding and cleaner, thus more "respectable" for women entering the labor force, than typical jobs in factories. Thus the expansion of the service sector is well positioned to generate the rising portion of the U. Insofar as the decline in manufacturing and the parallel rise in services are staggered across countries, this development can explain the international variation in women's labor market outcomes. Only a handful of papers in the recent literature have made this connection explicitly (see Blau and Khan, 2003, Rendall, 2010, Akbulut, 2011, Olivetti and Petrongolo, 2011, and Ngai and Petrongolo, 2012). All these papers are concerned with recent trends in female labor force participation in economically advanced economies and suggest that industry structure affect women's work.[29] Other authors have studied the role of home production in explaining the shift towards services but do not explicitly focus on the link with female labor force participation (see Ngai and Pissarides, 2008, Rogerson, 2008, Buera and Kaboski, 2011, 2012).

Far less has been written about the transition from agriculture to manufacturing. The declining portion of the U can be linked to the change in the nature of agricultural work as

[29]Of course, supply-side factors might be driving the change, although work by Lee and Wolpin (2006) suggests that demand-side factors associated with technical change are likely to be the prevailing force underlying these changes.

an economy moves away from subsistence agriculture. This change typically involves a shift from very labor-intensive technologies, where women are heavily involved as family workers, to capital-intensive agricultural technologies (such as the plough) where men tend to have a comparative advantage because they require physical strength. De Vries (1994) argues that market production increased (also for women) during the early stages of the industrial revolution but home production gained importance as female labor market participation declined. As discussed in Section 2, Goldin and Sokoloff's (1984) "relative productivity hypothesis" predicts that the manufacturing sector would develop earlier in agricultural areas where the relative productivity of females and children is especially low relatively to men. According to this hypothesis, we should see an increase in the demand of female (unskilled) workers but, based on the evidence in Katz and Margo (2013), this increase should be limited. They show that although the share of female workers was positively correlated with firm size in the 19$^{\text{th}}$ century, many, relatively large, establishments did not hire women or children. Moreover, since production in manufacturing was arduous and relatively intensive in the use of 'brawn', especially in the early phases of industrialization in the 19$^{\text{th}}$ century, women, especially married women, were more likely to drop out of the market.

To date, no study has proposed a mechanism that can simultaneously generate structural transformation and the full U-shaped pattern for female labor force participation, at least to the author knowledge. One notable exception, although the link to female labor supply is not explicit, is Buera and Kaboski (2012). Their theory emphasizes the scale of the productive unit as being important to understand both movements among broad sectors (agriculture, manufacturing, technology) and movements between home and market production. Among other things, scale technologies can generate the movement of services from the market sector to the home sector, and vice versa. To the extent that the division of labor between home and market activities is gendered, this mechanism has the potential to generate a declining female labor supply, associated with the phase of greatest expansion of the manufacturing sector, as well as the increasing portion of the curve, associated with the manufacturing sector decline and the acceleration in the expansion of the service sector.

This is a promising area of research. This paper contributes to it by documenting gender differentials in the relationship between the process of structural transformation and economic development, both historically and in a modern cross section of countries. Note that using sectoral shares to study the evolution of women's work mitigates some of the issues related to the measurement of female labor force participation, especially for the sample of developed economies. This is because it does not require to match population counts with data about the economically active population.

5.1 Developed Economies

As discussed in Herrendorf et al. (2013), increases in GDP per capita have been associated with decreases in employment share in agriculture, and increases in the employment share in services. The manufacturing share of employment behaves somewhat differently from the other two sectors: its employment share follows an inverted-U shape. At low levels of development the employment share in manufacturing increases with more development. It then reaches a peak and then begins falling as development continues.[30]

The first column in Figure 4 confirms these finding based on the historical sample of developed economies. The vertical axis in each of the horizontal panels reports the share of economically active population working in agriculture (panel A), manufacturing (panel B), and services (panel C), respectively.[31] The next two columns show how this relationship varies by gender. Specifically, the vertical axis represents the share of economically active women (column 2) and men (column 3) employed in each of the three sectors. The trends by gender do not differ from those in the aggregate. That is, for both genders the correlation between GDP per capita and sectoral employment shares is negative in the agricultural sector, positive in the service sector, and it has an inverted-U shape in the manufacturing sector. However, the graph reveals some interesting differences. The female employment share in agriculture seems to drop somewhat less rapidly with log GDP per capita, the inverted-U shape in manufacturing is more muted for women than for men, and the employment share of women in services seems to grow more rapidly.

To investigate whether these gender differentials are statistically significant, Table 6 reports the results of pooled regressions, by industry, of employment shares against a female dummy, log GDP per capita (entering both linearly and as a quadratic polynomial), and interaction terms between the two. Column 1 to 3 report the results for the linear specification, column 4 and 5 those for the quadratic specification. As in earlier tables, controls for year effects (column 2 and 4), as well as country effects (column 3 and 5), are progressively added.

For the agricultural sector, as shown in panel A, the employment shares drop for both genders but the rate of decline is smaller for women than for men. This finding might be surprising in light of the discussion in section 2, but it stems from the fact that both shares are converging to zero as GDP per capita increases. Since men's employment share in agriculture is initially higher than women's, its drop is also larger. The results of the quadratic regressions in column 4 and 5 confirm this pattern, although the gender differential is not statistically significant in this case.

Panel B reveals strong gender differentials in the manufacturing sector. In the linear specification, male employment shares in manufacturing substantially increase with log GDP

[30] The same patterns are observed when using nominal value added shares.

[31] Following the definition of the three sectors in Herrendorf et al. (2013), I include mining as well as the utilities sector in the manufacturing sector.

per capita, even when we control for both year and country effects, but the increase is much smaller, by about 8 log points, for females. The estimates for the quadratic specification substantially differ by gender. Consistent with Goldin and Sokoloff (1982) and Katz and Margo (2013), the employment share in manufacturing initially rises more rapidly for women than for men, but it flattens out much earlier so that the inverted-U shape is much more pronounced for men than for women.

The last panel in Table 6 reports the results for the service sector. Column 1 to 3 show that the employment share in the service sector increases at a higher rate for women than for men, but the difference is not statistically significant (at standard levels of significance). The results of the quadratic regressions (column 4 to 5) reveal the existence of important gender differentials. The increase in the share of women working in services is steeper than men's at low levels of log GDP per capita, but it increases at a decreasing rate as GDP per capita grows. This is not surprising since the share is bounded by 1 and, in all the countries in our sample, 90 percent of all working women are in services. On the other end, the share of men employed in the service sector increases somewhat linearly, or with a slightly convex profile with economic development (being slow at first and then accelerating once the manufacturing sector start rapidly shrinking).[32]

5.2 Full Sample

Figure 5 and Table 7 report the result of the sectoral analysis for the full sample. The results are similar to those observed for the sample of developed economies with a few exceptions. The share of working women employed in agriculture drops more abruptly relative to men (at least for the quadratic specification); the gender gap in service sector shares (favorable to women) is larger; the manufacturing share of female employment is higher than in the sample of developed economies at all levels of economic development. Once again, this evidence indicates that the nature of manufacturing work might matter for the declining part of the U. Excluding early OECD economies from the sample does not substantially alter this picture. The most notable difference is that both the female service sector share and the gender differential grow more rapidly than in the full sample.

6 Conclusions

This chapter shows that there is a consistent U-shaped relationship between women's role in the labor market and the process of economic development, both within and across countries,

[32]Additional regressions (not shown) using the female share of total sector employment (that is a measure of female input intensity) as a dependent variable have also been run. The results show that while in the manufacturing sector female intensity declines as its relative importance in the overall economy increases, the female intensity in the service sector is positively correlated with the size of the sector.

although the U-shape is more muted for countries developing post-1950. The chapter is purely descriptive and, among the other things, does not discuss the potential determinants for the observed differences in female labor supply across countries and over time. However, differences in taxation, childcare availability, maternity leave policies, institutions and culture are obviously important.

Although this paper focuses on female labor force participation, there are other dimensions of women's status that might not vary linearly with economic development. Alesina, Giuliano and Nunn (2013), confirm the U-shaped relationship for female participation to the labor market (even after controlling for cultural differences across countries), but not for indicators of female participation in politics and entrepreneurial activities. Further investigation using alternative indicators of economic status, such as women's rights or maternal health, could potentially uncover other interesting non-linear relationships.

One interesting avenue for future research is to use the cross-state variation within the United States to gain a deeper understanding of the determinants of the U-shaped female labor supply: there was (and still is) a substantial amount of regional variation in economic structure that can be exploited for identification (see Kim, 1998,1999, and Kim and Margo, 2004), as well as a substantial variation in married women labor force participation and earnings (Olivetti and Petrongolo, 2011). This could be a promising identification strategy because, historically, for married women the geographic location of the household was arguably determined by the husband and thus, at least to a first approximation, can be thought of as exogenous.

7 Data Appendix

All datasets were merged with historical data on GDP per capita from Maddison (2010). See http://www.ggdc.net/maddison/maddison-project/home.htm for data and documentation.

7.1 Developed Country Sample

There are reasonable concerns about data comparability, especially for the early period in our sample. Fortunately, for developed economies, there is an overlap between the labor force statistics from IHS and those from ILO. Data sources by year are listed in Section 7.1.1. Countries for which the IHS statistics are inconsistent with the ones from the ILO have been dropped from the sample. In all cases the inconsistency was due to compatibility issues between the numerator (economically active population) and the denominator (population counts). For example, for some of the countries geographical boundaries were re-designed after wars. The IHS statistics usually refer to a countrys boundaries for the year the information was reported, however there are instances in which the geographical unit at the numerator is not consistent with that at the denominator (for example, Lombardia and Veneto and Austria pre-1890). In other cases the numerator and denominator represented a different age universe or referred to different populations.[33] The next subsection provides more details about this process. For the years of overlap between IHS and ILO statistics, the data source selection rule was to switch to the ILO statistics for the first year they became available, 1950 in most cases. Alternative data source selection rules have also been explored. For instance, using IHS as the main data source and ILO data to 'fill the blanks. The overall results of the analysis were unchanged.

7.1.1 Developed Country Sample: Data Sources

Data for the developed countries sample come from the following sources: International Historical Statistics [IHS], Mitchell (1998 a,b,c); International Labor Organization [ILO]. Pre-1940 data for the United States are from: Goldin (1991) and Pencavel (1986). Specifically, I use the following data source/year combinations: Australia: 1900-1920 [IHS], 1960-2005 [ILO]; Belgium: 1890-1930 [IHS], 1945, 1960-2005 [ILO]; Canada: 1890-1940 [IHS], 1950-2005 [ILO]; Denmark: 1890-1940 [IHS], 1950-2005 [ILO]; Finland: 1900-1950 [IHS], 1960-2005 [ILO]; France: 1895-1955 [IHS], 1960-2005 [ILO]; Germany: 1925-1945 [IHS], 1950-2005 [ILO]; Ireland: 1910-1935, 1950 [IHS], 1960-2005 [ILO]; Italy: 1900-1935 [IHS], 1950-2005 [ILO]; Netherlands: 1890-1930 [IHS], 1945, 1960-2005 [ILO]; Norway: 1890-1930 [IHS], 1945-2005 [ILO]; Portugal: 1890-1910, 1940 [IHS], 1950-2005 [ILO]; Spain: 1900-1920, 1940 [IHS], 1950-2005 [ILO]; Sweden: 1890-1930, 1950 [IHS], 1960-2005 [ILO]; United Kingdom: 1890-1930, 1950 [IHS], 1960-2005 [ILO]; United States: 1890-1930 [Goldin & Pencavel], 1940 [IHS], 1950-2005 [ILO].

7.1.2 Developed Country Sample: Assumptions and Corrections

Economically active data and sectoral data was combined within the International Historical Statistics (IHS) as one table (Mitchell, 1998 a,b,c). The following set of notes are thus relevant for both the analyses on overall labor force participation and sectoral shares. The sector classification in agriculture, manufacturing and services is described in section 7.3. The below list provides all the assumptions and corrections made to the data that was compiled from the IHS.

Economically Active Population - Europe

- France: For the male population, the year 1866 was listed twice. It was assumed that the second 1866 was meant to be 1886 based on the corresponding year listed for women.

[33] See Mitchell (2008), notes to "B1 Economically Active Population by Major Industrial Groups.

- Germany: East and West Germany were combined in the IHS for consistency with the other data sources.
  - Observation for the period 1882 to 1939 Germany includes statistics for the area considered part of Germany from 1882-1939.
  - East Germany includes statistics for the respective territory from 1946-1971. Only years 1960 and 1971 include statistics for East Berlin.
  - West Germany includes statistics for the respective territory from 1946-1980. Only years 1961,1970, and 1980 include statistics for West Berlin.
  - Germany includes statistics for the respective territory from 1992.
- Ireland: Northern Ireland was included in the United Kingdom and Southern Ireland is listed as Ireland following 1926 to be consistent with how the ILO reports data for Ireland.

Total Population - Europe

- Denmark: Starting in 1921, Schleswig, which was acquired in that year, is included.
- Germany:
  - Germany: Areas ceded to Germany by Austria, Denmark, and France in 1860-1871 are excluded until 1864.
  - Germany: From 1910 the territories ceded after World War I are excluded.
  - East Germany: Statistics include East Berlin
  - West Germany: Statistics include West Berlin The last year following 1970 for West Germany was 1950. This year was changed to 1987 as that was the next census conducted after 1970.[34])
- Italy:
  - The year 1921 was listed twice, the second observation includes territories acquired after World War I.
  - The year 1951 was listed twice, the second observation and all subsequent observations are for the resident population.
- Portugal: Years prior to 1841 do not include Azores and Maderia.

[34]Wall Street Journal: $http://online.wsj.com/article/SB10001424052702303982504576423814268469244.html$ $http://www.faqs.org/faqs/genealogy/german-faq/part2/section-4.html\#b$

- Sweden: The year 1890 was included twice, consecutively. Based on the Department of National Archives, it was assumed the first observation was in fact 1880 and was adjusted accordingly.[35]

United States Labor force participation rate for men and women aged 15 and above in the United States for periods prior to 1940 were gathered from Pencavel (1986, Tables 1.1) and Goldin (1990, Table 2.1).

Sector information for the United States prior to 1940 comes from author's calculations using IPUMS data for the years 1900 and 1910 and 1920 comes from Table Ba670-687 and Table Ba688-705 contributed by Matthew Sobek in Carter et. al. (2006).

The above data were combined with the EAPEP and ILO data for the 1950 to 2005 period (see below for a full description).

7.2 Full Sample

7.2.1 Labor Force Participation Data

Data for 1990 - 2005 came from the the 6th edition of the Economically Active Population, Estimates and Projections (EAPEP) published by the International Labour Organization (ILO). The data provide labor force participation by age group for a harmonized panel of 196 countries.[36] Labor force data for the full sample prior to 1990 were pulled directly from the Economically Active Population 1A Tables from the ILO website.[37]

7.2.2 Sector Data

Sector shares were calculated using data from the ILO Economically Active Population 1C Tables. This data source has employment information by industry which can be broadly categorized into agriculture, manufacturing and services. Data was generally available over the period 1945-2005 but was not consistently gathered for all countries the International Standard Industrial Classification (ISIC) also changed over time.

7.2.3 Occupation Data

The analysis on clerical work utilized the ILO data discussed above but limited the sample to women aged 45 to 59. The labor force participation data was then merged with the ILO Economically Active Population 1E Tables, which contains information on occupation by industry and gender.

[35] $http : //www.svar.ra.se/winder.asp?uidObjectGUID = 6587EEF0 - 3E98 - 4BE3 - A404 - E1938D3AEA68\&uidRedirectGUID = 9BCE8D60 - 1DC2 - 43AD - A33C - B758BAE5ACEE\&strType =$

[36] For a complete write up of the methodology used see: $http : //laborsta.ilo.org/applv8/data/EAPEP/v6/ILO_EAPEP_methodology_2011.pdf$

[37] See $http : //laborsta.ilo.org/STP/guest$

7.3 Classification of broad sectors of production

Sectors were assigned as follows:

- Agriculture corresponds to the sum of ISIC-Rev.3 section A and B. If ISIC classification was not available, industries were assigned to agriculture if the source table heading said "Agriculture" or "Agriculture, Forestry and Fishing."

- Manufacturing corresponds to the sum of ISIC-Rev.3 section C, D, F and includes mining, manufacturing and construction. If ISIC classification was not available, industries were assigned to manufacturing if the source table heading said "Mining" or "Extraction Industries" or "Manufacturing" or "Construction" or "Electricity, Gas and Water Supply" or "Utilities."

- Services corresponds to the sum of ISIC-Rev.3 section E, G-P and includes wholesale, retail trade, hotels and restaurants, transport, storage and communication, finance, insurance, real estate, business services, and community, social and personal services. If ISIC classification was not available, industries were assigned to service if the source table heading said "Commerce" or "Finance" or "Trade" or "Transport" or "Communication" or "Services."

The following economically active individuals were classified as missing sector information:

- For 1950 and 1960: ISIC-Rev. 1, code "9 Activities not adequately described."

- For 1970-1990: ISIC-Rev. 2, code "0" Activities not adequately defined."

- For year 2000-2005: ISIC-Rev. 3, section "Q Extra-territorial organizations and bodies" and "X Not classifiable by economic activity".

References

[1] Akbulut, Rahşan. 2011. Sectoral Changes and the Increase in Women's Labor Force Participation. *Macroeconomic Dynamics* 15: 240-264.

[2] Albanesi, Stefania and Claudia Olivetti. 2009. Gender Roles and Medical Progress. NBER Working Paper 14873.

[3] Alesina, Alberto, Giuliano, Paola and Nathan Nunn. 2013. On the Origins of Gender Roles: Women and the Plough. *Quarterly Journal of Economics*, 128(2): 469-530.

[4] Atack, Jeremy; Fred Bateman; and Robert A. Margo. 2008. Steam Power, Establishment Size, and Labor Productivity Growth in Nineteenth Century American Manufacturing, *Explorations in Economic History*, 45: 185-198.

[5] Bailey, Martha J. 2006. More power to the pill: The impact of contraceptive freedom on women's lifecycle labor supply. *Quarterly Journal of Economics*, 121: 289-320.

[6] Barro, Robert and Lee, Jong-Wha. 2010. A New Data Set of Educational Attainment in the World, 1950-2010. NBER Working Paper No. 15902.

[7] Blau, Francine D. 1998. The Well-being of American Women, 1970-1995. *Journal of Economic Literature* pg. 112-165.

[8] Blau, Francine D., and Lawrence M. Kahn. 2003. Understanding International Differences in the Gender Pay Gap. *Journal of Labor Economics* 21: 106–144.

[9] Blau, Francine D. and Lawrence M. Kahn. 2007. Changes in the Labor Supply Behavior of Married Women: 1980-2000. *Journal of Labor Economics* pg. 393-438.

[10] Blau, Francine D., Marianne A. Ferber and Anne E. Winkler. 2014. *The Economics of Women, Men, and Work*, 7th edition. Prentice-Hall.

[11] Boserup, Ester. 1970. *Woman's Role in Economic Development*, London: George Allen and Unwin Ltd.

[12] Buera, Francisco J. and Joseph P. Kaboski. 2011. Scale and the origins of structural change. *Journal of Economic Theory*, doi:10.1016/j.jet.2010.11.007.

[13] Buera, Francisco J. and Joseph P. Kaboski. 2012. The Rise of the Service Economy. *American Economic Review*, 102(6): 2540-69.

[14] Carter, S.B. 2006. Historical Statistics of the United States: Earliest Times to the Present. Cambridge University Press.

[15] Costa, Dora. 2000. From Mill Town to Board Room: The Rise of Women's Paid Labor. *Journal of Economic Perspective* 14: 101-122.

[16] De Vries, Jan. 1994. The Industrial Revolution and the Industrious Revolution. *Journal of Economic History* 54 (2): 249-70.

[17] Fernández, Raquel, Fogli, Alessandra and Claudia Olivetti. 2004. Mothers and Sons: Preference Development and Female Labor Force Dynamics. *Quarterly Journal of Economics* 119, no. 4: 1249-1299.

[18] Fernández, Raquel. 2013. Culture as Learning: The Evolution of Female Labor Force Participation over a Century. *American Economic Review*, 103(1): 472-500.

[19] Feyrer, James, Bruce Sacerdote and Ariel D. Stern. 2008. Will the Stock Return to Europe and Japan? Understanding Fertility within Developed Nations. *Journal of Economic Perspectives*, 22 (3): 3-22.

[20] Fogli, Alessandra and Laura Veldkamp. 2011. Nature or Nurture? Learning and Female Labor Force Participation. *Econometrica*, 79 (4): 11031138.

[21] Galor, Oded and David N. Weil. 1996. The Gender Gap, Fertility and Growth. *American Economic Review*, Vol. 86, 374-387.

[22] Goldin, Claudia, and Kenneth Sokoloff. 1982. Women, Children, and Industrialization in the Early Republic: Evidence from the Manufacturing Censuses' *Journal of Economic History*, 42: 741-774.

[23] Goldin, Claudia and Kenneth Sokoloff. 1984. The Relative Productivity Hypothesis of Industrialization: The American Case, 1820 to 1850. *The Quarterly Journal of Economics*, Vol. 99 (3), 461-487.

[24] Goldin, Claudia. 1986. The Economic Status of Women in the Early Republic: Quantitative Evidence. *The Journal of Interdisciplinary History*, Vol. 16 (3): pp. 375-404.

[25] Goldin, Claudia. 1990. *Understanding the Gender Wage Gap: An Economic History of American Women*. Oxford University Press.

[26] Goldin, Claudia. 1995. The U-Shaped Female Labor Force Function in Economic Development and Economic History.In T. P. Schultz, ed., *Investment in Women's Human Capital and Economic Development*, pp. 61-90.

[27] Goldin, Claudia and Lawrence Katz. 2002. The Power of the Pill: Oral Contraceptives and Women's Career and Marriage Decisions. *Journal of Political Economy* 100, 730-770.

[28] Goldin, Claudia. 2006. The Quiet Revolution That Transformed Women's Employment, Education, and Family, Ely Lecture, in *American Economic Review*, *Papers and Proceedings* 96: 1-21.

[29] Goldin, Claudia and Lawrence F. Katz. 2008. *The Race between Education and Technology*. Cambridge, MA: The Belknap Press of Harvard University Press.

[30] Greenwood, Jeremy, Ananth Seshadri, and Mehmet Yorugoklu. 2005. Engines of Liberation. *The Review of Economic Studies* 72: 109-133.

[31] Herrendorf, Berthold, Rogerson, Richard and Akos Valentinyi. 2013. Growth and Structural Tranformation. NBER Working Paper No. 18996.

[32] International Labour Organization. 1990. Economically Active Population Estimates and Projections, 1950- 2025: Volume 6.

[33] Katz, Lawrence F. and Robert A. Margo. 2013. Technical Change and the Relative Demand for Skilled Labor: The United States in Historical Perspective. NBER Working Paper No. 18752.

[34] Kim, Sukkoo. 1998, Economic Integration and Convergence: U.S. Regions, 1840-1990. *Journal of Economic History*, 58 (3): 659-683.

[35] Kim, Sukkoo. 1999. Regions, Resources and Economic Geography: The Sources of U.S. Regional Comparative Advantage, 1880-1987. *Regional Science and Urban Economics*, 29 (1): 1-32.

[36] Kim, Sukkoo and Robert A. Margo. 2004. Historical Perspectives on U.S. Economic Geography. in V. Henderson and J. Thisse, eds. *Handbook of Urban and Regional Economics*, Volume 4: Cities and Geography, pp. 2982-3019. Amsterdam: North-Holland.

[37] Lee, Donghoon and Ken Wolpin. 2006. Intersectoral Labor Mobility and the Growth of the Service Sector. *Econometrica* 74: 1-46.

[38] Luci, Angela. 2009. Female labour market participation and economic growth. *International Journal of Innovation and Sustainable Development*, Vol. 4, 2/3. (doi : 10.1504/IJISD.2009.028065; ISSN 1740-8822).

[39] Lundberg, Shelly. 2010. The Sexual Division of Labour. In *The Shape of the Divison of Labour: Nations, Industries and Households*, edited by Robert M. Solow and Jean-Philippe Touffut, pp. 122-48. Cheltenham, UK: Edward Elgar.

[40] Maddison, Angus. 2010. Statistics on World Population, GDP and Per Capita GDP, 1-2008 AD. Groningen: University of Groningen.

[41] Mitchell, Brian. 1998a. *International Historical Statistics; Europe 1750-1993*. 3rd edition, Macmillan ; Stockton, London : New York.

[42] Mitchell, Brian. 1998b. *International Historical Statistics; The Americas 1750-1993*. 3rd edition, Macmillan, Basingstoke, England.

[43] Mitchell, Brian. 1998c. *International Historical Statistics; Africa, Asia & Oceania 1750-1993*. 3rd edition, Macmillan ; Stockton, London : New York.

[44] Ngai L. Rachel and Cristopher Pissarides. 2008. Trends in Hours and Economic Growth. *Review of Economic Dynamics*, 11 (2): 429-443.

[45] Ngai L. Rachel and Barbara Petrongolo. 2012. Structural Transformation, Marketization and Female Employment. Manuscript, London School of Economics.

[46] Mammen, Kristin and Christina Paxson. 2000. Women's Work and Economic Development. *Journal of Economic Perspectives*, 14 (4): 141-164.

[47] Olivetti, Claudia and Barbara Petrongolo. 2011. Gender Gaps across Countries and Skills: Supply, Demand and the Industry Structure. NBER Working Paper 17349.

[48] Pencavel J. 1986. Labor Supply of Men. Chapter 1 in Handbook of Labor Economics, volume 1, pg. 3-102, edited by Orley C. Ashenfelter and Richard Layard.

[49] Rendall, Michelle. 2011. The Service Sector and Female Market Work: Europe vs. US. University of Zurich, mimeo.

[50] Rogerson, Richard. 2008. Structural Transformation and the Deterioration of European Labor Markets. *Journal of Political Economy* 166: 235-258.

[51] Ruggles, Steven and Alexander, J. Trent and Genadek, Katie and Goeken, Ronald and Schroeder, Matthew B. and Sobek, Matthew. 2010. Integrated Public Use Microdata Series: Version 5.0 [Machine-readable database], Minneapolis: University of Minnesota.

Table 1: GDP per capita and sectoral shares 1890-2000: Selected countries

Year	GDP per capita	Employment Shares			Valued Added Shares		
		Agriculture	Manufacturing	Services	Agriculture	Manufacturing	Services
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
				United States			
1890	3,391	0.427	0.272	0.301	0.190	0.350	0.460
1950	9,557	0.109	0.340	0.551	0.068	0.357	0.575
2000	28,481	0.024	0.204	0.772	0.010	0.218	0.773
				Belgium			
1890	3,429	0.321	0.415	0.264	0.110	0.440	0.451
1947	4,798	0.140	0.517	0.343	0.082	0.415	0.503
2000	20,661	0.023	0.220	0.757	0.013	0.244	0.743
				France			
1886	2,237	0.470	0.257	0.273	0.273	0.390	0.337
1954	5,914	0.263	0.355	0.382	0.130	0.480	0.390
2000	20,415	0.039	0.212	0.749	0.028	0.229	0.743
				Netherlands			
1889	3,502	0.365	0.316	0.319	0.208	0.321	0.471
1947	5,049	0.187	0.356	0.458	0.130	0.370	0.500
2000	22,159	0.034	0.194	0.771	0.026	0.249	0.724
				Spain			
1887	1,586	0.694	0.160	0.147	0.336	0.280	0.384
1950	2,189	0.496	0.255	0.249	0.287	0.270	0.443
2000	15,615	0.063	0.294	0.642	0.044	0.292	0.664
				Sweden			
1890	1,769	0.581	0.234	0.184	0.304	0.271	0.424
1950	6,768	0.208	0.420	0.372	0.112	0.425	0.463
2000	20,702	0.032	0.285	0.683	0.012	0.306	0.681
				United Kingdom			
1891	3,976	0.157	0.436	0.407	0.090	0.410	0.500
1950	6,940	0.053	0.454	0.493	0.050	0.470	0.480
2000	20,353	0.017	0.221	0.762	0.010	0.275	0.715

Sources: GDP per capita in 1990 dollars (PPP adjusted) from Maddison (2008). Employment and value added shares from Herrendorf, Rogerson and Valentinyi (2013).

Table 2: Female labor force participation and economic development
Sixteen developed economies, 1890-2005

	Female			Male
	(1)	(2)	(3)	(4)
Log GDP per capita	-1.178***	-1.030**	-0.846*	-0.192
	(0.251)	(0.388)	(0.460)	(0.478)
Log GDP per capita squared	0.072***	0.064**	0.053*	0.013
	(0.014)	(0.023)	(0.026)	(0.027)
Constant	5.159***	4.431**	3.699*	1.661
	(1.107)	(1.637)	(1.971)	(2.074)
N	240	240	240	230
R^2	0.449	0.518	0.725	0.784
Country Effects	No	No	Yes	Yes
Year Effects	No	Yes	Yes	Yes

Sources: International Historical Statistics, Mitchell (1998 a,b,c) and International Labor Organization, see data appendix for a full description.

Notes: Robust standard errors in parenthesis are clustered at the country level. Years at 5-year intervals. If multiple data points exist the values are averaged over the 5 year period. *** Significant at the 1% level. ** Significant at the 5% level. * Significant at the 10% level.

Table 3: Female labor force participation, education gap and GDP per capita
Full Sample, 1950-2005

	Females					Males
	(1)	(2)	(3)	(4)	(5)	(6)
	15-64 years old					
Log GDP per capita	-1.025***	-0.797***	-1.126***	-0.336*	-0.351**	-0.034
	(0.224)	(0.216)	(0.195)	(0.178)	(0.167)	(0.057)
Log GDP per capita squared	0.063***	0.049***	0.066***	0.020*	0.021**	0.004
	(0.013)	(0.013)	(0.012)	(0.010)	(0.010)	(0.003)
Log of Male to Female Yrs School			-0.171***		-0.010	
			(0.036)		(0.032)	
Constant	4.596***	3.592***	5.146***	1.264*	1.340**	1.027***
	(0.935)	(0.907)	(0.827)	(0.719)	(0.673)	(0.229)
N	871	871	871	871	871	871
R^2	0.116	0.290	0.375	0.863	0.863	0.744
	45-59 years old					
Log GDP per capita	-1.328***	-1.072***	-1.437***	-0.436**	-0.354*	0.110**
	(0.257)	(0.250)	(0.232)	(0.184)	(0.181)	(0.051)
Log GDP per capita squared	0.080***	0.064***	0.083***	0.025**	0.020*	-0.006*
	(0.015)	(0.015)	(0.014)	(0.011)	(0.011)	(0.003)
Log of Male to Female Yrs School			-0.197***		0.051	
			(0.045)		(0.054)	
Constant	5.930***	4.763***	6.488***	1.620**	1.208	0.523**
	(1.070)	(1.047)	(0.983)	(0.752)	(0.753)	(0.204)
N	824	824	824	824	824	824
R^2	0.137	0.298	0.367	0.893	0.894	0.744
Country Effects	No	No	No	Yes	Yes	Yes
Year Effects	No	Yes	Yes	Yes	Yes	Yes

Sources: International Labour Organization, see data appendix for a full description. Education data: Barro-Lee (2010).

Notes: Robust standard errors in parenthesis are clustered at the country level. Years are at 5-year intervals. If multiple data points exist the values are averaged over the 5-year period.

*** Significant at the 1% level. ** Significant at the 5% level. * Significant at the 10% level.

Table 4: Female labor force participation, education gap and GDP per capita
Excludes early-OECD Countries, 1950-2005

	Females					Males
	(1)	(2)	(3)	(4)	(5)	(6)
			15-64 years old			
Log GDP per capita	-0.755**	-0.539*	-0.901***	-0.039	-0.057	0.023
	(0.321)	(0.288)	(0.263)	(0.231)	(0.217)	(0.068)
Log GDP per capita squared	0.045**	0.032*	0.051***	0.002	0.003	0.000
	(0.020)	(0.018)	(0.016)	(0.014)	(0.013)	(0.004)
Log of Male to Female Yrs School			-0.172***		-0.015	
			(0.038)		(0.032)	
Constant	3.544***	2.648**	4.320***	0.135	0.233	0.789***
	(1.287)	(1.175)	(1.081)	(0.910)	(0.850)	(0.270)
N	669	669	669	669	669	669
R^2	0.052	0.260	0.355	0.879	0.879	0.770
			45-59 years old			
Log GDP per capita	-1.026***	-0.754**	-1.150***	-0.150	-0.092	0.043
	(0.375)	(0.334)	(0.312)	(0.241)	(0.243)	(0.065)
Log GDP per capita squared	0.061**	0.043**	0.064***	0.008	0.004	-0.002
	(0.023)	(0.021)	(0.019)	(0.014)	(0.015)	(0.004)
Log of Male to Female Yrs School			-0.195***		0.050	
			(0.047)		(0.056)	
Constant	4.753***	3.585***	5.398***	0.550	0.240	0.796***
	(1.496)	(1.358)	(1.285)	(0.954)	(0.963)	(0.252)
N	627	627	627	627	627	627
R^2	0.093	0.298	0.372	0.910	0.911	0.756
Country Effects	No	No	No	Yes	Yes	Yes
Year Effects	No	Yes	Yes	Yes	Yes	Yes

Sources: International Labour Organization. See data appendix for a full description. Education data: Barro-Lee (2010).
Notes: Robust standard errors in parenthesis are clustered at the country level. Years are at 5-year intervals. If multiple data points exist the values are averaged over the 5-year period. Excluded OECD countries are: Australia, Austria, Belgium, Canada, Denmark, France, Finland, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxemborg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, nited Kingdom, United States.
*** Significant at the 1% level. ** Significant at the 5% level. * Significant at the 10% level.

Table 5: Clerical work and education, population aged 45-59

	F/M Clerical Workers		
	(1)	(2)	(3)
Log of Male to Female Years School	-0.700***	-0.683***	-0.837***
	(0.188)	(0.206)	(0.301)
Percent Women with Secondary Educ	0.020***	0.025***	0.005
	(0.005)	(0.005)	(0.006)
Constant	0.759***	0.368*	0.686***
	(0.170)	(0.201)	(0.242)
N	354	354	354
R^2	0.111	0.190	0.925
Country Effects	No	No	Yes
Year Effects	No	Yes	Yes

Sources: International Labor Organization. See data appendix for a full description.

Notes: Robust standard errors in parenthesis are clustered at the country level.

Years are at 5-year intervals. If multiple data points exist the values are averaged over the 5 year period.

***Significant at the 1% level. **Significant at the 5% level. *Significant at the 10% level.

Table 6: Sectoral employment shares by gender and GDP per capita
Sixteen developed economies, 1890-2005

	(1)	(2)	(3)	(4)	(5)
			Agriculture		
Log GDP per capita	-0.221***	-0.330***	-0.359***	-1.091**	-0.810*
	(0.012)	(0.047)	(0.073)	(0.481)	(0.438)
Female x Log GDP	0.047**	0.047**	0.047**	-0.137	-0.137
	(0.020)	(0.020)	(0.021)	(0.312)	(0.317)
Log GDP per capita squared				0.045	0.029
				(0.026)	(0.027)
Female x Log GDP squared				0.010	0.010
				(0.018)	(0.018)
Female	-0.494**	-0.494**	-0.494**	0.313	0.313
	(0.198)	(0.202)	(0.205)	(1.362)	(1.384)
Constant	2.217***	3.053***	3.363***	6.255**	5.113**
	(0.120)	(0.353)	(0.595)	(2.159)	(1.788)
N	510	510	510	510	510
R^2	0.719	0.766	0.838	0.777	0.841
			Manufacturing		
Log GDP per capita	0.049***	0.122***	0.265***	1.402***	0.844***
	(0.014)	(0.039)	(0.045)	(0.315)	(0.214)
Female x Log GDP	-0.087***	-0.087***	-0.087***	-0.564***	-0.564***
	(0.009)	(0.009)	(0.010)	(0.125)	(0.127)
Log GDP per capita squared				-0.074***	-0.035**
				(0.017)	(0.014)
Female x Log GDP squared				0.027***	0.027***
				(0.007)	(0.007)
Female	0.624***	0.624***	0.624***	2.718***	2.718***
	(0.089)	(0.091)	(0.092)	(0.539)	(0.548)
Constant	-0.061	-0.630**	-1.857***	-6.081***	-4.253***
	(0.129)	(0.293)	(0.373)	(1.428)	(0.848)
N	510	510	510	510	510
R^2	0.546	0.669	0.844	0.713	0.851
			Services		
Log GDP per capita	0.172***	0.208***	0.094*	-0.311	-0.033
	(0.008)	(0.034)	(0.047)	(0.255)	(0.301)
Female x Log GDP	0.040**	0.040**	0.040**	0.701**	0.701**
	(0.017)	(0.018)	(0.018)	(0.266)	(0.271)
Log GDP per capita squared				0.030*	0.006
				(0.015)	(0.018)
Female x Log GDP squared				-0.037**	-0.037**
				(0.015)	(0.015)
Female	-0.130	-0.130	-0.130	-3.031**	-3.031**
	(0.172)	(0.176)	(0.179)	(1.155)	(1.173)
Constant	-1.156***	-1.423***	-0.506	0.826	0.140
	(0.067)	(0.254)	(0.386)	(1.061)	(1.256)
N	510	510	510	510	510
R^2	0.820	0.835	0.900	0.838	0.903
Country Effects	No	No	Yes	No	Yes
Year Effects	No	Yes	Yes	Yes	Yes

Sources: International Historical Statistics, Mitchell (1998 a,b,c) and International Labor Organization.
Notes: Robust standard errors in parenthesis are clustered at the country level.
Years are at 5-year intervals. If multiple data points exist the values are averaged over the 5-year period.
***Significant at the 1% level. **Significant at the 5% level. *Significant at the 10% level.

Table 7: Sectoral employment shares by gender and GDP per capita
Full Sample, 1950-2005

	(1)	(2)	(3)	(4)	(5)
			Agriculture		
Log GDP per capita	-0.219***	-0.214***	-0.106***	-0.606***	-0.408**
	(0.007)	(0.008)	(0.024)	(0.123)	(0.183)
Female x Log GDP	0.008	0.008	0.008	-0.524***	-0.524***
	(0.012)	(0.012)	(0.013)	(0.175)	(0.182)
Log GDP per capita squared				0.024***	0.017*
				(0.007)	(0.010)
Female x Log GDP squared				0.032***	0.032***
				(0.010)	(0.011)
Female	-0.123	-0.123	-0.123	2.076***	2.076***
	(0.116)	(0.117)	(0.122)	(0.713)	(0.744)
Constant	2.179***	2.164***	1.283***	3.787***	2.596***
	(0.066)	(0.069)	(0.170)	(0.528)	(0.801)
N	1360	1360	1360	1360	1360
R^2	0.649	0.654	0.828	0.683	0.837
			Manufacturing		
Log GDP per capita	0.099***	0.107***	0.095***	0.448***	0.688***
	(0.005)	(0.005)	(0.014)	(0.082)	(0.090)
Female x Log GDP	-0.073***	-0.073***	-0.073***	0.155*	0.155*
	(0.006)	(0.006)	(0.006)	(0.081)	(0.085)
Log GDP per capita squared				-0.020***	-0.035***
				(0.005)	(0.005)
Female x Log GDP squared				-0.014***	-0.014***
				(0.005)	(0.005)
Female	0.509***	0.509***	0.509***	-0.434	-0.434
	(0.049)	(0.050)	(0.052)	(0.331)	(0.345)
Constant	-0.546***	-0.579***	-0.468***	-1.987***	-2.999***
	(0.043)	(0.045)	(0.101)	(0.341)	(0.392)
N	1360	1360	1360	1360	1360
R^2	0.509	0.549	0.754	0.598	0.790
			Services		
Log GDP per capita	0.120***	0.107***	0.011	0.159*	-0.280*
	(0.005)	(0.007)	(0.018)	(0.090)	(0.154)
Female x Log GDP	0.065***	0.065***	0.065***	0.369**	0.369**
	(0.011)	(0.011)	(0.011)	(0.163)	(0.170)
Log GDP per capita squared				-0.003	0.017*
				(0.005)	(0.009)
Female x Log GDP squared				-0.018*	-0.018*
				(0.010)	(0.010)
Female	-0.386***	-0.386***	-0.386***	-1.642**	-1.642**
	(0.100)	(0.100)	(0.104)	(0.662)	(0.691)
Constant	-0.633***	-0.585***	0.185	-0.800**	1.403**
	(0.047)	(0.054)	(0.137)	(0.376)	(0.669)
N	1360	1360	1360	1360	1360
R^2	0.600	0.630	0.825	0.634	0.827
Country Effects	No	No	Yes	No	Yes
Year Effects	No	Yes	Yes	Yes	Yes

Sources: International Labor Organization, see data appendix for a full description.

Notes: Robust standard errors in parenthesis are clustered at the country level.

Years are at 5-year intervals. If multiple data points exist the values are averaged over the 5-year period.

***Significant at the 1% level. **Significant at the 5% level. *Significant at the 10% level.

Figure 1: Trends in female labor force participation, 1890-2005

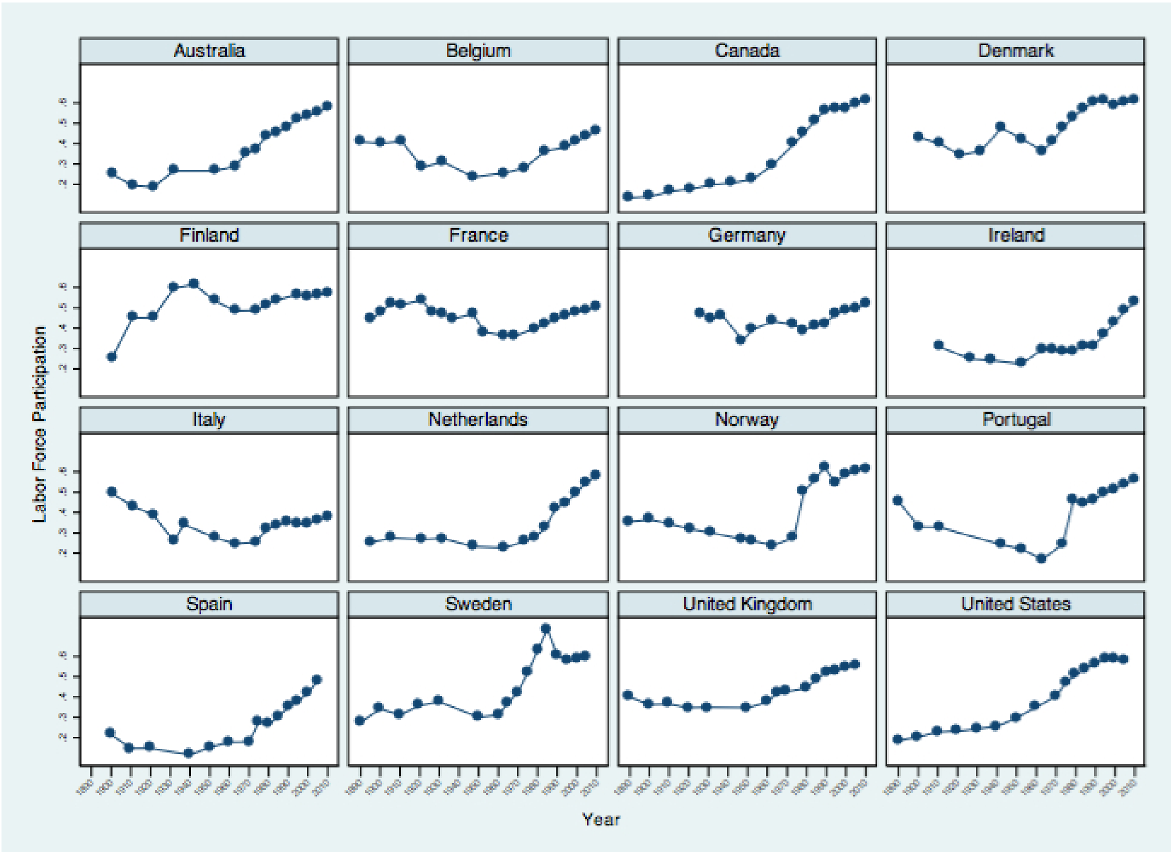


Figure 2: Female labor force participation and economic development: 1890-2005

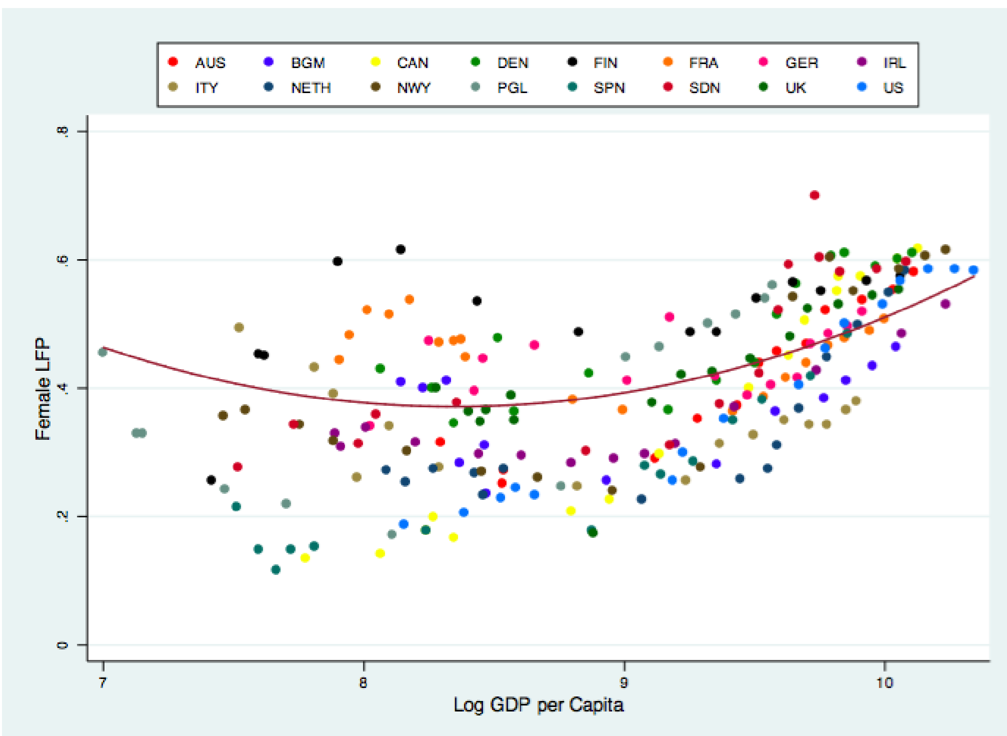
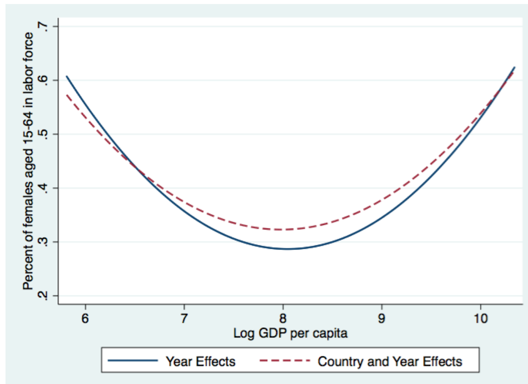
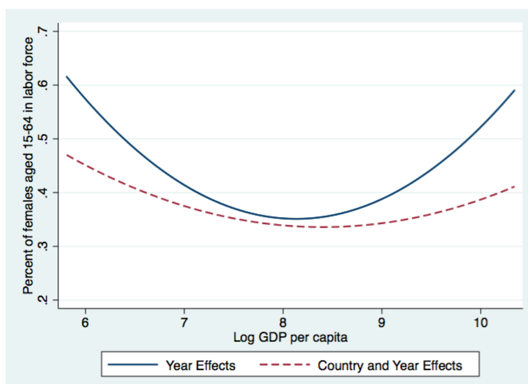


Figure 3: The U-shaped female labor supply within and across countries

Panel A: 1890-2005, Developed Economies



Panel B: 1950-2005, Full Sample



Panel C: 1950-2005, Excludes OECD countries

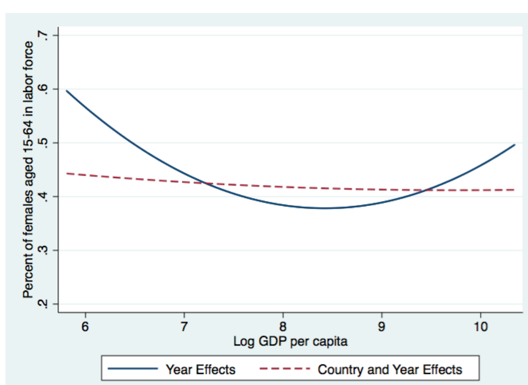
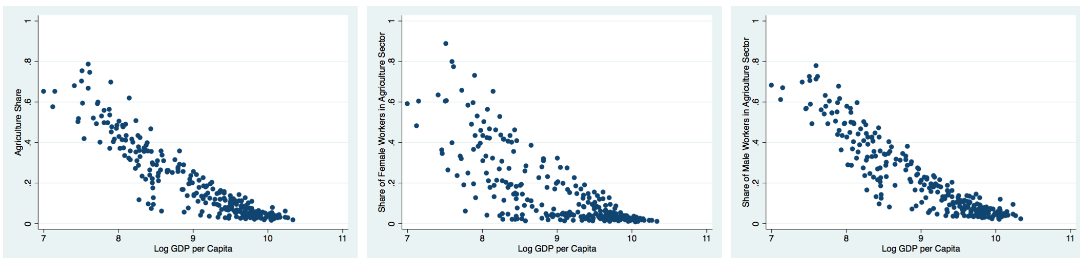


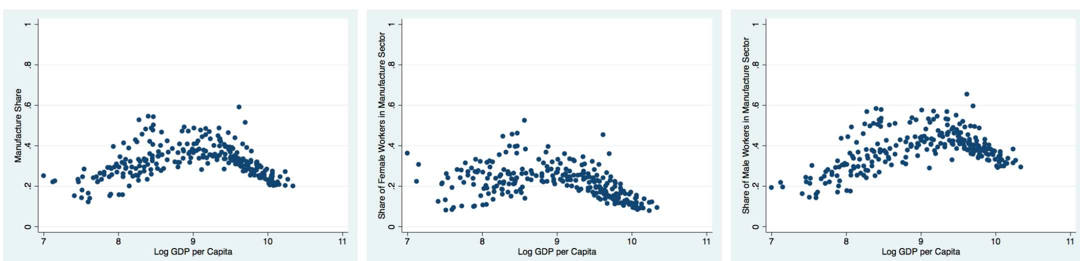
Figure 4: Sectoral employment shares by gender: Developed economies, 1890-2005

All Females Males

Panel A: Agricultural Sector



Panel B: Manufacturing Sector



Panel C: Service Sector

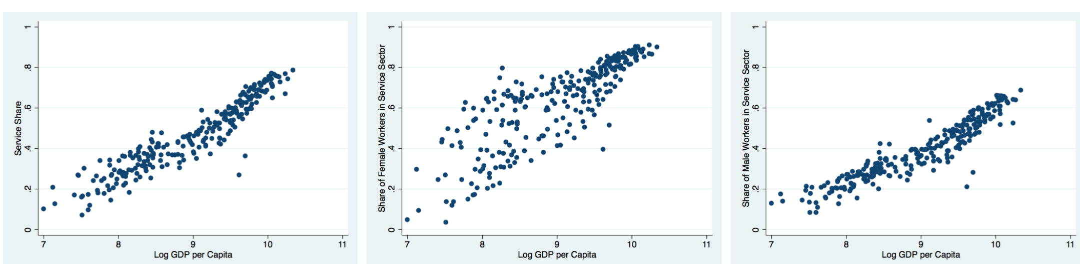
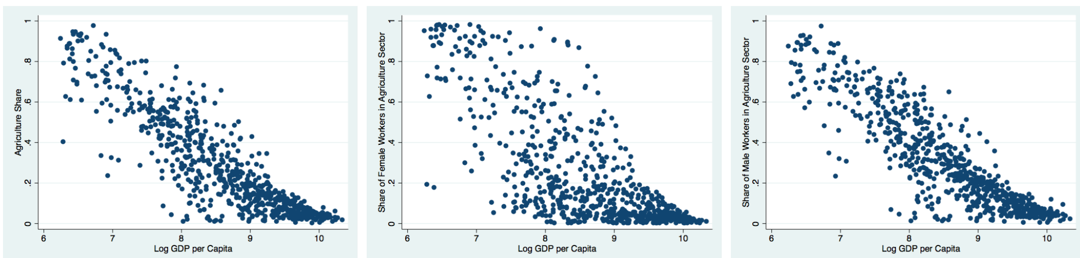


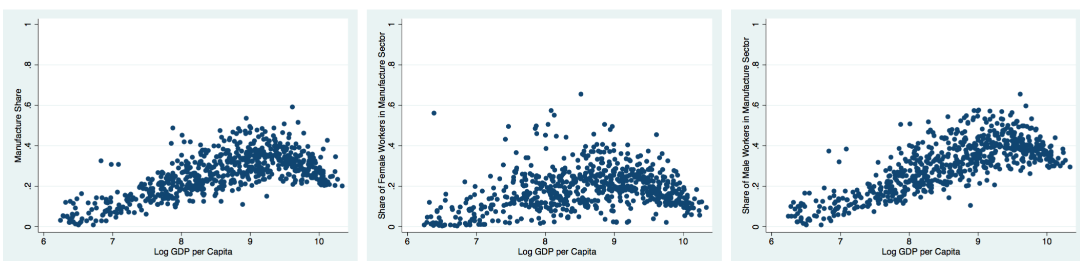
Figure 5: Sectoral employment shares by gender: Full sample, 1950-2005

All | Females | Males

Panel A: Agricultural Sector



Panel B: Manufacturing Sector



Panel C: Service Sector

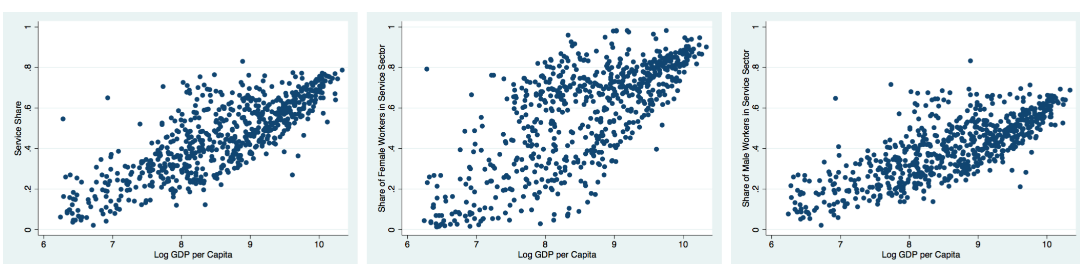


Table A.1: Labor force participation by gender: Sixteen developed economies, 1890-2005

	Australia	Belgium	Canada	Denmark	Finland	France	Germany	Ireland	Italy	Netherlands	Norway	Portugal	Spain	Sweden	United Kingdom	United States
Panel A: Females																
1890		0.408	0.134							0.271	0.355	0.455		0.276	0.400	0.186
1895						0.443										
1900	0.315	0.401	0.140	0.430	0.255	0.482			0.494	0.254	0.366	0.329	0.215	0.342	0.364	0.204
1905						0.522										
1910	0.272	0.412	0.165	0.400	0.453	0.515		0.307	0.431	0.275	0.343	0.328	0.147	0.312	0.366	0.228
1920	0.251	0.282	0.177	0.344	0.451	0.537			0.390	0.268	0.317		0.148	0.359	0.347	0.233
1925						0.475	0.472	0.329							0.387	
1930		0.311	0.197	0.364	0.597	0.472			0.260	0.273	0.300			0.377	0.349	0.243
1935						0.447	0.446	0.337	0.341							
1940			0.207	0.476	0.614		0.466					0.242	0.116			0.256
1945		0.235				0.470	0.339			0.232	0.270					
1950			0.225	0.423	0.534		0.394	0.315	0.277		0.260	0.219	0.153	0.300	0.174	0.298
1955						0.381										
1960	0.289	0.255	0.297	0.365	0.485	0.365	0.411	0.297	0.246	0.226	0.238	0.170	0.177	0.311	0.376	0.351
1965	0.352			0.411			0.509	0.294						0.373	0.419	
1970	0.371	0.281	0.399	0.439	0.488	0.362	0.417	0.282	0.255	0.258	0.277	0.246	0.179	0.423	0.426	0.405
1975	0.438		0.450	0.515	0.487	0.387	0.388	0.290	0.312	0.275			0.279	0.521		0.460
1980	0.456	0.364	0.504	0.563	0.538	0.416	0.405	0.297	0.326	0.310	0.542	0.448	0.265	0.591	0.445	0.500
1985	0.467		0.550	0.605		0.439	0.415	0.313	0.350	0.368	0.603	0.463	0.286	0.700	0.480	0.529
1990	0.520	0.383	0.574	0.610	0.565	0.466	0.468	0.371	0.343	0.448	0.550	0.499	0.350	0.604	0.524	0.567
1995	0.537	0.412	0.573	0.589	0.551	0.478	0.484	0.427	0.342	0.497	0.585	0.513	0.382	0.579	0.530	0.585
2000	0.554	0.433	0.601	0.602	0.567	0.489	0.496	0.484	0.366	0.549	0.605	0.540	0.419	0.586	0.543	0.586
2005	0.581	0.465	0.616	0.609	0.573	0.506	0.518	0.529	0.379	0.584	0.615	0.560	0.483	0.597	0.553	0.583
Panel B: Males																
1890		0.982	0.898								0.901			0.776	0.981	0.874
1895						0.901										
1900	0.985	0.994	0.850		0.691	0.920				0.917	0.876			0.875	0.970	0.873
1905						0.925										
1910	0.973	0.944	0.900	0.968	0.816	0.928		0.866		0.917	0.907			0.879	0.961	0.863
1920	0.975	0.849	0.892	0.887	0.691	0.933				0.918	0.902		0.999	0.907	0.948	0.865
1925						0.919	0.931	0.898							0.920	
1930		0.897	0.878	0.887	0.902	0.901			0.961	0.893	0.882			0.889	0.925	0.841
1935						0.878	0.877	0.893	0.909							
1940			0.859	0.926	0.894		0.849					0.967	0.952			0.802
1945		0.798				0.874	0.753			0.884	0.866					
1950			0.870	0.876	0.899		0.842	0.885	0.885		0.876	0.878	0.916	0.858	0.438	0.842
1955						0.808										
1960	0.857	0.760	0.781	0.852	0.842	0.754	0.830	0.850	0.807	0.826	0.826	0.910	0.890	0.817	0.869	0.788
1965	0.839			0.832			0.833	0.840						0.750	0.838	
1970	0.803	0.717	0.764	0.785	0.743	0.730	0.793	0.820	0.727	0.755	0.749	0.868	0.802	0.700	0.813	0.747
1975	0.793		0.755	0.764	0.672	0.694	0.737	0.776	0.757	0.785			0.753	0.728		0.761
1980	0.773	0.705	0.767	0.755	0.680	0.689	0.727	0.764	0.733	0.693	0.787	0.789	0.725	0.717	0.760	0.759
1985	0.751		0.768	0.752		0.666	0.717	0.741	0.721	0.695	0.784	0.723	0.689	0.783	0.722	0.721
1990	0.744	0.607	0.742	0.737	0.690	0.642	0.707	0.693	0.648	0.700	0.694	0.715	0.673	0.693	0.729	0.747
1995	0.733	0.607	0.721	0.727	0.666	0.630	0.692	0.691	0.617	0.710	0.714	0.693	0.652	0.671	0.706	0.742
2000	0.720	0.607	0.727	0.719	0.665	0.627	0.667	0.710	0.614	0.732	0.714	0.699	0.663	0.675	0.698	0.731
2005	0.725	0.610	0.724	0.713	0.655	0.623	0.669	0.720	0.607	0.730	0.709	0.692	0.682	0.682	0.694	0.720

Sources: International Historical Statistics, Mitchell (1998 a,b,c) and International Labor Organization, see data appendix for details.

Table A.2: Labor force participation by gender: Full sample, 1950-2005

	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005
							Panel A: Females					
Afghanistan							0.074		0.155	0.146	0.139	0.148
Albania									0.576	0.571	0.559	0.557
Algeria		0.386		0.029		0.036	0.061	0.07	0.112	0.125	0.132	0.147
Angola			0.076						0.69	0.694	0.68	0.638
Argentina			0.232		0.265	0.29	0.299	0.319	0.461	0.478	0.516	0.561
Armenia									0.653	0.65	0.634	0.562
Australia			0.289	0.352	0.371	0.438	0.528	0.531	0.62	0.643	0.663	0.693
Austria	0.478		0.53		0.491		0.428	0.512	0.577	0.613	0.633	0.675
Azerbaijan									0.591	0.605	0.633	0.656
Bahrain					0.062		0.165	0.175	0.306	0.341	0.367	0.387
Bangladesh			0.181			0.034	0.045	0.087	0.62	0.588	0.573	0.588
Belarus			0.664				0.661		0.71	0.675	0.653	0.63
Belgium			0.255		0.281		0.364		0.489	0.532	0.564	0.605
Benin						0.701	0.387	0.394	0.591	0.628	0.664	0.678
Bolivia	0.602					0.229	0.232	0.244	0.532	0.594	0.616	0.638
Bosnia									0.389	0.389	0.387	0.392
Botswana							0.447	0.642	0.696	0.712	0.727	0.741
Brazil			0.19		0.211	0.36	0.319	0.418	0.537	0.571	0.6	0.634
Bulgaria		0.622		0.595		0.606		0.771	0.661	0.632	0.591	0.613
Burkina Faso						0.028		0.753	0.795	0.795	0.795	0.796
Burundi							0.948	0.89	0.91	0.882	0.862	0.85
Cambodia			0.582						0.812	0.801	0.79	0.808
Cameroon						0.483	0.514	0.508	0.587	0.626	0.636	0.647
Canada	0.249		0.297		0.445	0.507	0.549	0.634	0.681	0.685	0.72	0.738
Cape Verde			0.932				0.224		0.458	0.484	0.509	0.534
Central African Republic						0.532			0.703	0.71	0.715	0.722
Chad							0.253		0.648	0.653	0.652	0.652
Chile	0.285		0.227		0.231		0.28	0.322	0.371	0.386	0.395	0.451
China							0.706		0.795	0.79	0.774	0.757
Colombia	0.206			0.203		0.239	0.24	0.429	0.338	0.435	0.558	0.555
Comoros							0.276		0.283	0.299	0.317	0.34
Congo, Republic of						0.562		0.493	0.616	0.645	0.672	0.691
Costa Rica				0.184		0.211	0.294	0.292	0.362	0.4	0.44	0.485
Croatia									0.552	0.558	0.569	0.59
Cuba		0.192			0.199		0.366	0.405	0.406	0.426	0.436	0.478
Czech Republic									0.637	0.637	0.63	0.617
Czechoslovakia	0.467		0.579		0.642		0.736		0.729			
Denmark	0.423		0.416	0.476	0.523	0.539	0.59	0.744	0.769	0.742	0.752	0.766
Djibouti									0.294	0.316	0.338	0.36
Dominican Republic			0.11		0.268		0.29		0.47	0.485	0.509	0.54
Ecuador			0.176			0.171	0.27		0.433	0.486	0.571	0.572
Egypt			0.052	0.058		0.057	0.078	0.152	0.247	0.215	0.211	0.238
El Salvador			0.189		0.245		0.372		0.438	0.456	0.476	0.491
Equatorial Guinea								0.441	0.829	0.828	0.824	0.82
Estonia									0.718	0.663	0.651	0.693
Ethiopia						0.569	0.572	0.599	0.751	0.743	0.777	0.809
Finland			0.485		0.488	0.487	0.599	0.72	0.71	0.699	0.723	0.735
France			0.365		0.362	0.387	0.433	0.545	0.587	0.612	0.63	0.653
Gabon				0.5					0.555	0.551	0.555	0.564
Gambia								0.7	0.701	0.709	0.718	0.724
Georgia									0.608	0.615	0.593	0.587
Germany	0.394		0.411	0.509	0.483	0.388	0.427	0.524	0.601	0.623	0.648	0.69
Ghana			0.567		0.636				0.714	0.729	0.72	0.683
Greece	0.178		0.39		0.259		0.295	0.401	0.427	0.476	0.518	0.557
Guatemala				0.13		0.142	0.141	0.21	0.42	0.428	0.437	0.491
Guinea								0.474	0.656	0.65	0.65	0.658
Guinea-Bissau	0.951						0.026		0.617	0.624	0.663	0.685
Haiti	0.831				0.703		0.557	0.586	0.586	0.587	0.59	0.606
Honduras						0.165	0.176	0.187	0.357	0.425	0.425	0.423
Hungary			0.429		0.48		0.617		0.559	0.505	0.529	0.55
India			0.429		0.187		0.329		0.369	0.367	0.371	0.353
Indonesia			0.312		0.37	0.458	0.421	0.472	0.514	0.522	0.517	0.527
Iran		0.094		0.122	0.079	0.134	0.115	0.09	0.099	0.106		0.182
Iraq		0.032				0.158		0.105	0.119	0.128	0.138	0.147
Ireland			0.327	0.328	0.317	0.29	0.348	0.358	0.442	0.505	0.569	0.621
Israel					0.341	0.336	0.383	0.414	0.491	0.535	0.568	0.595
Italy	0.277		0.246		0.299	0.312	0.353	0.431	0.43	0.439	0.482	0.508
Jamaica			0.498		0.365	0.666	0.595	0.48	0.732	0.688	0.635	0.632
Japan	0.502	0.505	0.509	0.531	0.509	0.501	0.49	0.544	0.58	0.593	0.599	0.617
Jordan			0.044			0.093	0.067		0.106	0.128	0.127	0.148
Kazakhstan									0.703	0.714	0.723	0.734
Kenya									0.687	0.653	0.621	0.61
Korea, Rep.			0.294	0.314	0.384	0.467	0.433	0.427	0.5	0.517	0.53	0.544
Kuwait				0.089	0.1	0.149	0.207	0.277	0.377	0.429	0.464	0.451
Kyrgyzstan									0.644	0.63	0.6	0.589
Laos										0.846		
Latvia									0.715	0.641	0.639	0.683

Table A.2 ***(ctd.)*****:** Labor force participation by gender: Full sample, 1950-2005

	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005
						Panel A: Females *(ctd.)*						
Lebanon						0.154			0.19	0.205	0.219	0.24
Lesotho						0.352			0.684	0.694	0.666	0.611
Liberia			0.442			0.248		0.466	0.572	0.585	0.592	0.59
Libya				0.041		0.065			0.204	0.253	0.301	0.32
Lithuania									0.691	0.668	0.669	0.656
Macedonia									0.457	0.454	0.438	0.476
Madagascar						0.733			0.855	0.858	0.86	0.858
Malawi						0.621		0.801	0.757	0.757	0.782	0.832
Malaysia		0.299	0.497		0.371	0.434	0.416		0.451	0.446	0.467	0.464
Mali						0.173			0.393	0.389	0.378	0.377
Mauritania						0.04			0.196	0.217	0.25	0.27
Mauritius	0.212		0.175		0.206			0.335	0.41	0.432	0.445	0.458
Mexico			0.198		0.185		0.267		0.369	0.407	0.414	0.451
Mongolia									0.571	0.583	0.586	0.575
Morocco			0.088		0.126		0.176		0.278	0.303	0.283	0.283
Mozambique	0.081				0.32		0.865		0.864	0.877	0.884	0.875
Namibia									0.503	0.499	0.531	0.589
Nepal			0.596		0.343		0.452		0.829	0.841	0.843	0.832
Netherlands			0.226		0.258	0.327	0.315	0.368	0.548	0.612	0.677	0.722
New Zealand	0.284	0.297	0.277	0.262	0.338	0.366	0.414	0.627	0.636	0.667	0.686	0.714
Nicaragua				0.221	0.206	0.319		0.364	0.358	0.368	0.421	0.47
Niger						0.072			0.273	0.341	0.395	0.398
Nigeria				0.277				0.37	0.404	0.431	0.462	0.478
Norway	0.288		0.238		0.277		0.608	0.68	0.698	0.741	0.756	0.759
Oman									0.192	0.217	0.248	0.276
Pakistan					0.086	0.071	0.084	0.103	0.144	0.146	0.17	0.216
Panama	0.242		0.247		0.303		0.334	0.379	0.429	0.472	0.499	0.519
Paraguay			0.264		0.243		0.231		0.562	0.535	0.551	0.581
Peru			0.232		0.209		0.302	0.483	0.483	0.587	0.621	0.657
Philippines			0.272		0.35	0.243	0.468	0.487	0.493	0.509	0.521	0.503
Poland	0.582		0.619		0.665		0.66		0.622	0.59	0.583	0.57
Portugal	0.219		0.17		0.275		0.46	0.463	0.598	0.616	0.654	0.687
Puerto Rico			0.253		0.261	0.273	0.298	0.278	0.368	0.401	0.424	0.447
Qatar								0.281	0.451	0.425	0.423	0.498
Romania		0.693		0.696		0.681			0.61	0.643	0.596	0.559
Russia									0.696	0.645	0.664	0.682
Rwanda							0.941		0.891	0.879	0.88	0.877
Sao Tome and Principe							0.398		0.398	0.401	0.419	0.446
Saudi Arabia									0.155	0.167	0.171	0.185
Senegal					0.587			0.62	0.637	0.647	0.655	0.663
Serbia/Montenegro/Kosovo									0.493	0.515	0.538	0.555
Seychelles			0.539		0.418	0.51	0.478	0.558	0.57	0.591		
Sierra Leone				0.45					0.67	0.681	0.676	0.679
Singapore		0.224			0.311	0.364	0.438	0.489	0.553	0.561	0.586	0.606
Slovak Republic									0.673	0.62	0.632	0.61
Slovenia									0.575	0.633	0.634	0.668
Somalia						0.375			0.367	0.374	0.382	0.388
South Africa			0.264		0.387		0.399	0.445	0.38	0.438	0.477	0.494
Spain	0.153		0.177		0.204	0.33	0.318	0.351	0.434	0.484	0.535	0.617
Sri Lanka		0.303		0.235	0.325		0.299	0.368	0.391	0.404	0.392	0.392
Sudan		0.413				0.216		0.31	0.271	0.295	0.306	0.316
Swaziland				0.5		0.282		0.303	0.433	0.437	0.44	0.444
Sweden			0.371	0.443	0.514	0.559	0.722	0.793	0.789	0.755	0.757	0.768
Switzerland	0.371		0.396		0.481		0.514		0.691	0.708	0.734	0.756
Syria			0.079		0.086	0.152	0.103	0.127	0.211	0.234	0.201	0.154
Tajikistan									0.626	0.624	0.615	0.606
Tanzania				0.712			0.837		0.89	0.891	0.895	0.903
Thailand			0.814		0.734	0.437	0.736	0.762	0.744	0.707	0.705	0.705
Togo							0.527		0.704	0.752	0.793	0.82
Total Former USSR			0.563		0.646		0.738		0.707			
Trinidad and Tobago			0.306		0.256		0.35	0.391	0.467	0.514	0.538	0.594
Tunisia		0.354		0.058		0.203	0.194	0.231	0.23	0.251	0.259	0.268
Turkey		0.72	0.654	0.567	0.509	0.474	0.462	0.443	0.337	0.315	0.278	0.264
Turkmenistan									0.503	0.51	0.51	0.498
Uganda									0.835	0.828	0.814	0.776
Ukraine			0.562				0.632		0.678	0.649	0.623	0.62
United Arab Emirates						0.102	0.163		0.28	0.328	0.355	0.406
United Kingdom			0.446	0.501	0.519		0.559	0.48	0.665	0.672	0.684	0.693
United States	0.33		0.351		0.405	0.46	0.532	0.627	0.676	0.696	0.691	0.682
Uruguay				0.271		0.293		0.476	0.555	0.609	0.642	0.652
Uzbekistan									0.501	0.506	0.51	0.508
Venezuela			0.202		0.226	0.3	0.295	0.307	0.396	0.479	0.554	0.539
Vietnam									0.811	0.803	0.794	0.783
Yemen									0.172	0.206	0.236	0.25
Yugoslavia			0.426		0.408	0.4	0.423					
Zambia					0.282	0.313	0.355	0.321	0.744	0.753	0.748	0.738
Zimbabwe							0.481	0.662	0.681	0.671	0.772	0.843

Table A.2 ***(ctd.)*****:** Labor force participation by gender: Full sample, 1950-2005

	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005
	Panel B: Males											
Afghanistan							0.882		0.830	0.830	0.822	0.820
Albania									0.783	0.786	0.776	0.770
Algeria		0.881		0.826		0.781	0.806	0.720	0.789	0.807	0.785	0.760
Angola			0.893						0.765	0.761	0.765	0.778
Argentina			0.843		0.810	0.781	0.786	0.865	0.832	0.817	0.806	0.821
Armenia									0.799	0.795	0.784	0.745
Australia			0.857	0.839	0.803	0.793	0.855	0.821	0.841	0.833	0.822	0.828
Austria	0.926		0.902		0.863		0.747	0.811	0.804	0.803	0.795	0.804
Azerbaijan									0.744	0.752	0.747	0.720
Bahrain					0.833		0.846	0.736	0.890	0.883	0.866	0.860
Bangladesh			0.930			0.902	0.841	0.886	0.895	0.886	0.876	0.871
Belarus			0.877				0.818		0.804	0.761	0.723	0.698
Belgium			0.760		0.717		0.705		0.714	0.723	0.731	0.737
Benin						0.923	0.860	0.841	0.891	0.849	0.797	0.787
Bolivia	0.925					0.861	0.866	0.846	0.833	0.832	0.827	0.825
Bosnia									0.588	0.638	0.650	0.667
Botswana							0.806	0.790	0.813	0.812	0.814	0.822
Brazil			0.903		0.836	0.873	0.860	0.852	0.887	0.865	0.853	0.856
Bulgaria		0.879		0.768		0.703		0.854	0.716	0.696	0.675	0.710
Burkina Faso						0.892		0.919	0.917	0.913	0.912	0.911
Burundi							0.940	0.883	0.899	0.868	0.842	0.826
Cambodia			0.866						0.875	0.869	0.859	0.876
Cameroon						0.816	0.803	0.789	0.790	0.771	0.768	0.771
Canada	0.940		0.781		0.825	0.820	0.813	0.849	0.832	0.816	0.826	0.823
Cape Verde			0.957				0.632		0.876	0.870	0.862	0.860
Central African Republic						0.711			0.873	0.867	0.862	0.857
Chad							0.910		0.807	0.802	0.800	0.801
Chile	0.898		0.851		0.826		0.739	0.763	0.815	0.809	0.784	0.784
China							0.865		0.889	0.882	0.868	0.857
Colombia	0.945			0.875		0.789	0.807	0.815	0.800	0.826	0.845	0.816
Comoros							0.819		0.800	0.791	0.791	0.804
Congo, Republic of						0.818		0.696	0.736	0.726	0.726	0.731
Costa Rica				0.930		0.831	0.871	0.846	0.869	0.866	0.850	0.844
Croatia									0.751	0.732	0.716	0.713
Cuba		0.882			0.828		0.778	0.722	0.792	0.790	0.765	0.768
Czech Republic									0.803	0.802	0.787	0.781
Czechoslovakia	0.810		0.859		0.813		0.843		0.817			
Denmark	0.876		0.931	0.913	0.878	0.785	0.777	0.856	0.856	0.852	0.840	0.839
Djibouti									0.681	0.683	0.685	0.688
Dominican Republic			0.912		0.818		0.777		0.857	0.843	0.835	0.837
Ecuador			0.937			0.866	0.831		0.858	0.857	0.870	0.867
Egypt			0.890	0.811		0.791	0.752	0.782	0.749	0.748	0.766	0.779
El Salvador			0.923		0.906		0.836		0.852	0.837	0.809	0.817
Equatorial Guinea								0.926	0.948	0.956	0.949	0.942
Estonia									0.812	0.779	0.746	0.768
Ethiopia						0.901	0.898	0.882	0.919	0.922	0.921	0.914
Finland			0.842		0.743	0.672	0.730	0.800	0.783	0.766	0.774	0.771
France			0.754		0.730	0.694	0.708	0.767	0.749	0.748	0.751	0.749
Gabon				0.686					0.726	0.703	0.678	0.663
Gambia								0.863	0.849	0.838	0.831	0.832
Georgia									0.772	0.775	0.768	0.766
Germany	0.842		0.830	0.833	0.875	0.737	0.751	0.819	0.806	0.799	0.793	0.819
Ghana			0.890		0.835				0.733	0.756	0.754	0.719
Greece	0.883		0.847		0.728		0.716	0.747	0.763	0.772	0.778	0.790
Guatemala				0.920		0.880	0.866	0.878	0.888	0.879	0.875	0.899
Guinea								0.824	0.796	0.796	0.795	0.795
Guinea-Bissau	0.951						0.885		0.797	0.800	0.795	0.794
Haiti	0.950				0.896		0.828	0.809	0.767	0.723	0.695	0.704
Honduras						0.881	0.877	0.882	0.878	0.897	0.876	0.849
Hungary			0.870		0.754		0.837		0.713	0.671	0.672	0.681
India			0.902		0.856		0.868		0.867	0.857	0.854	0.846
Indonesia			0.889		0.824	0.864	0.835	0.823	0.833	0.851	0.869	0.867
Iran		0.935		0.865	0.796	0.832	0.775	0.810	0.799	0.748		0.724
Iraq		0.896				0.802		0.753	0.738	0.727	0.716	0.714
Ireland			0.911	0.904	0.886	0.776	0.849	0.812	0.774	0.770	0.790	0.804
Israel					0.749	0.706	0.698	0.683	0.685	0.678	0.667	0.679
Italy	0.885		0.807		0.816	0.757	0.778	0.844	0.755	0.733	0.743	0.744
Jamaica			0.905		0.807	0.910	0.809	0.741	0.846	0.829	0.810	0.789
Japan	0.862	0.850	0.850	0.856	0.843	0.869	0.816	0.837	0.839	0.852	0.849	0.849
Jordan			0.780			0.721	0.770		0.697	0.713	0.706	0.696
Kazakhstan									0.820	0.814	0.805	0.803
Kenya									0.788	0.754	0.720	0.709
Korea, Rep.			0.750	0.726	0.748	0.763	0.718	0.687	0.762	0.770	0.764	0.760
Kuwait				0.893	0.874	0.825	0.867	0.812	0.810	0.842	0.845	0.841
Kyrgyzstan									0.782	0.782	0.778	0.810
Laos										0.852		
Latvia									0.816	0.766	0.738	0.768

Table A.2 *(ctd.)*: Labor force participation by gender: Full sample, 1950-2005

	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005
						Panel B: Males *(ctd.)*						
Lebanon						0.738			0.733	0.742	0.747	0.750
Lesotho						0.788			0.838	0.827	0.791	0.751
Liberia			0.833			0.700		0.662	0.636	0.622	0.620	0.633
Libya				0.802		0.780			0.748	0.749	0.763	0.787
Lithuania									0.810	0.788	0.744	0.715
Macedonia									0.685	0.758	0.679	0.714
Madagascar						0.920			0.894	0.899	0.903	0.898
Malawi						0.817		0.854	0.786	0.783	0.831	0.823
Malaysia		0.874	0.901		0.792	0.817	0.806		0.829	0.833	0.825	0.801
Mali						0.929			0.671	0.672	0.684	0.700
Mauritania						0.946			0.786	0.788	0.792	0.798
Mauritius	0.852		0.811		0.832			0.834	0.852	0.850	0.840	0.806
Mexico			0.927		0.813		0.797		0.866	0.859	0.847	0.842
Mongolia									0.674	0.681	0.676	0.671
Morocco			0.874		0.800		0.812		0.832	0.833	0.815	0.800
Mozambique	0.979				0.970		0.882		0.804	0.807	0.829	0.829
Namibia									0.661	0.646	0.674	0.708
Nepal			0.943		0.878		0.877		0.919	0.918	0.908	0.893
Netherlands			0.826		0.755	0.892	0.716	0.695	0.794	0.812	0.843	0.847
New Zealand	0.913	0.919	0.833	0.864	0.812	0.795	0.823	0.864	0.830	0.836	0.835	0.845
Nicaragua				0.911	0.795	0.787		0.815	0.854	0.856	0.835	0.820
Niger						0.937			0.922	0.901	0.896	0.914
Nigeria				0.880				0.791	0.744	0.702	0.643	0.622
Norway	0.936		0.826		0.749		0.845	0.852	0.812	0.838	0.830	0.819
Oman									0.825	0.809	0.789	0.789
Pakistan					0.869	0.871	0.860	0.857	0.864	0.855	0.860	0.865
Panama	0.917		0.871		0.861		0.786	0.825	0.835	0.856	0.850	0.857
Paraguay			0.942		0.915		0.880		0.931	0.911	0.883	0.882
Peru			0.886		0.816		0.791	0.762	0.806	0.844	0.837	0.855
Philippines			0.824		0.794	0.767	0.814	0.809	0.841	0.846	0.839	0.807
Poland	0.870		0.886		0.824		0.817		0.759	0.718	0.700	0.706
Portugal	0.878		0.910		0.913		0.805	0.723	0.805	0.779	0.792	0.792
Puerto Rico			0.843		0.610	0.638	0.629	0.580	0.682	0.691	0.677	0.666
Qatar								0.934	0.945	0.945	0.932	0.940
Romania		0.942		0.877		0.832			0.763	0.772	0.725	0.705
Russia									0.799	0.746	0.747	0.764
Rwanda							0.945		0.896	0.886	0.853	0.852
Sao Tome and Principe							0.832		0.800	0.774	0.774	0.788
Saudi Arabia									0.821	0.765	0.758	0.758
Senegal					0.920			0.898	0.904	0.900	0.897	0.897
Serbia/Montenegro/Kosovo									0.721	0.724	0.731	0.726
Seychelles			0.880		0.867	0.849	0.837	0.780	0.788	0.735		
Sierra Leone				0.861					0.674	0.651	0.659	0.689
Singapore		0.891			0.848	0.788	0.815	0.836	0.844	0.839	0.838	0.828
Slovak Republic									0.798	0.769	0.767	0.762
Slovenia									0.667	0.726	0.727	0.752
Somalia						0.927			0.797	0.795	0.797	0.793
South Africa			0.950		0.914		0.822	0.836	0.656	0.640	0.630	0.653
Spain	0.916		0.890		0.879	0.848	0.827	0.797	0.785	0.775	0.795	0.816
Sri Lanka		0.842		0.821	0.842		0.788	0.798	0.813	0.809	0.809	0.813
Sudan		0.970				0.906		0.852	0.770	0.759	0.761	0.766
Swaziland				0.832		0.588		0.670	0.747	0.737	0.724	0.717
Sweden			0.920	0.839	0.800	0.767	0.830	0.858	0.829	0.801	0.801	0.816
Switzerland	0.936		0.931		0.918		0.899		0.908	0.899	0.886	0.878
Syria			0.838		0.790	0.759	0.776	0.770	0.833	0.832	0.810	0.771
Tajikistan									0.790	0.790	0.779	0.772
Tanzania				0.860			0.828		0.918	0.915	0.914	0.912
Thailand			0.895		0.877	0.745	0.864	0.875	0.885	0.855	0.852	0.850
Togo							0.804		0.847	0.836	0.825	0.819
Total Former USSR			0.854		0.827		0.825		0.813			
Trinidad and Tobago			0.863		0.816		0.796	0.803	0.771	0.809	0.808	0.819
Tunisia		0.807		0.863		0.866	0.803	0.825	0.788	0.772	0.745	0.731
Turkey		0.954	0.938	0.919	0.847	0.854	0.846	0.832	0.833	0.802	0.750	0.748
Turkmenistan									0.774	0.762	0.776	0.781
Uganda									0.825	0.829	0.827	0.802
Ukraine			0.850				0.800		0.770	0.742	0.708	0.723
United Arab Emirates						0.933	0.949		0.919	0.920	0.918	0.917
United Kingdom			0.957	0.927	0.914		0.879	0.722	0.856	0.833	0.824	0.820
United States	0.900		0.788		0.747	0.761	0.790	0.806	0.838	0.831	0.816	0.801
Uruguay				0.812		0.784		0.893	0.867	0.865	0.850	0.855
Uzbekistan									0.756	0.751	0.754	0.764
Venezuela			0.895		0.803	0.809	0.797	0.807	0.828	0.850	0.853	0.833
Vietnam									0.884	0.872	0.860	0.847
Yemen									0.757	0.744	0.731	0.733
Yugoslavia			0.872		0.782	0.758	0.770					
Zambia					0.846	0.848	0.842	0.879	0.861	0.856	0.859	0.862
Zimbabwe							0.800	0.771	0.803	0.802	0.867	0.907

Sources: International Labor Organization, see data appendix for details.

Table A.3: Sectoral shares by gender: Sixteen developed economies, 1890-2000

	Australia	Belgium	Canada	Denmark	Finland	France	Germany	Ireland	Italy	Netherlands	Norway	Portugal	Spain	Sweden	United Kingdom	United States
Panel A: Females																
Sector: Agriculture																
1890		0.320	0.061	0.488		0.433	0.528			0.210	0.363	0.591		0.886	0.018	
1900	0.113	0.267	0.040	0.423	0.632	0.406	0.561		0.606	0.186	0.263	0.602	0.603	0.655	0.018	0.191
1910	0.041	0.203	0.044	0.305	0.799	0.420		0.125	0.581	0.208	0.189	0.481	0.396	0.458	0.022	0.191
1920	0.022	0.188	0.037	0.176	0.773	0.446	0.436	0.364	0.594	0.143	0.194		0.318	0.330	0.054	0.110
1930	0.035	0.143	0.046	0.257	0.729	0.402	0.407	0.307	0.430	0.144	0.130			0.271	0.012	
1940	0.036	0.076	0.024	0.186	0.651	0.414	0.442	0.248		0.182	0.119	0.343	0.235	0.061		0.043
1950	0.039		0.024	0.173	0.461	0.277	0.354	0.211	0.414		0.082	0.331	0.247	0.047	0.017	0.038
1960	0.046	0.046	0.030	0.068	0.319	0.196	0.178	0.132	0.291	0.044	0.040	0.177	0.405	0.060	0.013	0.024
1970	0.045	0.029	0.032	0.065	0.161	0.114	0.108	0.079	0.207	0.035	0.084	0.224	0.213	0.043	0.013	0.018
1980	0.042	0.020	0.031	0.040	0.094	0.140	0.067	0.048	0.137	0.031	0.053	0.297	0.155	0.030	0.012	0.016
1990	0.037	0.017	0.025	0.027	0.059	0.084	0.035	0.030	0.083	0.029	0.034	0.146	0.092	0.019	0.011	0.014
2000	0.029	0.013	0.018	0.017	0.033	0.023	0.019	0.018	0.044	0.023	0.018	0.126	0.045	0.011	0.008	0.011
Sector: Manufacturing																
1890		0.317	0.313	0.287		0.270	0.268			0.161	0.208	0.362		0.080	0.445	
1900	0.220	0.353	0.316	0.189	0.123	0.272	0.237		0.259	0.172	0.241	0.306	0.130	0.099	0.456	0.148
1910	0.282	0.367	0.271	0.183	0.083	0.324		0.331	0.270	0.180	0.218	0.223	0.192	0.151	0.460	0.165
1920	0.261	0.398	0.217	0.168	0.092	0.247	0.255	0.099	0.237	0.210	0.207		0.278	0.201	0.459	0.230
1930	0.238	0.361	0.158	0.139	0.100	0.246	0.240	0.106	0.290	0.194	0.190			0.208	0.382	
1940	0.297	0.396	0.224	0.182	0.134	0.212	0.231	0.107		0.172	0.238	0.213	0.279	0.249		0.229
1950	0.282		0.242	0.216	0.211	0.261	0.263	0.200	0.280		0.261	0.240	0.252	0.366	0.394	0.252
1960	0.256	0.302	0.193	0.254	0.220	0.266	0.332	0.229	0.312	0.228	0.222	0.292	0.255	0.256	0.344	0.231
1970	0.204	0.256	0.165	0.201	0.230	0.257	0.333	0.239	0.316	0.167	0.165	0.332	0.265	0.191	0.274	0.204
1980	0.158	0.167	0.146	0.165	0.211	0.406	0.286	0.211	0.261	0.124	0.130	0.256	0.210	0.151	0.203	0.179
1990	0.122	0.135	0.135	0.162	0.162	0.160	0.230	0.186	0.224	0.107	0.109	0.250	0.170	0.125	0.143	0.143
2000	0.093	0.113	0.113	0.138	0.123	0.114	0.167	0.131	0.192	0.088	0.083	0.212	0.129	0.099	0.106	0.107
Sector: Services																
1890		0.363	0.626	0.225		0.297	0.204			0.628	0.429	0.047		0.035	0.537	
1900	0.667	0.379	0.644	0.389	0.245	0.323	0.203		0.135	0.643	0.496	0.093	0.266	0.246	0.526	0.661
1910	0.676	0.430	0.685	0.512	0.119	0.256		0.544	0.149	0.612	0.593	0.296	0.412	0.391	0.518	0.643
1920	0.717	0.414	0.746	0.656	0.135	0.306	0.309	0.537	0.169	0.647	0.599		0.405	0.468	0.487	0.660
1930	0.727	0.496	0.796	0.603	0.171	0.352	0.354	0.586	0.280	0.662	0.679			0.521	0.606	
1940	0.668	0.528	0.752	0.631	0.215	0.374	0.326	0.644		0.645	0.642	0.444	0.486	0.690		0.728
1950	0.679		0.734	0.611	0.328	0.462	0.383	0.589	0.306		0.657	0.428	0.501	0.587	0.589	0.709
1960	0.698	0.652	0.777	0.678	0.462	0.538	0.490	0.639	0.397	0.728	0.739	0.531	0.339	0.684	0.643	0.744
1970	0.751	0.715	0.803	0.734	0.609	0.629	0.559	0.682	0.476	0.798	0.750	0.444	0.522	0.766	0.713	0.778
1980	0.800	0.813	0.823	0.795	0.694	0.454	0.647	0.741	0.603	0.846	0.816	0.447	0.634	0.819	0.786	0.806
1990	0.841	0.848	0.840	0.811	0.778	0.756	0.735	0.784	0.693	0.864	0.858	0.604	0.737	0.856	0.846	0.842
2000	0.878	0.875	0.869	0.845	0.844	0.863	0.814	0.851	0.764	0.889	0.899	0.662	0.825	0.890	0.886	0.882
Panel B: Males																
Sector: Agriculture																
1890		0.321	0.602	0.504		0.457	0.361			0.367	0.566	0.681		0.705	0.164	
1900	0.388	0.273	0.548	0.499	0.697	0.429	0.286		0.587	0.352	0.491	0.669	0.724	0.576	0.130	0.444
1910	0.300	0.245	0.422	0.487	0.777	0.403		0.616	0.545	0.311	0.490	0.610	0.712	0.492	0.122	0.338
1920	0.285	0.228	0.408	0.425	0.724	0.370	0.235	0.596	0.548	0.268	0.438		0.631	0.447	0.219	0.291
1930	0.272	0.183	0.442	0.401	0.676	0.330	0.225	0.577	0.493	0.229	0.440			0.404	0.081	
1940	0.205	0.140	0.332	0.341	0.595	0.327	0.237	0.568		0.204	0.357	0.567	0.558	0.312		0.227
1950	0.163		0.214	0.281	0.470	0.262	0.213	0.466	0.425		0.316	0.539	0.543	0.217	0.070	0.154
1960	0.143	0.074	0.137	0.211	0.380	0.202	0.088	0.401	0.256	0.126	0.242	0.490	0.427	0.159	0.048	0.078
1970	0.087	0.049	0.093	0.121	0.189	0.136	0.058	0.293	0.167	0.072	0.121	0.343	0.261	0.091	0.036	0.054
1980	0.075	0.038	0.069	0.095	0.134	0.130	0.046	0.210	0.117	0.063	0.095	0.202	0.185	0.072	0.034	0.046
1990	0.064	0.033	0.046	0.074	0.100	0.126	0.036	0.173	0.078	0.051	0.076	0.117	0.121	0.049	0.029	0.041
2000	0.052	0.023	0.042	0.045	0.067	0.049	0.030	0.105	0.055	0.042	0.051	0.108	0.071	0.033	0.021	0.029
Sector: Manufacturing																
1890		0.415	0.218	0.292		0.292	0.436			0.347	0.242	0.191		0.213	0.568	
1900	0.276	0.458	0.252	0.273	0.160	0.305	0.490		0.238	0.366	0.302	0.193	0.143	0.270	0.582	0.251
1910	0.361	0.495	0.298	0.279	0.141	0.336		0.224	0.267	0.379	0.281	0.217	0.159	0.312	0.577	0.318
1920	0.367	0.509	0.298	0.317	0.169	0.350	0.507	0.169	0.249	0.406	0.323		0.211	0.363	0.433	0.355
1930	0.380	0.518	0.241	0.334	0.199	0.361	0.495	0.176	0.299	0.424	0.294			0.375	0.500	
1940	0.404	0.535	0.308	0.375	0.251	0.350	0.475	0.174		0.373	0.367	0.220	0.235	0.428		0.374
1950	0.443		0.404	0.399	0.330	0.418	0.503	0.263	0.335		0.400	0.247	0.256	0.514	0.536	0.392
1960	0.375	0.520	0.398	0.445	0.378	0.439	0.572	0.286	0.442	0.480	0.409	0.289	0.318	0.529	0.538	0.419
1970	0.415	0.485	0.381	0.443	0.451	0.471	0.558	0.344	0.469	0.444	0.445	0.315	0.416	0.498	0.510	0.400
1980	0.371	0.405	0.356	0.391	0.439	0.624	0.508	0.370	0.401	0.377	0.395	0.415	0.421	0.444	0.445	0.381
1990	0.333	0.374	0.366	0.374	0.411	0.359	0.490	0.354	0.375	0.338	0.351	0.404	0.410	0.403	0.381	0.345
2000	0.294	0.351	0.316	0.347	0.376	0.330	0.416	0.374	0.381	0.298	0.313	0.420	0.406	0.342	0.341	0.310
Sector: Services																
1890		0.264	0.180	0.205		0.251	0.203			0.286	0.192	0.128		0.082	0.268	
1900	0.336	0.269	0.200	0.228	0.143	0.266	0.224		0.176	0.282	0.208	0.138	0.133	0.154	0.287	0.305
1910	0.339	0.260	0.281	0.234	0.082	0.261		0.160	0.187	0.310	0.229	0.173	0.130	0.196	0.301	0.344
1920	0.348	0.263	0.295	0.257	0.107	0.280	0.257	0.235	0.203	0.326	0.240		0.158	0.190	0.348	0.354
1930	0.348	0.299	0.317	0.265	0.125	0.310	0.280	0.248	0.207	0.347	0.266			0.221	0.419	
1940	0.390	0.325	0.360	0.284	0.154	0.323	0.288	0.259		0.423	0.276	0.212	0.207	0.260		0.399
1950	0.394		0.382	0.321	0.200	0.320	0.284	0.272	0.240		0.284	0.214	0.201	0.270	0.394	0.454
1960	0.482	0.407	0.465	0.344	0.242	0.359	0.340	0.313	0.302	0.394	0.348	0.221	0.255	0.312	0.414	0.503
1970	0.498	0.466	0.527	0.436	0.360	0.392	0.384	0.362	0.364	0.484	0.434	0.343	0.323	0.411	0.454	0.546
1980	0.554	0.557	0.575	0.514	0.427	0.245	0.446	0.420	0.482	0.559	0.510	0.382	0.394	0.484	0.520	0.573
1990	0.603	0.593	0.588	0.552	0.489	0.515	0.474	0.473	0.546	0.611	0.573	0.479	0.469	0.548	0.590	0.615
2000	0.654	0.626	0.642	0.608	0.557	0.621	0.554	0.521	0.564	0.660	0.637	0.472	0.523	0.625	0.638	0.661

Sources: International Historical Statistics, Mitchell (1998 a,b,c) and International Labor Organization, see data appendix for details.

Table A.4: Sectoral shares by gender: Full sample, 1950-2000

	1950		1960		1970		1980		1990		2000	
	Agriculture	*Manufacturing*	*Agriculture*	*Manufacturing*	*Agriculture*	*Manufacturing*	*Agriculture*	*Manufacturing*	*Agriculture*	*Manufacturing*	*Agriculture*	*Manufacturing*
						Panel A: Females						
Algeria	0.902	0.018	0.240	0.165	0.051	0.194	0.037	0.162			0.215	0.278
Argentina			0.052	0.270	0.042	0.208	0.031	0.182	0.051	0.133	0.004	0.104
Australia	0.039	0.282	0.046	0.256	0.045	0.204	0.042	0.158	0.037	0.122	0.029	0.093
Austria	0.441	0.220	0.303	0.274	0.181	0.275	0.114	0.234	0.079	0.198	0.056	0.136
Bahrain			0.002	0.551	0.001	0.041	0.008	0.087	0.002	0.072		
Bangladesh			0.918	0.046	0.726	0.044	0.400	0.338	0.887	0.091	0.659	0.157
Belgium			0.046	0.302	0.029	0.256	0.020	0.167	0.017	0.135	0.013	0.113
Bolivia	0.743	0.112			0.272	0.185			0.235	0.107	0.379	0.094
Botswana			0.951	0.007			0.615	0.031	0.157	0.190	0.128	0.163
Brazil			0.290	0.301	0.209	0.106	0.154	0.149	0.193	0.110	0.155	0.114
Bulgaria			0.631	0.268	0.265	0.369	0.170	0.406	0.129	0.356	0.071	0.285
Burundi							0.979	0.010	0.977	0.007		
Cameroon					0.921	0.026	0.920	0.026				
Canada	0.024	0.242	0.030	0.193	0.032	0.165	0.031	0.146	0.025	0.135	0.018	0.113
Cape Verde			0.191	0.020			0.298	0.219	0.317	0.175		
Central African Republic					0.953	0.004			0.876	0.004		
Chile	0.080	0.259	0.047	0.208	0.028	0.224	0.036	0.131	0.055	0.149	0.050	0.121
Colombia	0.136	0.257	0.117	0.205	0.072	0.219	0.008	0.238	0.007	0.248	0.081	0.173
Costa Rica			0.055	0.177	0.042	0.172	0.053	0.228	0.062	0.231	0.048	0.151
Croatia									0.145	0.350	0.132	0.190
Cuba	0.057	0.198			0.082	0.221	0.106	0.216				
Czech Republic									0.095	0.373	0.033	0.273
Czechoslovakia			0.301	0.372	0.163	0.405	0.117	0.405	0.099	0.368		
Denmark	0.173	0.216	0.068	0.254	0.065	0.201	0.040	0.165	0.027	0.162	0.017	0.138
Dominican Republic			0.102	0.138	0.445	0.114	0.110	0.164	0.037	0.236		
Ecuador	0.294	0.365	0.250	0.338	0.132	0.227	0.130	0.171	0.088	0.154	0.056	0.131
Egypt			0.407	0.075	0.214	0.143	0.246	0.139	0.491	0.098	0.354	0.147
El Salvador			0.103	0.243	0.103	0.168	0.197	0.204	0.090	0.234	0.042	0.224
Estonia											0.041	0.223
Ethiopia							0.876	0.017	0.876	0.017	0.736	0.078
Finland			0.319	0.220	0.161	0.230	0.094	0.211	0.059	0.162	0.033	0.123
France	0.277	0.261	0.196	0.266	0.082	0.254	0.140	0.406	0.084	0.160	0.023	0.114
Germany			0.178	0.332	0.108	0.333	0.067	0.286	0.035	0.230	0.019	0.167
Ghana			0.583	0.106	0.544	0.155	0.560	0.143			0.523	0.137
Greece	0.449	0.259	0.687	0.140	0.516	0.182	0.370	0.187	0.290	0.182	0.153	0.115
Guatemala			0.123	0.218	0.074	0.227	0.124	0.221	0.153	0.196		
Haiti	0.822	0.058			0.619	0.077	0.524	0.090	0.513	0.096		
Honduras			0.052	0.188	0.075	0.278			0.082	0.248	0.104	0.251
Hungary			0.383	0.307	0.218	0.393	0.186	0.352	0.147	0.306	0.031	0.228
India	0.891	0.042	0.833	0.092	0.848	0.071	0.841	0.086	0.812	0.086		
Indonesia			0.689	0.083	0.657	0.097	0.551	0.117	0.495	0.140	0.447	0.152
Iran	0.252	0.492	0.227	0.571	0.282	0.512	0.280	0.243	0.157	0.317	0.336	0.285
Iraq	0.303	0.260			0.676	0.109	0.174	0.138	0.257	0.079		
Ireland	0.211	0.200	0.132	0.229	0.079	0.239	0.048	0.211	0.030	0.186	0.018	0.131
Israel			0.103	0.188	0.059	0.190	0.033	0.161	0.021	0.155	0.007	0.109
Italy	0.414	0.280	0.291	0.312	0.207	0.316	0.137	0.261	0.083	0.224	0.044	0.192
Jamaica	0.329	0.164	0.180	0.211	0.181	0.163	0.191	0.100	0.131	0.130	0.086	0.079
Japan	0.560	0.157	0.397	0.215	0.214	0.271	0.120	0.279	0.074	0.264	0.050	0.197
Jordan			0.337	0.249			0.012	0.074				
Kazakhstan									0.181	0.243	0.330	0.088
Korea, Rep.			0.665	0.087	0.550	0.168	0.345	0.245	0.180	0.263	0.111	0.176
Kuwait			0.001	0.053	0.001	0.037	0.001	0.024	0.001	0.019		
Latvia											0.099	0.169
Liberia			0.939	0.009	0.886	0.010	0.859	0.008				
Libya			0.189	0.503	0.388	0.064						
Lithuania									0.133	0.335	0.125	0.202
Malawi					0.955	0.017	0.957	0.012			0.919	0.012
Malaysia	0.771	0.073	0.736	0.074	0.680	0.094	0.386	0.202	0.222	0.278	0.122	0.256
Mauritius	0.522	0.106	0.403	0.075	0.372	0.110	0.182	0.456	0.168	0.493	0.082	0.281
Mexico			0.329	0.137	0.121	0.221	0.166	0.254	0.100	0.188	0.066	0.201
Moldova											0.421	0.110
Morocco			0.433	0.248			0.357	0.339	0.032	0.483	0.567	0.188
Mozambique	0.951	0.010			0.940	0.016	0.970	0.008				
Namibia			0.586	0.019					0.700	0.106		
Nepal			0.975	0.013	0.955	0.004	0.971	0.002	0.911	0.013		
Netherlands			0.044	0.228	0.035	0.167	0.031	0.124	0.029	0.107	0.023	0.088
New Zealand	0.052	0.245	0.049	0.245	0.051	0.231	0.074	0.196	0.070	0.134	0.057	0.111
Nicaragua			0.151	0.186	0.120	0.190					0.082	0.176
Niger			0.976	0.000	0.704	0.158						
Norway	0.082	0.261	0.040	0.222	0.084	0.165	0.053	0.130	0.034	0.109	0.018	0.083
Oman									0.017	0.035	0.031	0.108
Pakistan	0.769	0.076	0.713	0.127	0.663	0.114	0.611	0.094	0.675	0.129	0.683	0.139
Panama	0.178	0.135	0.077	0.106	0.081	0.122	0.047	0.117	0.033	0.114	0.035	0.087
Paraguay			0.227	0.304	0.137	0.287	0.159	0.245	0.007	0.158	0.142	0.101
Peru			0.330	0.183	0.193	0.189	0.246	0.135	0.051	0.167	0.019	0.121

Table A.4 ***(ctd.)*:** Sectoral shares by gender: Full sample, 1950-2000

	1950		1960		1970		1980		1990		2000	
	Agriculture	*Manufacturing*	*Agriculture*	*Manufacturing*	*Agriculture*	*Manufacturing*	*Agriculture*	*Manufacturing*	*Agriculture*	*Manufacturing*	*Agriculture*	*Manufacturing*
Panel B: Females *(ctd.)*												
Philippines			0.388	0.215	0.344	0.188	0.363	0.143	0.309	0.133	0.252	0.119
Poland	0.690	0.138	0.589	0.170	0.428	0.255	0.326	0.287	0.251	0.229	0.157	0.185
Portugal	0.331	0.240	0.177	0.292	0.224	0.332	0.297	0.256	0.146	0.250	0.126	0.212
Puerto Rico			0.032	0.344	0.015	0.306	0.002	0.257	0.004	0.201	0.003	0.144
Qatar							0.000	0.021	0.000	0.019	0.000	0.038
Romania			0.724	0.119	0.505	0.265			0.316	0.384	0.347	0.246
Russia											0.079	0.203
Rwanda							0.980	0.006	0.961	0.005		
Seychelles					0.199	0.100	0.075	0.079				
Sierra Leone			0.897	0.020							0.711	0.024
Singapore	0.165	0.170	0.428	0.223	0.026	0.362	0.008	0.376	0.001	0.303	0.003	0.187
Slovak Republic									0.108	0.422	0.035	0.257
Slovenia									0.142	0.359	0.095	0.265
South Africa			0.173	0.089	0.307	0.105	0.128	0.169	0.100	0.144	0.065	0.127
Spain	0.247	0.252	0.405	0.255	0.213	0.265	0.155	0.210	0.092	0.170	0.045	0.129
Sri Lanka			0.658	0.104	0.657	0.133	0.560	0.174	0.404	0.253	0.437	0.247
Sudan	0.827	0.133			0.888	0.034	0.871	0.045				
Sweden	0.047	0.366	0.060	0.256	0.043	0.191	0.030	0.151	0.019	0.125	0.011	0.099
Switzerland			0.030	0.371	0.052	0.324	0.047	0.227	0.039	0.166	0.031	0.129
Syria			0.780	0.050	0.638	0.133	0.506	0.147	0.444	0.096	0.263	0.074
Thailand	0.923	0.013	0.876	0.029	0.763	0.073	0.699	0.088	0.579	0.145	0.448	0.177
Trinidad and Tobago			0.165	0.163	0.145	0.237	0.069	0.215	0.050	0.176	0.021	0.168
Tunisia	0.901	0.050	0.138	0.429	0.271	0.496	0.298	0.478	0.217	0.443		
Turkey			0.959	0.015	0.898	0.048	0.873	0.046	0.749	0.099	0.581	0.135
Ukraine									0.224	0.459	0.186	0.229
United Arab Emirates					0.004	0.058	0.001	0.067	0.001	0.137	0.001	0.059
United Kingdom			0.013	0.344	0.013	0.274	0.012	0.203	0.011	0.143	0.008	0.106
United States	0.038	0.252	0.024	0.231	0.018	0.204	0.016	0.179	0.014	0.143	0.011	0.107
Uruguay			0.028	0.292	0.036	0.239	0.022	0.218	0.020	0.195	0.024	0.132
Venezuela			0.066	0.200	0.042	0.181	0.023	0.181	0.017	0.153	0.018	0.118
Yemen					0.872	0.036			0.875	0.030		
Yugoslavia			0.703	0.142	0.539	0.195	0.365	0.248				
Zambia					0.385	0.196	0.716	0.036				
Panel B: Males												
Algeria	0.750	0.109	0.605	0.147	0.329	0.331	0.264	0.336			0.203	0.253
Argentina			0.239	0.384	0.202	0.357	0.166	0.396	0.145	0.322	0.013	0.323
Australia	0.163	0.443	0.143	0.375	0.087	0.415	0.075	0.371	0.064	0.333	0.052	0.294
Austria	0.253	0.474	0.181	0.508	0.120	0.504	0.082	0.503	0.063	0.482	0.051	0.398
Bahrain			0.105	0.411	0.071	0.363	0.034	0.408	0.029	0.328		
Bangladesh			0.853	0.049	0.793	0.050	0.631	0.107	0.570	0.165	0.458	0.136
Belgium			0.074	0.520	0.049	0.485	0.038	0.405	0.033	0.374	0.023	0.351
Bolivia	0.544	0.315			0.542	0.206			0.273	0.287	0.372	0.263
Botswana			0.874	0.050			0.532	0.182	0.249	0.329	0.219	0.281
Brazil			0.566	0.236	0.518	0.204	0.345	0.298	0.285	0.275	0.233	0.270
Bulgaria			0.402	0.462	0.211	0.479	0.160	0.521	0.156	0.435	0.113	0.370
Burundi							0.879	0.037	0.889	0.036		
Cameroon					0.706	0.096	0.709	0.095				
Canada	0.214	0.404	0.137	0.398	0.093	0.381	0.069	0.356	0.046	0.366	0.042	0.316
Cape Verde			0.690	0.097			0.348	0.371	0.305	0.382		
Central African Republic					0.755	0.073			0.748	0.061		
Chile	0.390	0.320	0.368	0.328	0.271	0.353	0.274	0.251	0.225	0.317	0.180	0.299
Colombia	0.657	0.167	0.583	0.194	0.480	0.214	0.018	0.338	0.017	0.350	0.310	0.204
Costa Rica			0.585	0.192	0.469	0.219	0.371	0.280	0.311	0.268	0.224	0.258
Croatia									0.163	0.477	0.132	0.355
Cuba	0.471	0.211			0.354	0.276	0.289	0.320				
Czech Republic									0.142	0.545	0.054	0.474
Czechoslovakia			0.214	0.542	0.166	0.548	0.145	0.570	0.154	0.537		
Denmark	0.281	0.399	0.211	0.445	0.121	0.443	0.095	0.391	0.074	0.374	0.045	0.347
Dominican Republic			0.730	0.120	0.595	0.141	0.386	0.266	0.222	0.276		
Ecuador	0.650	0.184	0.651	0.177	0.567	0.170	0.411	0.219	0.242	0.234	0.117	0.273
Egypt			0.581	0.151	0.497	0.189	0.431	0.224	0.328	0.251	0.272	0.249
El Salvador			0.717	0.159	0.661	0.135	0.529	0.214	0.359	0.269	0.316	0.248
Estonia											0.088	0.410
Ethiopia							0.893	0.022	0.893	0.022	0.852	0.046
Finland			0.380	0.378	0.189	0.451	0.134	0.439	0.100	0.411	0.067	0.376
France	0.262	0.418	0.202	0.439	0.111	0.462	0.130	0.624	0.126	0.359	0.049	0.330
Germany			0.088	0.572	0.058	0.558	0.046	0.508	0.036	0.490	0.030	0.416
Ghana			0.638	0.180	0.592	0.162	0.664	0.113			0.551	0.170
Greece	0.527	0.195	0.495	0.226	0.315	0.322	0.245	0.345	0.204	0.333	0.133	0.287
Guatemala			0.736	0.127	0.670	0.178	0.637	0.166	0.574	0.202		
Haiti	0.887	0.056			0.840	0.068	0.786	0.086	0.779	0.088		
Honduras			0.794	0.095	0.711	0.133			0.643	0.146	0.496	0.208
Hungary			0.365	0.415	0.260	0.471	0.241	0.444	0.210	0.430	0.079	0.392
India	0.717	0.107	0.694	0.126	0.699	0.122	0.659	0.150	0.633	0.148		
Indonesia			0.726	0.074	0.658	0.092	0.566	0.116	0.484	0.167	0.435	0.198
Iran	0.616	0.176	0.508	0.230	0.448	0.267	0.303	0.263	0.255	0.293	0.216	0.307
Iraq	0.558	0.168			0.238	0.246	0.132	0.198	0.232	0.121		

Table A.4 *(ctd.)*: Sectoral shares by gender: Full sample, 1950-2000

	1950		1960		1970		1980		1990		2000	
	Agriculture	*Manufacturing*	*Agriculture*	*Manufacturing*	*Agriculture*	*Manufacturing*	*Agriculture*	*Manufacturing*	*Agriculture*	*Manufacturing*	*Agriculture*	*Manufacturing*
						Panel B: Males *(ctd.)*						
Ireland	0.466	0.263	0.401	0.286	0.293	0.344	0.210	0.370	0.173	0.354	0.105	0.374
Israel			0.143	0.421	0.086	0.414	0.070	0.391	0.049	0.383	0.029	0.314
Italy	0.425	0.335	0.256	0.442	0.167	0.469	0.117	0.401	0.078	0.375	0.055	0.381
Jamaica	0.639	0.196	0.522	0.267	0.408	0.335	0.420	0.246	0.330	0.293	0.260	0.278
Japan	0.375	0.339	0.245	0.374	0.126	0.402	0.083	0.391	0.058	0.393	0.045	0.366
Jordan			0.440	0.264			0.121	0.272				
Kazakhstan									0.287	0.381	0.357	0.204
Korea, Rep.			0.595	0.140	0.440	0.244	0.277	0.336	0.141	0.387	0.087	0.335
Kuwait			0.012	0.355	0.024	0.312	0.022	0.355	0.017	0.330		
Latvia											0.153	0.334
Liberia			0.745	0.130	0.710	0.103	0.671	0.090				
Libya			0.432	0.202	0.225	0.272						
Lithuania									0.232	0.467	0.185	0.344
Malawi					0.781	0.099	0.784	0.085			0.750	0.077
Malaysia	0.531	0.149	0.528	0.118	0.499	0.157	0.332	0.226	0.246	0.295	0.191	0.323
Mauritius	0.427	0.268	0.376	0.309	0.320	0.282	0.224	0.309	0.189	0.335	0.105	0.338
Mexico			0.593	0.203	0.486	0.250	0.459	0.271	0.319	0.259	0.229	0.284
Moldova											0.440	0.184
Morocco			0.672	0.115			0.448	0.250	0.044	0.385	0.381	0.220
Mozambique	0.819	0.072			0.671	0.167	0.720	0.139				
Namibia			0.627	0.217					0.549	0.250		
Nepal			0.925	0.026	0.905	0.013	0.906	0.008	0.763	0.037		
Netherlands			0.126	0.480	0.072	0.444	0.063	0.377	0.051	0.338	0.042	0.298
New Zealand	0.211	0.387	0.170	0.420	0.148	0.391	0.134	0.367	0.126	0.322	0.103	0.315
Nicaragua			0.710	0.156	0.562	0.200					0.405	0.209
Niger			0.974	0.007	0.919	0.028						
Norway	0.316	0.400	0.242	0.409	0.121	0.445	0.095	0.395	0.076	0.351	0.051	0.313
Oman									0.081	0.227	0.080	0.207
Pakistan	0.704	0.114	0.598	0.164	0.588	0.141	0.741	0.066	0.443	0.201	0.391	0.237
Panama	0.689	0.114	0.622	0.145	0.534	0.173	0.385	0.215	0.342	0.199	0.217	0.231
Paraguay			0.658	0.158	0.626	0.159	0.545	0.241	0.038	0.362	0.350	0.231
Peru			0.571	0.201	0.495	0.206	0.434	0.196	0.142	0.276	0.048	0.274
Philippines			0.706	0.114	0.631	0.147	0.587	0.149	0.522	0.174	0.454	0.173
Poland	0.483	0.306	0.388	0.384	0.313	0.447	0.281	0.460	0.252	0.425	0.169	0.392
Portugal	0.539	0.247	0.490	0.289	0.343	0.315	0.202	0.415	0.117	0.404	0.108	0.420
Puerto Rico			0.302	0.329	0.110	0.358	0.081	0.286	0.055	0.284	0.036	0.293
Qatar							0.035	0.356	0.043	0.368	0.030	0.519
Romania			0.446	0.361	0.256	0.516			0.228	0.506	0.326	0.329
Russia											0.127	0.336
Rwanda							0.880	0.051	0.872	0.041		
Seychelles					0.275	0.372	0.132	0.308				
Sierra Leone			0.703	0.174							0.661	0.096
Singapore	0.068	0.218	0.705	0.119	0.030	0.301	0.013	0.351	0.004	0.355	0.007	0.329
Slovak Republic									0.164	0.555	0.078	0.463
Slovenia									0.135	0.496	0.094	0.448
South Africa			0.366	0.362	0.309	0.388	0.176	0.456	0.154	0.416	0.106	0.345
Spain	0.543	0.256	0.427	0.318	0.261	0.416	0.185	0.421	0.121	0.410	0.071	0.406
Sri Lanka			0.530	0.147	0.516	0.141	0.493	0.186	0.374	0.222	0.355	0.220
Sudan	0.886	0.027			0.655	0.088	0.665	0.097				
Sweden	0.217	0.514	0.159	0.529	0.091	0.498	0.072	0.444	0.049	0.403	0.033	0.342
Switzerland			0.147	0.563	0.090	0.531	0.069	0.460	0.053	0.386	0.050	0.341
Syria			0.499	0.211	0.428	0.243	0.264	0.340	0.208	0.291	0.181	0.314
Thailand	0.843	0.038	0.803	0.057	0.718	0.100	0.663	0.128	0.563	0.192	0.477	0.205
Trinidad and Tobago			0.228	0.401	0.180	0.431	0.110	0.459	0.131	0.385	0.078	0.411
Tunisia	0.680	0.131	0.479	0.194	0.418	0.268	0.326	0.358	0.249	0.335		
Turkey			0.645	0.175	0.560	0.169	0.440	0.218	0.333	0.268	0.249	0.272
Ukraine									0.284	0.504	0.240	0.389
United Arab Emirates					0.048	0.438	0.048	0.398	0.090	0.350	0.056	0.437
United Kingdom			0.048	0.538	0.036	0.510	0.034	0.445	0.029	0.381	0.021	0.341
United States	0.154	0.392	0.078	0.419	0.054	0.400	0.046	0.381	0.041	0.345	0.029	0.310
Uruguay			0.252	0.331	0.231	0.304	0.136	0.318	0.081	0.343	0.091	0.309
Venezuela			0.403	0.228	0.257	0.298	0.197	0.315	0.168	0.306	0.134	0.302
Yemen					0.447	0.123			0.460	0.132		
Yugoslavia			0.551	0.288	0.407	0.321	0.276	0.390				
Zambia					0.318	0.319	0.480	0.189				

Sources: International Labor Organization, see data appendix for details.