

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 their changing roles during the course of economic development has been a central topic of inquire since Ester Boserup's pioneering work on *Woman's Role in Economic Development*. This is of course a complex phenomenon whose systematic analysis is complicated by measurement issues. Goldin's work greatly contributed to our understanding of this process and inspired much of the subsequent work on the topic. In a series of seminal papers she 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 19th century, reached the bottom sometimes in the 1920s and then it steadily increased during the 20th century.

Goldin (1986, 1990) argues that until the late nineteenth century, women in the United States, whether married or single, 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 to 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 19th 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. She 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), Luci (2009) and Lundberg (2010) provides additional evidence of a U-shaped labor supply based on larger panel of economies observed in the 1970s and 1980s and for the years 1965 to 2005, respectively.¹

This paper builds upon 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 US 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.

I first study the experience of the US in a comparative perspective relative to a sample of economically advanced economies. I combine pre-WWII data on labor force participation rates and sectoral employment by gender from the International Historical Statistics (IHS, Mitchell, 1998) and comparable post-WWII data from the International Labour Organization (ILO) to construct a data set of sixteen developed economies for which data are consistently available for most of the 1890 to 2005 period. The sample includes the following countries: 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, I use ILO data for the years 1950 to 2005 and confirm the findings of Goldin (1990), Mammen and Paxson (2000) and Luci (2009) for a longer panel of countries. Interestingly, the U-shape appears to be more muted when early OECD economies are not included in the sample. One possible explanation 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 intensive than it was in the 19th century. For example, if, as it is the case with electronics in Asia, industrialization is associated with an

¹See Blau, Ferber and Winkler (2010, Chapter 12) for a comparative discussion of a recent cross-section of world economies. This work includes a discussion of the experience of the former Soviet countries as well as differences among African economies.

²Far 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 the Data Appendix for a detailed discussion.

increased demand for fine motor skills (in which women have a comparative advantage), then industrialization can generate an increase in women's relative wages that, by counteracting the income effect, could potentially be associated with a smaller drop in female labor force participation.

Last, I link the evolution of women's employment 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.³ 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, increasing in the early stages of the reallocation process and then declining, and a steady increase in the share of labor in services. I show that there are 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 services increases much more rapidly for women than for men. Interestingly, these gender differences are smaller for emerging economies.

Taken together, these findings seem to suggest that the timing of a country's transformation from agriculture to manufacturing 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. The cleaner, more precision manufacturing of today and the rapidly expanding service economy in some developing countries may be less likely to trigger norms against women's work.

The rest of the paper is organized as follows. Section 2 provides a brief review of the literature. Section 3 discusses data collection and presents the analysis for the historical sample of developed economies. Section 4 analyzes the cross-section of world's economies from 1950 to 2005. Section 5 documents gender differentials associated to the process of structural transformation. Finally, section 6 concludes.

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

³This 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.

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 early stages of economic development, growth initially lowers female participation in the (formal) labor market and only subsequently is associated with higher female employment. Because of this reason, Goldin (1995) points out, the positive relationship between women's status and economic development might be camouflaged and mixed 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?

A rich literature exists that 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 (cfr. Goldin (1990, 2006), Blau (1998) and Blau and Kahn (2007) for a comprehensive discussion of the factors affecting the trends in the US at different points in time; Blau et. al. (2010, Ch.11) for international comparisons and Lundberg (2010) for a discussion of the changing sexual division of labor with economic development.) In what follows I organize the discussion of the mechanisms underlying the U-shape based on the link between female labor force participation and structural transformation.

Women's presumably distinct influence on production across phases of economic development, ranging from agricultural to industrial and postindustrial, 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 they require. For example, as noted by Boserup (1970), plough cultivation is much more capital intensive than shifting cultivation, and it requires significant strength to be operated. Because of these requirements, she argues, when plough agriculture is practiced, men have an advantage in farming, and this might originate traditional gender role attitudes that affect the gender division of labor potentially lowering female labor force participation.⁴

The early transition to a mostly industrial economy is characterized by conflicting forces

⁴The Boserup's hypothesis is proved right in recent work by Alesina, Giuliano and Nunn (2012). They show that still today the descendants of societies that traditionally practiced plough agriculture, have less equal gender norms and female participation in the workplace, as well as in politics and entrepreneurial activities.

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 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 US agricultural areas, where the marginal products of females and children are low relative to those of adult men (which is, in and of itself a function of the agricultural technology used), 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 or traditional economy, the earlier will manufacturing evolve.

Thus it seems that with the increasing industrialization happening during the 19th century, there was initially a greater demand for (relatively unskilled) female labor. Why then female labor force participation decreasing during 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 disappear (becomes negative for steam power) once they control for establishment size, which is positively associated with the percent unskilled as in Goldin and Sokoloff (1982). Moreover, they argue that "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."

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 she would work only until her marriage. Stated differently, there was a stigma against married women working as manual laborers in factory-type work.⁵ Because of the changing nature of agricultural production, as well as the stigma attached to women's employment in manufacturing, the 'income effect' dominates during this phase of development, female labor force participation declines.

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

⁵The stigma towards a working married woman was strong. 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 yes.

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 the economy (see Goldin and Katz, 2008, and Katz and Margo, 2013) greatly facilitates 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).⁶ Other types of technological progress reinforced this process by affecting women's investment in human capital and fertility choices.⁷

This speculative discussion provides an incomplete representation of the vast literature on this topic. In Section 5 I will return to the link between structural transformation and female labor supply.

3 The American Experience in Comparative Perspective: Developed Economies.

This section uses data from sixteen high-income countries over the period 1890 to 2005 to trace out 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).⁸ The past experience of economically advanced countries is interesting. While they are similar to the US in many ways, they transitioned across stages of economic development at different points in time. Table 1 summarizes statistics on log 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, 2000. The first panel in the table reports statistics for the US followed by Belgium, the Netherlands, France, Spain, Sweden and the UK.⁹

The range of experiences spanned by these countries is quite heterogeneous. The UK had the highest (log) 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 "postin-

⁶Most 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.

⁷For 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, 2012.)

⁸See Data Appendix for details.

⁹Data on GDP per capita are from Maddison, 2010. Sectoral data are constructed and discussed in Herrendorf, Rogerson and Valentini (2012). The choice of this specific subset of economies in my sample is guided by the availability of sectoral value added shares from Herrendorf et al. (2013).

dustrial” value. The UK, in other words, was well ahead in its process of industrialization. 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 valued added share, 50 percent. The other countries were well behind in the process of structural transformation. In the US, the country with the third highest log GDP per capita in 1890, the employment share in agriculture was still quite high (42 percent) although the size of the sector as measured by its value added share was already down to 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 valued added share (46 percent). The remaining economies were still prevalently agricultural at the turn of the 20th Century. At least half of the economically active population in France, Spain and Sweden, the three countries with the lowest log 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. 2012). 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.¹⁰

Table 1 shows that, although these countries are comparable in terms of standards of living (and have been since the 1970s), 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 to market work is complicated by issues of measurement. 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. In this section I describe the data collection effort and measurement issues related to data comparability across countries and within a country over time. The end product of this data collection effort is a balanced panel of sixteen high-income economies for which data are available for most of the period. That is, for these countries, information by gender on both labor force

¹⁰The convergence of employment and valued added shares during economic development is yet another interesting regularity documented in Herrendorf et al. (2013).

participation, defined over the population aged 15 and above, and the distribution of workers across sectors of production spanning the entire 1890-2005 periods is consistently available. I will refer to this group of countries as the sample of “developed economies”. This sample 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 we have a starting data point for all the countries (except Australia and Denmark, for which 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 the countries in the sample.¹¹

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 the definition of labor force participation changed to include all individuals working for pay, unpaid family workers and also the unemployed seeking work during the survey week, that is, a definition consistent with the ILO construct of ‘economically active’ population. It is not surprising then that the International Historical Statistics (IHS) do 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, same as for the other countries in the sample. 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. I’ll return to this point in Section 3.2.¹²

¹¹ 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.

¹² Labor force participation rates for men aged 15 and above for years prior to 1940 were gathered from Pencavel (1986, Tables 1.1). Sector information for the US come from author’s calculations using IPUMS data and Table Ba670-687 and Table Ba688-705 in Carter et al., 2006. See Data Appendix for details.

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, also applies to other countries. For example, Costa (2000) discusses the existence of similar measurement issues related to historical data on female participation from France and Great Britain. In this paper I combine pre-WWII data on the economically active population by gender and by industrial group, as well as population counts by gender from the IHS (Mitchell, 1998) with similar post-WWII data from the ILO. Based on this data I construct a fairly long time series of labor force participation rates for women and men aged 15 and above.¹³ Far from being perfect, these data probably are as close as possible to being harmonized in terms of the definition of the employment construct. This is the ILO definition that classifies an individual as economically active if he/she is working for pay or profit at any time during the specific reference period, *whether she receives wages or not*. This definition of employment varies across countries, but it generally includes unpaid family farm workers, those in family business, 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.¹⁴ For the developed economies in my sample, recent versions of the ILO labor statistics report data starting with the 1940s. I also exploit the overlap between the ILO and the IHS statistics to detect inconsistencies in the data (see Data Appendix for details). As a consequence of this further check some of the 19th Century data points had to be dropped from the sample. The resulting panel of 16 countries is analyzed below.¹⁵ Comparisons between countries, however, must still be made with some caution owing to potential differences in classification, including differences in the definition of "economically active", still remaining.

¹³See Data Appendix for additional details. Unfortunately, because of data limitation, I cannot produce historical labor force statistics by age.

¹⁴See ILO report (2011) for a discussion of the difficulties collecting high quality data for women's labor force participation.

¹⁵For 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 19th 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 I use 1870 or 1880 as the first year in the sample.

3.2 Long-run trends in female labor force participation

Figure 1 displays female labor force participation rates for each of the sixteen 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, the year the definition of the employment construct changes. By year 2000 womens participation rate in the United States was around 60 percent. However, as argued by Goldin (1990) the 1890 figure for the U.S. 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 19th Century cities (see, Table 2.9 in Goldin, 1990, p. 44). The adjustment implies that female labor force participation in 1890 was as high as 26 percent, that is, as high as in 1940.¹⁶ It follows that, as argued by Goldin (1990, pg. 45), 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.¹⁷ 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 than they were in the past two decades of the Nineteen Century. This is consistent with the analysis in Costa (2000). Belgium also exhibits a U-shaped trend; female labor force participation hovers around 41 percent from 1890 to 1910, and then drops substantially and starts increasing again in the 1950s, reaching back to 41 percent only by the mid-1990s. Irelands 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 than Belgium. The female participation rate in Spain is the same, around 23 percent, in 1890 and in 1970. In Italy womens labor force

¹⁶Most 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.

¹⁷In other work Goldin (1986) shows that female labor force participation might have been even higher at the turn of the 19th century, thus implying an even stronger U-shape for female labor supply in the U.S.. Using data from 26 cities and business directories for Philadelphia, she estimates that in 1800 the labor force participation rate of female head of households (mostly widows) was around 65 percent, dropping to approximately 45 percent by 1860.

participation in year 2000 is still 13 percentage points lower than it was in 1900. Female labor supply is also U-shaped in Australia, the Netherlands, and Sweden, although the U is more muted. Finally, France and Finland both display a slightly N-shaped pattern of female labor supply. Female labor force participation in France is around 44 percent at the turn of the 20th Century, it peaks to 53 percent in 1920 and then drops and raises again during the course of the 20th century. By year 2000, however, the female labor force participation rate is still lower than it were in 1920.¹⁸ Finland's trend is very similar although the peak of the N occurs in 1940, twenty years later than in France.

3.3 Female labor force participation and economic development

I now turn to the discussion of the relationship between female labor force participation and GDP per capita for the historical sample of currently high-income economies.

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.

Table 2 reports the results of a quadratic regression of labor force participation against log GDP per capita and its square term. Column 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 in Table 2 displays the coefficients of the fitted U-shaped line shown in Figure 2. All coefficients are statistically significant at the one 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 allows to study the evolution of female labor force participation in individual countries as they grow. With country fixed effects the shape of the U is identified from variation in income within a country over time, rather than from the cross-country variation. At the same time, year fixed effects account 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

¹⁸Costa (2000, figure 2) documents the same pattern for France using a different data source.

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.¹⁹ Consistent with this hypothesis I find no clear relationship between male labor force participation and economic development. The estimates are very small and not statistically significant.²⁰

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 3.²¹ 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. That is, a quadratic can capture equally well the evolution of female labor force participation across countries and for individual countries as they grow. This is perhaps 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 (although this might be partly due to the fact that we have fewer country-year observations).

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. 2012). This peak corresponds to the onset of the service economy. Based on the estimates in Table 2 we can compare this value to the average trough of the U-shaped labor supply function. The lowest female labor force participation 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 indicates 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.

¹⁹With the caveat that in all countries there is a declining trend in male labor supply driven by increasing years of education and early retirement.

²⁰To mitigate concerns that the results might be driven by cross-country differences in employment classification, I also run a specification 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.

²¹Because the level of the U in the country 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.

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

Next I turn to the analysis of the full sample of advanced and emerging economies for the period 1950 to 2005.²² The purpose of repeating the analysis for this larger sample is twofold. First, I can further investigate 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, I can study whether the findings in the previous section apply more generally.

The results of this analysis are presented in Table 3. Column (1) reports the coefficients for the basic regressions with no controls, column (2) and (3) include year effects and column (4) to (6) include both year and country fixed effects. Following Goldin (1995), in column (3) and (5) I 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. 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 and developing economies (Feyer, Sacerdote and Stern, 2008). Thus, the second panel of Table 3 reports the results for women aged 45 to 59. This restriction, also used in 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.

The estimates in Table 3 confirm the results for the sample of developed economies. There is a significant U-shaped relationship between female labor force participation and log GDP per capita in every specification, though the U is more muted once we control for country fixed effects. This holds controlling for the gender gap in years of schooling and for both measures of female labor force participation although, 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). I find no evidence of a U-shaped labor supply for men. If anything, consistent with the 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 early OECD economies, that is, countries that joined the OECD before 1973, are excluded from the sample (see footnotes to Table 4 for the list

²²Labor force participation data were pulled directly from the ILO web page, see Data Appendix 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 from the ILO. Data on educational attainment by gender are from Barro and Lee (2010).

of countries). The results in column (1) to (3) and (6) 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. 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. Interestingly, the labor supply of older men does not decline with GDP as in the full sample and in the sample of developed economies. This indicates that, while being typical of economically advanced economies, early retirement is not a staple of emerging economies.²³

To ease the comparison of the results, Figure 3, Panel B and C, illustrates how the U-shape varies, within and across countries, based on the estimates for the 1950-2005 full sample (column 2 and 4, table 3) and the sample that excludes early OECD economies (column 2 and 4, table 4), respectively. The figure shows interesting 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 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. Moreover, the difference between the solid and the dash 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 this specification the bottom of the U corresponds to a female labor force participation rate of 0.34 observed when log GDP per capita equal to 8.4 (dashed line in Panel B) and to a female labor force participation rate of 0.42 observed when log GDP per capita equal to 9.4 (dashed line in panel C). Interestingly, for the sample that drops OECD economies the GDP level corresponding to the trough of female labor force participation roughly coincides with the peak of the manufacturing employment share.

The findings summarized in Figure 3 suggest 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

²³I also run a series of non-parametric regressions and find evidence of a U-shaped female labor supply for 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.

brawn intensive for countries that industrialize in the 20th century relatively to developed economies that went through the transition in the 19th century. For example, industrialization could be associated with an increased demand for fine motor skills (in which women have a comparative advantage), as it is the case with electronics in Asia. Alternatively, in some countries, as it is the case in India, the process of economic development could be associated with the expansion of the service economy where 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.²⁴

Before moving 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 women's absence as clerical workers might be driven by the fact that their education levels are low, not just relative to men, when the difference in education is highest. This 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 loses 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

²⁴A valid concern, raised by the discussant, is that there might not be enough within country variation to identify the U in this sample. The concern is partly mitigated by the fact that we observe at the very least four data points spanning 15 years for *all* the non-OECD countries in the sample. Further investigation of this pattern with a longer data set and including a larger set of controls is left for future work.

production of services is relatively intensive in the use of ‘brain’. Since men and women may have different endowments of these factors, the historical growth in the service sector may impact female participation to 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 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 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 suggests that industry structure affect women’s work.²⁵ 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, 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 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 during the early stages of the industrial revolution but home production gained importance with the decline in female labor market participation in the latter phases of the industrial revolution. 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 low relatively to men (for example, because of the adoption of the plough). 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 19th century, many, relatively large, establishments did not hire women or children. Moreover, since production in manufacturing was relatively intensive in the use of ‘brawn’, especially in the early phases of industrialization in the 19th century, women, especially married women, were more likely to drop out of the market.

This paper contributes to this literature by documenting gender differentials in the rela-

²⁵Of 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.

tionship between the process of structural transformation and economic development both historically and in a cross section countries. Note that using sectoral shares to study the evolution of women's work mitigates 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 data on the economically active population with the population counts.

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. Manufacturing behaves somewhat differently from the other two sectors: its employment share follows an inverted-U shape, that is, it is increasing for lower levels of development and decreasing for higher level of development.²⁶.

The first column in Figure 4 confirms these finding based on my 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.²⁷ 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 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 in services seems to grow more rapidly for women than for men.

To investigate whether these gender differentials are statistically significant we run 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. Table 6 reports the results for both the linear specification (column 1 to 3), and for the quadratic specification (column 4 and 5). As in the previous table, we progressively add controls for year effects (column 2 and 4) as well as country effects (column 3 and 5).

For the agricultural sector (panel A), we find that the employment shares drop for both genders but the rate of decline is slightly smaller for women than for men. This finding might be surprising in light of the discussion in section 2 but it comes from the fact that both shares are converging to zero as GDP per capita increases. Since men's employment

²⁶The same patterns are observed when using nominal value added shares.

²⁷Following the definition of the three sectors in Herrendorf et al. (2013), I include mining as well as the utilities sector in the manufacturing sector.

share in agriculture is initially higher than women's, its drop is also larger. The result of the quadratic regressions in column 4 and 5 confirm this pattern, although the gender differential is not statistically significant in this specification.

Panel B reveals strong gender differentials in the manufacturing sector. In the linear specification, male employment shares in manufacturing substantially increase with log GDP per capita, even when we control for both year and country effects, but the increase is much smaller, by about 8 log points, and statistically significant for females. The estimates for the quadratic specification substantially differ by gender. Consistent with Goldin and Sokoloff (1982) and Katz and Margo (2013), the female share in manufacturing initially rises more rapidly for women than for men but then curve 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. In column 1 to 3 we observe 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 starts rapidly shrinking).

Finally, I have also run regressions using the female share of total sector employment as a dependent variable. This share measures the female labor input intensity by sector. I find that, the share of female employed in agriculture and manufacturing are both negatively correlated with GDP per capita. For the manufacturing sector female intensity declines as the relative importance of the manufacturing sector in the overall economy increases (the increasing portion of the inverted-U). On the other end, the female-intensity in the service sector is positively correlated with GDP per capita. These two opposing forces contribute to generating the distinct U-shaped female labor supply. The sharp decline for agriculture and, especially, manufacturing would imply a lower demand for female labor input as GDP per capita grows, tracing the declining part of the U. The growth of the service economy, with its higher female intensity, would trace the increasing part of the U.

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 only a

few exceptions. I find that, the share of working women employed in agriculture drops more abruptly than that of men (at least for the quadratic specification). The gender gap (favorable to women) in service sector shares is larger than for the sample of developed economies. The predicted quadratic relationship between the female manufacturing share and income is higher in the sample of developed economies at all levels of economic development. Excluding early OECD economies from the sample does not substantially alter this picture. The most notable difference is that the female service sector share and the gender differential grow more rapidly than in the full sample.

6 Conclusions

This paper 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. Interestingly, the U-shape is more muted when early OECD economies are dropped from this sample. One possible explanation is that the stigma towards married women's participation to labor market, or women dislike for factory production, might be lower when manufacturing production is cleaner or less brawn intensive than it was in the 19th 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 can generate an increase in women's relative wages and thus it could potentially not be associated with a very large drop in female labor supply. The paper 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 (2012), 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. This is because 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 earning (Olivetti and Petrongolo, 2011). This could be a promising iden-

tification strategy in light of the fact that, 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) .

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. I have dropped from the sample countries for which the IHS statistics are inconsistent with the ones from the ILO. 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 during our period were redesigned 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.²⁸ 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 (updated in most cases) ILO statistics for the first year they became available, 1950 in most cases. We have also experimented with alternative data source selection rules. 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

²⁸See Mitchell (2008), notes to “B1 Economically Active Population by Major Industrial Groups.

[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 LFP 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.
- 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: From the second line for the year 1921 and below, Schleswig, which was acquired in that year, is included. In Stata, everything above the second line of 1921 is under the country "Denmark-S"
- 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 1970.²⁹⁾
- 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 Madera.
- 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.³⁰

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

Sector information for the US 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

²⁹⁾Wall Street Journal: <http://online.wsj.com/article/SB10001424052702303982504576423814268469244.html>
<http://www.faqs.org/faqs/genealogy/german-faq/part2/section-4.html#b>

³⁰⁾<http://www.svar.ra.se/winder.asp?uidObjectGUID=6587EEF0-3E98-4BE3-A404-E1938D3AEA68&uidRedirectGUID=9BCE8D60-1DC2-43AD-A33C-B758BAE5ACEE&strType=>

(ILO). The data provide labor force participation by age group for a harmonized panel of 196 countries.³¹ Labor force data for the full sample prior to 1990 were pulled directly from the Economically Active Population 1A Tables from the ILO website.³²

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 Full Sample ILO data discussed above but limited the sample to women aged 45 to 59. The LFP data was then merged with the ILO Economically Active Population 1E Tables, which contains information on occupation by industry and gender.

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.”

³¹For a complete write up of the methodology used see: <http://laborsta.ilo.org/applv8/data/EAPEP/v6/ILOEAPEPmethodology2011.pdf>

³²See <http://laborsta.ilo.org/STP/guest>

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”.

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Table 1: GDP per capita and sectoral shares, selected Developed countries, 1890-2000

Year	Log 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	8.129	0.427	0.272	0.301	0.190	0.350	0.460
1950	9.165	0.109	0.340	0.551	0.068	0.357	0.575
2000	10.257	0.024	0.204	0.772	0.010	0.218	0.773
Belgium							
1890	8.140	0.321	0.415	0.264	0.110	0.440	0.451
1947	8.476	0.140	0.517	0.343	0.082	0.415	0.503
2000	9.936	0.023	0.220	0.757	0.013	0.244	0.743
France							
1886	7.713	0.470	0.257	0.273	0.273	0.390	0.337
1954	8.685	0.263	0.355	0.382	0.130	0.480	0.390
2000	9.924	0.039	0.212	0.749	0.028	0.229	0.743
Netherlands							
1889	8.161	0.365	0.316	0.319	0.208	0.321	0.471
1947	8.527	0.187	0.356	0.458	0.130	0.370	0.500
2000	10.006	0.034	0.194	0.771	0.026	0.249	0.724
Spain							
1887	7.369	0.694	0.160	0.147	0.336	0.280	0.384
1950	7.691	0.496	0.255	0.249	0.287	0.270	0.443
2000	9.656	0.063	0.294	0.642	0.044	0.292	0.664
Sweden							
1890	7.478	0.581	0.234	0.184	0.304	0.271	0.424
1950	8.820	0.208	0.420	0.372	0.112	0.425	0.463
2000	9.938	0.032	0.285	0.683	0.012	0.306	0.681
United Kingdom							
1891	8.288	0.157	0.436	0.407	0.090	0.410	0.500
1950	8.845	0.053	0.454	0.493	0.050	0.470	0.480
2000	9.921	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 (2012).

Table 2: Female Labor Force Participation and Economic Development
Developed Country Sub-Sample, 1890-2005

	Female			Male
	(1)	(2)	(3)	(4)
Log GDP per capita	-1.178*** (0.251)	-1.030** (0.388)	-0.846* (0.460)	-0.192 (0.478)
Log GDP per capita squared	0.072*** (0.014)	0.064** (0.023)	0.053* (0.026)	0.013 (0.027)
Constant	5.159*** (1.107)	4.431** (1.637)	3.699* (1.971)	1.661 (2.074)
<i>N</i>	240	240	240	230
<i>R</i> 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 appendix for a full description.

Notes: Robust standard errors in parenthesis are clustered at the country level. *p<.1, ** p<.05, *** p<.01. Years are at 5 year intervals. If multiple data points exist the values are averaged over the 5 year period.

Table 3: Female Labor Force Participation, Gender 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*** (0.224)	-0.797*** (0.216)	-1.126*** (0.195)	-0.336* (0.178)	-0.351** (0.167)	-0.034 (0.057)
Log GDP per capita squared	0.063*** (0.013)	0.049*** (0.013)	0.066*** (0.012)	0.020* (0.010)	0.021** (0.010)	0.004 (0.003)
Log of Male to Female Yrs School			-0.171*** (0.036)		-0.010 (0.032)	
Constant	4.596*** (0.935)	3.592*** (0.907)	5.146*** (0.827)	1.264* (0.719)	1.340** (0.673)	1.027*** (0.229)
<i>N</i>	871	871	871	871	871	871
<i>R</i> ²	0.116	0.290	0.375	0.863	0.863	0.744
45-59 years old						
Log GDP per capita	-1.328*** (0.257)	-1.072*** (0.250)	-1.437*** (0.232)	-0.436** (0.184)	-0.354* (0.181)	0.110** (0.051)
Log GDP per capita squared	0.080*** (0.015)	0.064*** (0.015)	0.083*** (0.014)	0.025** (0.011)	0.020* (0.011)	-0.006* (0.003)
Log of Male to Female Yrs School			-0.197*** (0.045)		0.051 (0.054)	
Constant	5.930*** (1.070)	4.763*** (1.047)	6.488*** (0.983)	1.620** (0.752)	1.208 (0.753)	0.523** (0.204)
<i>N</i>	824	824	824	824	824	824
<i>R</i> 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 appendix for a full description. Education data: Barro-Lee (2010).

Notes: Robust standard errors in parenthesis are clustered at the country level. *p<.1, ** p<.05, *** p<.01.

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

Table 4: Female Labor Force Participation, Gender 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** (0.321)	-0.539* (0.288)	-0.901*** (0.263)	-0.039 (0.231)	-0.057 (0.217)	0.023 (0.068)
Log GDP per capita squared	0.045** (0.020)	0.032* (0.018)	0.051*** (0.016)	0.002 (0.014)	0.003 (0.013)	0.000 (0.004)
Log of Male to Female Yrs School			-0.172*** (0.038)		-0.015 (0.032)	
Constant	3.544*** (1.287)	2.648** (1.175)	4.320*** (1.081)	0.135 (0.910)	0.233 (0.850)	0.789*** (0.270)
<i>N</i>	669	669	669	669	669	669
<i>R</i> ²	0.052	0.260	0.355	0.879	0.879	0.770
45-59 years old						
Log GDP per capita	-1.026*** (0.375)	-0.754** (0.334)	-1.150*** (0.312)	-0.150 (0.241)	-0.092 (0.243)	0.043 (0.065)
Log GDP per capita squared	0.061** (0.023)	0.043** (0.021)	0.064*** (0.019)	0.008 (0.014)	0.004 (0.015)	-0.002 (0.004)
Log of Male to Female Yrs School			-0.195*** (0.047)		0.050 (0.056)	
Constant	4.753*** (1.496)	3.585*** (1.358)	5.398*** (1.285)	0.550 (0.954)	0.240 (0.963)	0.796*** (0.252)
<i>N</i>	627	627	627	627	627	627
<i>R</i> 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 appendix for a full description. Education data: Barro-Lee (2010).

Notes: Robust standard errors in parenthesis are clustered at the country level. *p<.1, ** p<.05, *** p<.01.

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, United Kingdom, United States.

Table 5: The Relationship Between Female Clerical Workers and Education, Population Aged 45-59

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

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

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

*p<.1, ** p<.05, *** p<.01. Years are at 5 year intervals. If multiple data points exist the values are averaged over the 5 year period.

Table 6: Sectoral Employment Shares by Gender and GDP per capita
Developed Countries Sub-sample, 1890-2005

	(1)	(2)	(3)	(4)	(5)
Agriculture					
Log GDP per capita	-0.221*** (0.012)	-0.330*** (0.047)	-0.359*** (0.073)	-1.091** (0.481)	-0.810* (0.438)
Female x Log GDP	0.047** (0.020)	0.047** (0.020)	0.047** (0.021)	-0.137 (0.312)	-0.137 (0.317)
Log GDP per capita squared				0.045 (0.026)	0.029 (0.027)
Female x Log GDP squared				0.010 (0.018)	0.010 (0.018)
Female	-0.494** (0.198)	-0.494** (0.202)	-0.494** (0.205)	0.313 (1.362)	0.313 (1.384)
Constant	2.217*** (0.120)	3.053*** (0.353)	3.363*** (0.595)	6.255** (2.159)	5.113** (1.788)
<i>N</i>	510	510	510	510	510
<i>R</i> ²	0.719	0.766	0.838	0.777	0.841
Manufacturing					
Log GDP per capita	0.049*** (0.014)	0.122*** (0.039)	0.265*** (0.045)	1.402*** (0.315)	0.844*** (0.214)
Female x Log GDP	-0.087*** (0.009)	-0.087*** (0.009)	-0.087*** (0.010)	-0.564*** (0.125)	-0.564*** (0.127)
Log GDP per capita squared				-0.074*** (0.017)	-0.035** (0.014)
Female x Log GDP squared				0.027*** (0.007)	0.027*** (0.007)
Female	0.624*** (0.089)	0.624*** (0.091)	0.624*** (0.092)	2.718*** (0.539)	2.718*** (0.548)
Constant	-0.061 (0.129)	-0.630** (0.293)	-1.857*** (0.373)	-6.081*** (1.428)	-4.253*** (0.848)
<i>N</i>	510	510	510	510	510
<i>R</i> ²	0.546	0.669	0.844	0.713	0.851
Services					
Log GDP per capita	0.172*** (0.008)	0.208*** (0.034)	0.094* (0.047)	-0.311 (0.255)	-0.033 (0.301)
Female x Log GDP	0.040** (0.017)	0.040** (0.018)	0.040** (0.018)	0.701** (0.266)	0.701** (0.271)
Log GDP per capita squared				0.030* (0.015)	0.006 (0.018)
Female x Log GDP squared				-0.037** (0.015)	-0.037** (0.015)
Female	-0.130 (0.172)	-0.130 (0.176)	-0.130 (0.179)	-3.031** (1.155)	-3.031** (1.173)
Constant	-1.156*** (0.067)	-1.423*** (0.254)	-0.506 (0.386)	0.826 (1.061)	0.140 (1.256)
<i>N</i>	510	510	510	510	510
<i>R</i> 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.

See appendix for a full description.

Notes: Robust standard errors in parenthesis are clustered at the country level. *p<.1, ** p<.05, *** p<.01.

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

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*** (0.007)	-0.214*** (0.008)	-0.106*** (0.024)	-0.606*** (0.123)	-0.408** (0.183)
Female x Log GDP	0.008 (0.012)	0.008 (0.012)	0.008 (0.013)	-0.524*** (0.175)	-0.524*** (0.182)
Log GDP per capita squared				0.024*** (0.007)	0.017* (0.010)
Female x Log GDP squared				0.032*** (0.010)	0.032*** (0.011)
Female	-0.123 (0.116)	-0.123 (0.117)	-0.123 (0.122)	2.076*** (0.713)	2.076*** (0.744)
Constant	2.179*** (0.066)	2.164*** (0.069)	1.283*** (0.170)	3.787*** (0.528)	2.596*** (0.801)
<i>N</i>	1360	1360	1360	1360	1360
<i>R</i> ²	0.649	0.654	0.828	0.683	0.837
Manufacturing					
Log GDP per capita	0.099*** (0.005)	0.107*** (0.005)	0.095*** (0.014)	0.448*** (0.082)	0.688*** (0.090)
Female x Log GDP	-0.073*** (0.006)	-0.073*** (0.006)	-0.073*** (0.006)	0.155* (0.081)	0.155* (0.085)
Log GDP per capita squared				-0.020*** (0.005)	-0.035*** (0.005)
Female x Log GDP squared				-0.014*** (0.005)	-0.014*** (0.005)
Female	0.509*** (0.049)	0.509*** (0.050)	0.509*** (0.052)	-0.434 (0.331)	-0.434 (0.345)
Constant	-0.546*** (0.043)	-0.579*** (0.045)	-0.468*** (0.101)	-1.987*** (0.341)	-2.999*** (0.392)
<i>N</i>	1360	1360	1360	1360	1360
<i>R</i> ²	0.509	0.549	0.754	0.598	0.790
Services					
Log GDP per capita	0.120*** (0.005)	0.107*** (0.007)	0.011 (0.018)	0.159* (0.090)	-0.280* (0.154)
Female x Log GDP	0.065*** (0.011)	0.065*** (0.011)	0.065*** (0.011)	0.369** (0.163)	0.369** (0.170)
Log GDP per capita squared				-0.003 (0.005)	0.017* (0.009)
Female x Log GDP squared				-0.018* (0.010)	-0.018* (0.010)
Female	-0.386*** (0.100)	-0.386*** (0.100)	-0.386*** (0.104)	-1.642** (0.662)	-1.642** (0.691)
Constant	-0.633*** (0.047)	-0.585*** (0.054)	0.185 (0.137)	-0.800** (0.376)	1.403** (0.669)
<i>N</i>	1360	1360	1360	1360	1360
<i>R</i> 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 appendix for a full description.

Notes: Robust standard errors in parenthesis are clustered at the country level. *p<.1, ** p<.05, *** p<.01.

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

Figure 1: Trends in Female Labor Force Participation, 1890-2005

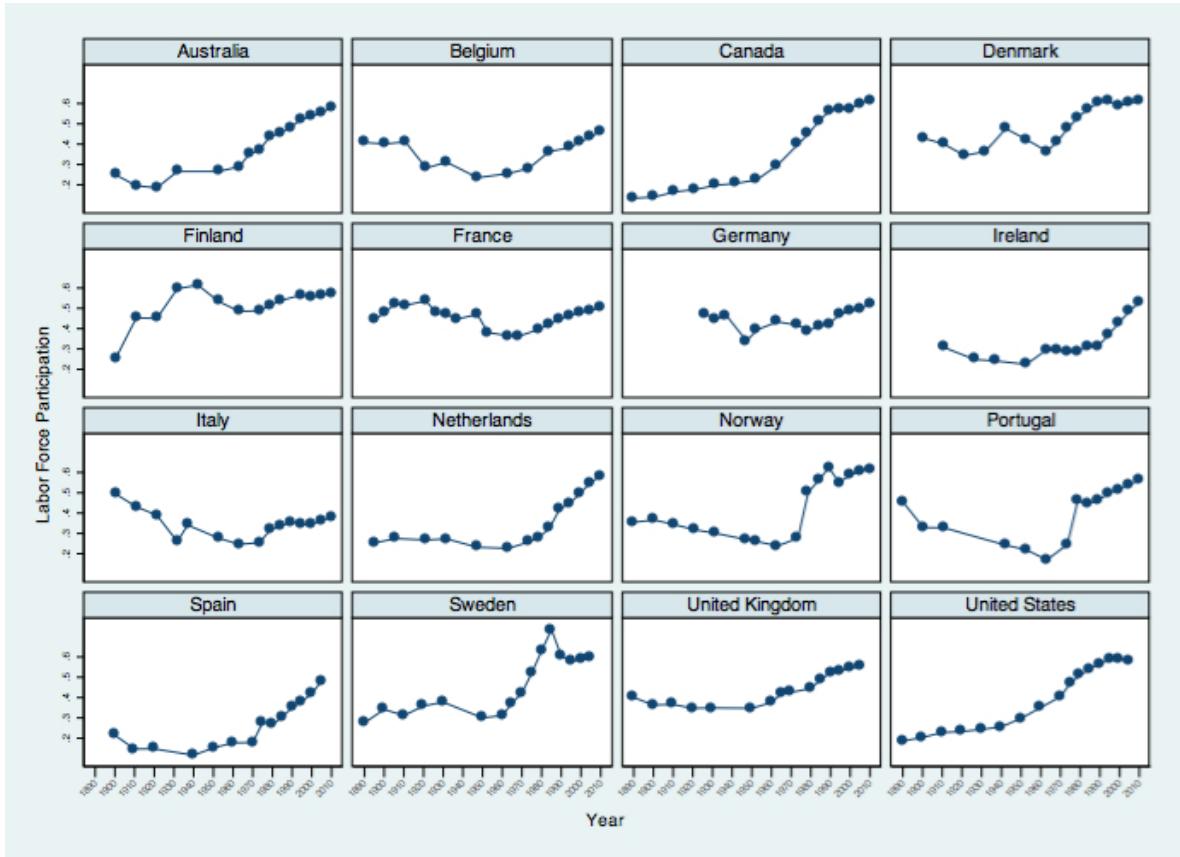


Figure 2: Female Labor Force Participation and Economic Development: 1890-2005

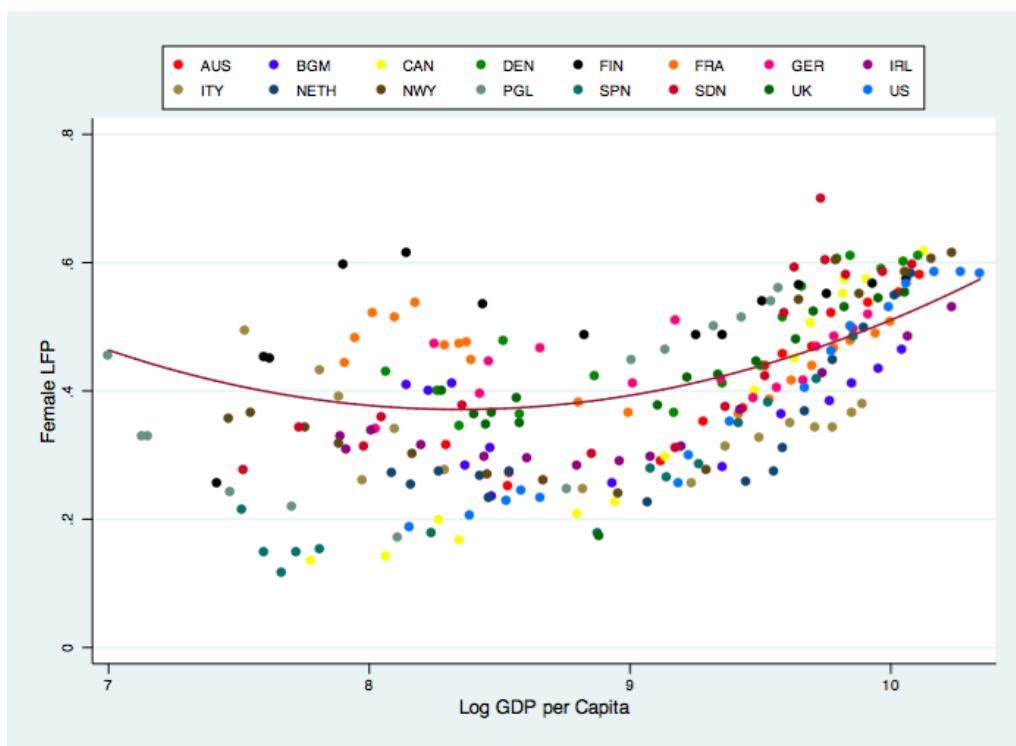
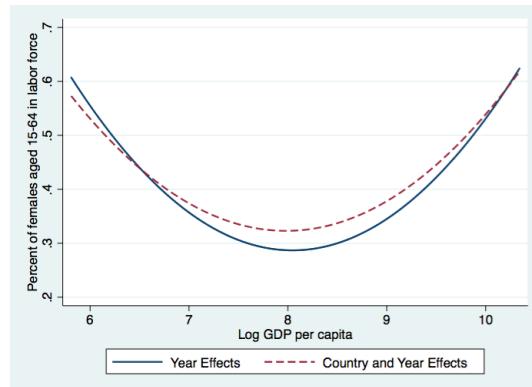
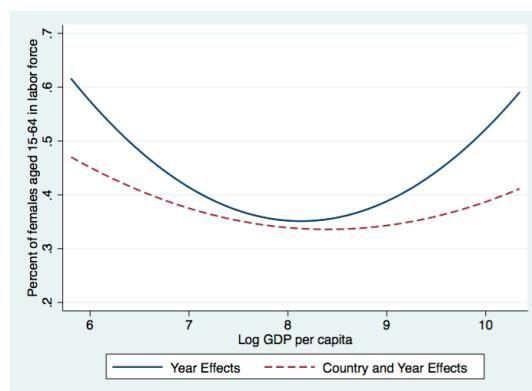


Figure 3: The U-shaped female labor supply within and across countries

Panel A: 1890-2005, Developed Economies



Panel B: 1950-2005, Full Sample



Panel C: 1950-2005, Excludes OECD countries

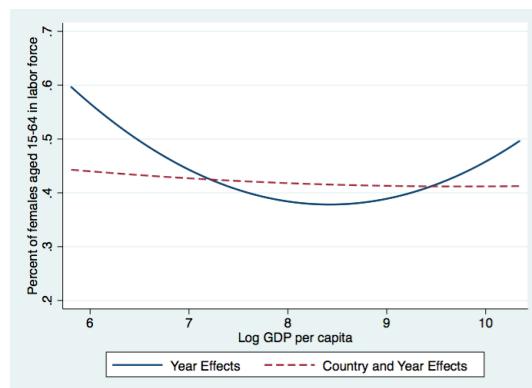


Figure 4: Sectoral Employment Shares by Gender: Developed Economies, 1890-2005

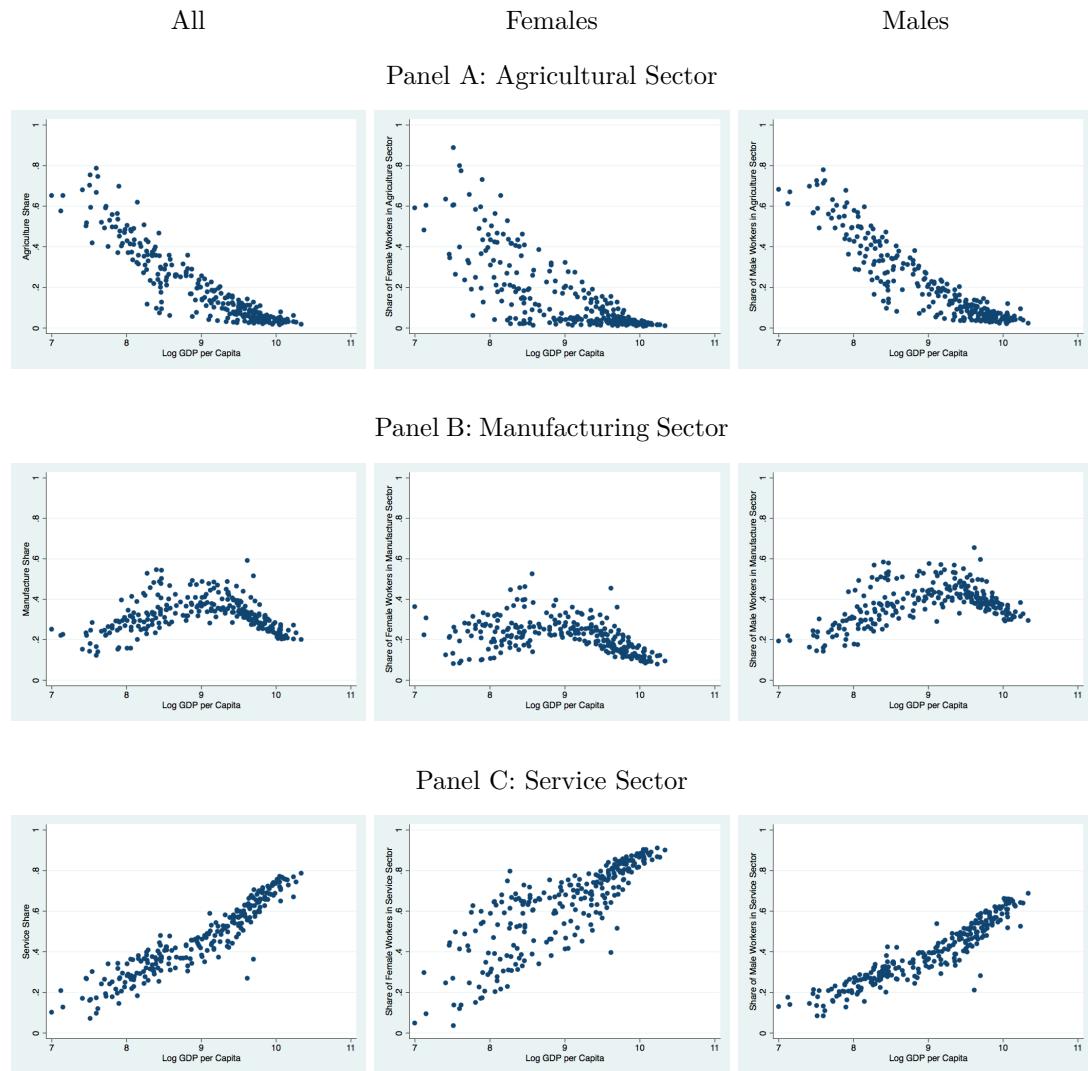


Figure 5: Sectoral Employment Shares by Gender: Full Sample, 1950-2005

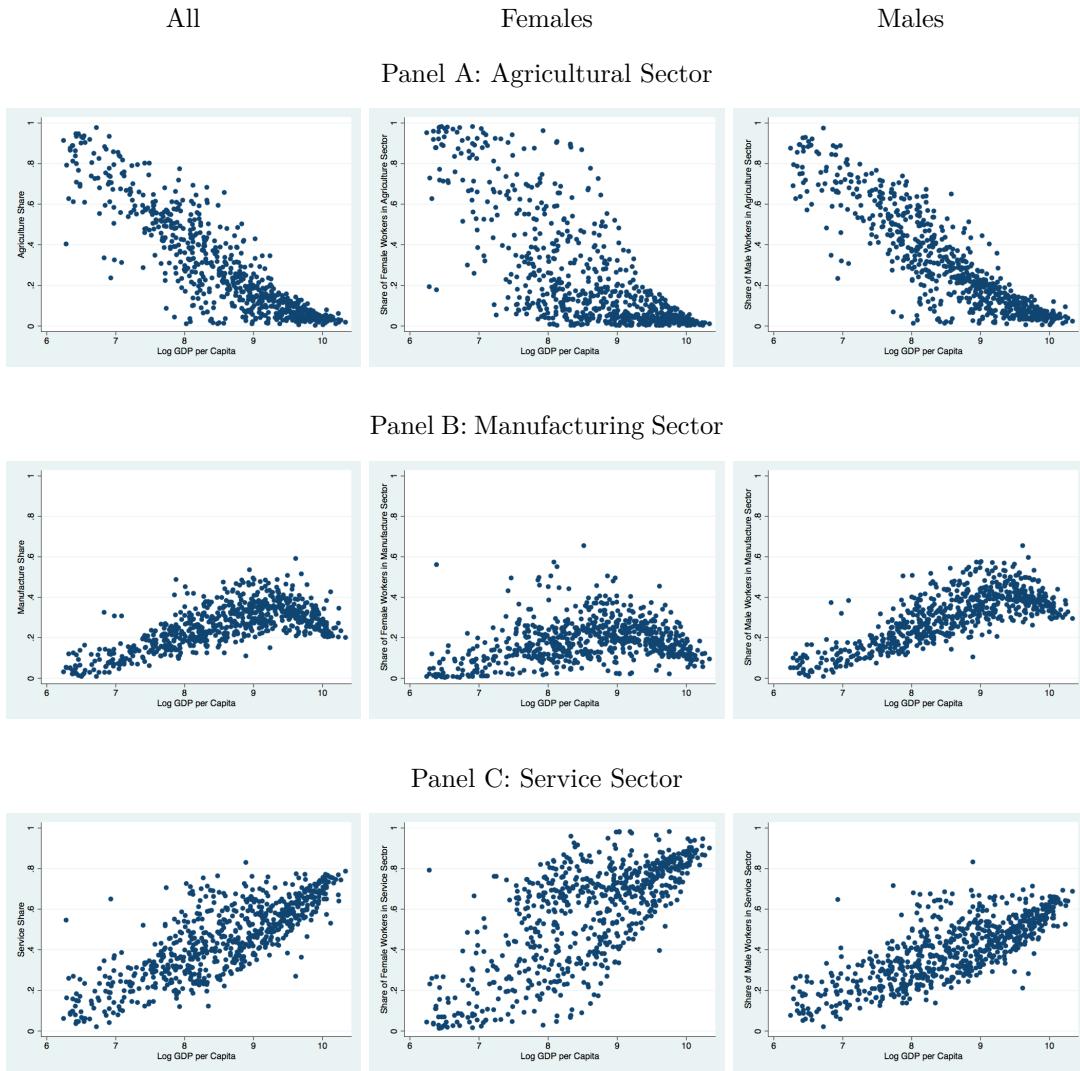


Table A.1: Labor Force Participation by Gender: Developed Economies, 1890-2005

	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						0.466						0.242	0.116			0.256
1945		0.235		0.476	0.614	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

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		0.696	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	0.128	0.138	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
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
Mexico			0.198			0.185		0.267		0.369	0.407	0.414
Mongolia						0.088		0.126		0.571	0.583	0.586
Morocco							0.32		0.865	0.864	0.877	0.884
Mozambique	0.081								0.364	0.358	0.368	0.421
Namibia									0.503	0.499	0.531	0.589
Nepal			0.596			0.343		0.452		0.829	0.841	0.843
Netherlands			0.226			0.258	0.327	0.315	0.368	0.548	0.612	0.677
New Zealand	0.284	0.297	0.277		0.262	0.338	0.366	0.414	0.627	0.636	0.667	0.714
Nicaragua						0.221	0.206	0.319		0.364	0.358	0.421
Niger							0.072			0.273	0.341	0.395
Nigeria						0.277				0.37	0.404	0.431
Norway	0.288		0.238			0.277		0.608	0.68	0.698	0.741	0.756
Orman									0.192	0.217	0.248	0.276
Pakistan						0.086	0.071	0.084	0.103	0.144	0.146	0.17
Panama	0.242		0.247			0.303		0.334	0.379	0.429	0.472	0.499
Paraguay			0.264			0.243		0.231		0.562	0.535	0.551
Peru			0.232			0.209		0.302	0.483	0.483	0.587	0.621
Philippines			0.272			0.35	0.243	0.468	0.487	0.493	0.509	0.521
Poland	0.582		0.619			0.665		0.66		0.622	0.59	0.583
Portugal	0.219		0.17			0.275		0.46	0.463	0.598	0.616	0.654
Puerto Rico			0.253			0.261	0.273	0.298	0.278	0.368	0.401	0.424
Qatar									0.281	0.451	0.425	0.423
Romania		0.693			0.696		0.681			0.61	0.643	0.596
Russia										0.696	0.645	0.664
Rwanda								0.941		0.891	0.879	0.88
Sao Tome and Principe								0.398		0.398	0.401	0.419
Saudi Arabia										0.155	0.167	0.171
Senegal						0.587			0.62	0.637	0.647	0.655
Serbia/Montenegro/Kosovo										0.493	0.515	0.538
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
Singapore	0.224					0.311	0.364	0.438	0.489	0.553	0.561	0.586
Slovak Republic										0.673	0.62	0.632
Slovenia										0.575	0.633	0.634
Somalia							0.375			0.367	0.374	0.382
South Africa			0.264			0.387		0.399	0.445	0.38	0.438	0.477
Spain	0.153		0.177			0.204	0.33	0.318	0.351	0.434	0.484	0.535
Sri Lanka		0.303			0.235	0.325		0.299	0.368	0.391	0.404	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	0.371	0.443	0.514	0.559	0.722	0.793	0.789	0.755	0.757	0.768
Switzerland			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
Tanzania					0.712			0.837		0.89	0.891	0.895
Thailand		0.814			0.734	0.437	0.736	0.762	0.744	0.704	0.752	0.793
Togo							0.527			0.704	0.752	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
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	0.956	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	0.796	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			0.874			0.800			0.674	0.681	0.676	0.671
Morocco					0.970		0.882		0.832	0.833	0.815	0.800
Mozambique	0.979								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	0.845
Nicaragua				0.911		0.795	0.787		0.815	0.854	0.856	0.835
Niger						0.937			0.922	0.901	0.896	0.914
Nigeria			0.880						0.791	0.744	0.702	0.643
Norway	0.936	0.826			0.749		0.845	0.852	0.812	0.838	0.830	0.819
Orman									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	0.932	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						0.927			0.667	0.726	0.727	0.752
Somalia									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			0.860				0.828		0.790	0.790	0.779	0.772
Tanzania		0.895		0.877	0.745		0.864	0.875	0.885	0.855	0.852	0.850
Thailand						0.804		0.847	0.836	0.825	0.825	
Togo									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	0.802	0.867	0.907

Table A.3: Sectoral Shares by Gender: 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																
<i>Sector: Agriculture</i>																
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
<i>Sector: Manufacturing</i>																
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
<i>Sector: Services</i>																
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		0.728
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		
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	0.662	0.825	0.890	0.886	0.882	
Panel B: Males																
<i>Sector: Agriculture</i>																
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
<i>Sector: Manufacturing</i>																
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.			

Table A.4: Sectoral Shares by Gender: Full Sample, 1950-2000

	1950		1960		1970		1980		1990		2000	
	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		0.099
Latvia			0.939	0.009	0.886	0.010	0.859	0.008				0.169
Liberia			0.189	0.503	0.388	0.064			0.133	0.335	0.125	0.202
Libya											0.919	0.012
Lithuania					0.955	0.017	0.957	0.012			0.122	0.256
Malawi	0.771	0.073	0.736	0.074	0.680	0.094	0.386	0.202	0.222	0.278		
Malaysia	0.522	0.106	0.403	0.075	0.372	0.110	0.182	0.456	0.168	0.493	0.082	0.281
Mauritius			0.329	0.137	0.121	0.221	0.166	0.254	0.100	0.188	0.066	0.201
Mexico			0.433	0.248			0.357	0.339	0.032	0.483	0.421	0.110
Moldova					0.940	0.016	0.970	0.008			0.567	0.188
Morocco												
Mozambique	0.951	0.010										
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										
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			0.214	0.542	0.166	0.548	0.145	0.570	0.154	0.537		
Czechoslovakia					0.211	0.445	0.121	0.443	0.095	0.391	0.074	0.347
Denmark	0.281	0.399	0.730	0.120	0.595	0.141	0.386	0.266	0.222	0.276		
Dominican Republic			0.650	0.184	0.651	0.177	0.567	0.170	0.411	0.219	0.234	0.117
Ecuador			0.581	0.151	0.497	0.189	0.431	0.224	0.328	0.251	0.272	0.249
Egypt			0.717	0.159	0.661	0.135	0.529	0.214	0.359	0.269	0.316	0.248
El Salvador										0.088	0.410	
Estonia										0.088		
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										
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					0.538	0.036	0.510	0.034	0.445	0.029	0.381	0.021
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				