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Segregated Integration: Recent Trends in the Austrian Gender Division of Labor

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Abstract

Using micro data from the Austrian Labor Force Survey, this paper explores how decreases in the gender differential in participation rates together with increasing differentials in the incidence of part-time jobs and stable or rising levels of occupational segregation by gender affect the gender division of labor. To so so, we propose an index for the gender division of labor based on the Mutual Information index. Our main results show that the gender division of labor is very stable along the 16-year period. This is so because although the rising female labor force participation reduces the gender division of labor, increases in gender differences in the incidence of part-time jobs and increases in occupational segregation result in greater division of labor across genders. These results are robust to alternative definitions of economic activity and labor market involvement and can also be found after controlling for educational levels and fields.

Keywords: gender segregation, female labor force participation, part-time jobs.

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1 Introduction

In the last decades, Western societies have witnessed how an increasing number of families reported a second income and more and more women found jobs in the labor market and did not leave these jobs after marriage. By the end of the 20th century, this profound social transformation (a "revolution" in England 2010's words) meant that educational achievements—in terms of years of education—and economic and political rights had been equalized across genders (Anker 1998, Goldin, Katz, and Kuziemko 2006). It would be tempting to presume that with the gradual elimination of the legal barriers, the increasing social acceptance of gender egalitarianism, and the greater need for specialized labor, Western societies would be rapidly converging into a system in which equal rights translated into equal work across genders.

However, the division of labor that has emerged presents a picture that is more complex than that portrayed in the egalitarian ideal. Gender differences persist in educational fields and in types of vocational training received (Anker 1998, Charles and Bradley 2009). Although large increases in female market work are associated with decreases in time devoted to home production by women and with increases in mens' hours of non-market work. Still, gender differences in time spent on non-market work remain substantial (Anxo, Mencarini, Pailhé, Solaz, Tanturri, and Flood 2011, Aguiar and Hurst 2007). Increasing female participation rates in general and increasing access to higher positions of women are associated with stable levels of occupational segregation (Charles 2011, Dolado, Felgueroso, and Jimeno 2003, Mandel and Semyonov 2006, Bettio and Verashchagina 2009).[1]

[1] Using time use datasets Aguiar and Hurst (2007) report that in 2003 US female hours in non-market work still exceed those of mens' by 68.03 percent, or 90 minutes per day. In fact, some sociologists stress how little the "gender revolution" since the 1960s have affected gendering in the personal realm (see England 2010 and the references therein).

Most empirical studies on gender differences in the labor market have not attempted to evaluate the effect of these trends in paid *and* unpaid work on the overall gender differentials both in work and in economic status. On the one hand, traditional studies on occupational segregation by gender focus on gender differences in occupational choices within those who work in a job, ignoring that still for a large proportion of women work is classified as *unpaid work*. On the other hand, most studies on female labor participation decisions do not attempt to evaluate to what extent these decisions are related to occupational segregation. One exception is Cohen (2004)'s study of occupational segregation by gender in the US, that includes as working those who are "keeping house" and codes *keeping house* as an occupation. Mora and Ruiz-Castillo (2005) exploit a well-known property of the Mutual information index, M, to quantify the contribution of the increasing female labor force participation on an index of gender segregation along human capital characteristics, labor market participation status, and occupation/industry choice.[2] More recently, Guinea-Martín, Mora, and Ruiz-Castillo (2013) apply this methodology to consider the gender segregation of the entire population in working age and disaggregate the analysis by their age and educational composition.

In this paper, we follow the same approach of Mora and Ruiz-Castillo (2005) and Guinea-Martín, Mora, and Ruiz-Castillo (2013) to propose a segregation index for the gender division of labor that is based on the M index of segregation. Using micro data from the Austrian Labor Force Survey, we consider a classification of 11 alternative economic activities that includes, among other, *working part-time and also doing homework*, *working and in maternal/paternal leave*, and *working in part-time and studying*. We first show how during the 1995:2010 period the Austrian labor market experiences a large decrease in the gender differential in labor force participation rates that does not come together

[2]The M index of segregation was first proposed by Theil and Finizza (1971) in the context of racial school segregation. For a characterization of M, see Frankel and Volij (2011).

with a fall in occupational segregation by gender. Moreover, we find a moderate decrease in the gender differential in the rate of managerial jobs within White-collar occupations and a large increase in gender differentials in part-time job rates. These somewhat opposing findings highlight that the increased participation of women into paid work in Austria is only an incomplete signal from a complex process of segregated integration. The M index of segregation that—in addition to gender differences in occupational choice—captures differences in economic activity and labor market involvement. We refer to this index as the index for the gender division of labor. We then study the effects of the participation decision, the full-time vs. part-time nature of the jobs, and the role of education on the gender division of labor.

Our main results show that occupational segregation is a major but not unique component of the gender division of labor, its contribution being no less than 40 percent but no more than 60 percent of the gender division of labor. In contrast, the contribution of gender differences in labor market involvement ranges between one fourth and one third. Regarding the recent trends in the Austrian labor market, we find that although the rising female labor force participation reduces the gender division of labor, this effect is counteracted by increases in gender segregation because of gender differences in the incidence of part-time jobs and increases in occupational segregation. These results are robust to alternative definitions of economic activity and labor market involvement and can also be found after controlling for educational levels and fields.

The rest of the paper is organized as follows. Section 2 is devoted to a discussion of the recent developments of the Austrian labor market in view of the increasing female participation rate and the stable or slightly increasing levels of occupational segregation by gender. Section 3 describes the measurement framework while Section 4 presents and discusses the results. Section 5 concludes.

2 The Austrian Segregated Labor Market

Austria stands out as an interesting illustration with its relatively early integration of women in the workplace and its current high participation rates, high levels of female part-time work, and persistent levels of occupational segregation. In 1910, nearly 39 percent of the Austrian labor force were women—one of the highest female participation rates in the world. However, less than one-quarter of those employed in industry were women (Münz and Neyer 1986). By the end of the 20th century, the level of occupational segregation had not decreased significantly. Summary index measures present a picture of persistently high levels of segregation in the presence of increasing participation rates in Austria (Anker 1998, Kreimer 2004, Bettio and Verashchagina 2009, Steinmetz 2012).

According to the *International Labor Organization* (Anker 1998), around 61 percent of all employed persons in Austria would have to change their occupations in order to reach an equal distribution of women and men in all occupations. National calculations show slightly lower figures, but the overall picture is the same: summary index measures present a picture of persistently high levels of segregation in the presence of increasing participation rates in Austria (Kreimer 2004).

This persistence in the levels of occupational segregation does not imply that the segregated structure of economic activity is the same as it was a few decades ago. The emergence of a group of women who fully devote to market activities traditionally associated with men and cover household production using the new market services provided by other women is a driving factor towards gender equality. These women successfully pursue professional careers even as managers and bosses, and contribute to decreases in gender differentials in managerial jobs, the incidence of part-time jobs, and occupational choice.

However, as emphasized by some scholars, exclusion from the labor market is also giving way to demarcation through so-called "female jobs" (Charles and Grusky 2005). Several new sources of segregation counteract the desegregation effects of the emergence of women fully devoted to market activities (Steinmetz and Handl 2003).

First, a large proportion of men are reluctant to compromise their own careers by devoting sufficient time on household work (Statistik Austria 2009). Hence, many women with a family have to choose between sacrificing their full-time careers or outsourcing part of the domestic work with services provided through the market. This choice is conditioned by social conventions, as the strategy of devoting most of non-leisure time to market activities is perceived as acceptable for men, while is met with criticisms when a female, especially if she is a young mother, follows it (Wernhart and Neuwirth 2007). Clearly, housewives who witness their reservation wages fall below market wages enter the labor market, but many of them only flexible part-time jobs in occupations most similar to the economic activity traditionally carried out within the family. In practice, flexibility fosters female occupational concentration into special jobs—the so-called "pink ghettos"—and leads to increases in gender differentials in the incidence of part-time and managerial jobs (Steinmetz and Handl 2003). These new channels of segregation have costly effects. For example, part-time jobs usually offer lower wages, less career opportunities, and fewer possibilities to switch to other jobs because of narrow specialization (Heintz, Nadai, Fischer, and Ummel 1997). Additionally, part-time labor participation directly leads to vertical segregation between men and women (Kreimer 2004 and the references therein).[3]

Second, some activities traditionally regarded as belonging to the sphere of the family

[3]For international studies on flexibility, "pink ghettos", the costs of part-time jobs, and vertical segregation, see, among others, Walby 1997, Anker 1998, Charles 1992, Watts and Rich 1992, Hakim 1993, Rubery and Fagan 1995, Grimshaw and Rubery 1997, Charles and Grusky 2005, and Elliott 2005.

increasingly take place through market operations.[4] As these activities are still conducted by women, occupational segregation increases via a larger concentration of working women in paid jobs related to domestic services. Those newly working women tend to concentrate in clerical, retail and health-related occupations. Hence, new markets for atypical activities traditionally done within the family or a close social network—such as the informal daily care of somebody's else children in your private home—does mechanically result in higher female participation and higher horizontal segregation. Vertical segregation can be reinforced by this new form of atypical employment and their associated higher unemployment risks (Pernicka and Stadler 2006, Tálos 1999).

Finally, the increasing female participation rates alter the pool of women choosing occupations, with an increase in the share of women whose preferences are arguably most different from those of men. Women may seek to find jobs where many women work as a result of their own preferences. Experimental studies show that women are more risk-averse and more averse to competition than are men (see Croson and Gneezy 2009, and the references therein), and there is evidence that many workers prefer to work with their own sex (see, for example, Cockburn 1991). Additionally, many empirical studies report discrimination practices in hiring and promotion that can work as informal barriers to gender equality and influence preference formation at the early stages of the life cycle.[5]

In sum, the recent evolution of occupational segregation and the female labor force participation in Austria are each incomplete measures for a description of the gender

[4]The employer could be private or, like in the Scandinavian welfare state model, public. In the latter case, the welfare state provides working places for mothers in the service sector (Melkas and Anker 1998, Leira 1993). Somewhat related with the substitution scenario, domestic work could simply be salaried. Clearly, this policy would have different results in terms of distribution and exclusion effects than the substitution scenario considered here. See Meyer (1997) and Robeyns (2007) for a critical view on salary-for-domestic-work policies.

[5]See Altonji and Blank 1999 and Harrison and List 2004 for recent reviews and Weichselbaumer (2003) for a field experiment on hiring discrimination against lesbians in Austria.

division of labor. An encompassing measurement framework for the gender division of labor should ideally accommodate all sources of labor division systematically. Assessing separately the evolution of each manifestation of gender division—unemployment, participation, part-time incidence, occupational segregation—is informative, but cannot provide a definite answer to the evolution of the gender division of labor.

In Table 1 we show gender differences in the Austrian labor market using some selected years from the 1995 : 2010 yearly data of the European Union Labor Force Survey (LFS), a large household sample survey providing information on labor participation, economic activity, and other socioeconomic characteristics.[6] We focus on individuals living in private households of age between 15 and 74.[7] We report the first and the last year of the period as well as 2003 and 2004 because there are changes in methodology between 2003 and 2004 that affect, among other variables, the classification of occupations.[8] Hence, in the following we discuss trends within the two periods.

Consider first the evolution of occupational segregation as measured by two popular indexes, the index of Dissimilarity and the Gini index. Both indexes give a picture which is consistent with a stable or slightly increasing level of occupational segregation by gender. The index of Dissimilarity slowly increases from 0.49 to 0.56 (or a 1.67 percent increase per annum) in the period 1995:2003 and from 0.52 to 0.53 in the period 2004:2010. The annual increases for the Gini index are a 1.09 percent during the first period and a 0.36 percent during the second period.[9]

[6]See Table A.1 in the the Appendix for the disaggregated information for all the years.

[7]This is the largest age interval that starts at the beginning of the working cycle and defines a population split close to 50/50 by gender. This population target is interesting for three reasons. First, it allows us to recover gender differentials between old people who consider themselves as inactive and old people who consider themselves as doing homework. Second, as will be shown below, it ensures that the M index of segregation is normalized and that results cannot be driven by changes in the share of women in the population.

[8]See Kytir and Stadler (2004) for details.

[9]These figures are of the same order of magnitude as figures published by Bettio and Verashchagina (2009).

For all remaining variables in Table 1, we present percentage point differences between female and male rates. A feature frequently found in gender segregation studies is that female employment is more concentrated than male employment. This is also the case in Austria during the period: while, on average, 58.93% of women work in the top ten largest female occupations (out of 109 occupations), only 41.66% of men work in the top ten male occupations. Gender differentials in this concentration measure increase from 14.19 percentage points in 1995 to 18.19 in 2003 and from 15.42 in 2004 to 16.87 in 2010.[10]

Table 1: Recent Trends in Gender Differences

Austria. Selected Indicators & Years.

	1995	2003	2004	2010
Indexes of Occupational Segregation				
Index of Dissimilarity	0.49	0.56	0.52	0.53
Gini Index	0.66	0.72	0.68	0.70
Gender Differentials (in percentage points)				
Job share in 10 largest occupations	14.19	18.19	15.42	16.87
Participation	-19.59	-15.43	-13.64	-11.63
Unemployment	0.97	-0.79	-0.00	-0.35
Part-time jobs	22.17	28.72	31.98	32.67
White-collar occupation	20.13	24.68	22.79	23.71
Managers in White-collar occupations	-13.70	-13.82	-11.42	-10.79

Note: Own calculations from Austrian data of the EU Labor Force Survey, selected years. Gender differentials are the difference between the female and the male percentage rate. Shares in 10 largest occupations are obtained selecting the 10 occupations with the largest share of jobs by gender. Part-time workers are those who usually work less than 30 hours per week. An occupation is White-collar if it belongs to 1-digit ISCO-88 major occupational categories 1 to 6, and it is Blue-collar otherwise. Managers in White-collar occupations reflect the proportion of managerial jobs among the White-collar category.

The Austrian female participation rate in 1995 is 54.15 and gradually increases around

[10] Biases in the design of the occupational classification may explain part of this feature.

5 percentage points to become 60.95 in 2010. In contrast, the male participation rate barely declines from 73.74 to 72.58. As a result, the gender differential in the participation rate drops from 19.59 percentage points (in favor of men) to 11.63 (an overall 40.66 percent decrease).

Austrian unemployment levels are low relative to those in other OECD countries. Female unemployment levels range from 4.13 percent to 5.60 percent and gender differentials are very low and stable. The business cycle perhaps affects male unemployment levels more than females, so the gender differential becomes negative when the economy enters recession and turns positive in economic expansions. Absolute differences between gender unemployment rates are, however, always smaller than 1.1 percentage points.

The vast majority of part-time workers—defined, in line with the OECD criterion, as workers who usually work less than 30 hours per week—are women: the share of women among those in part-time starts at 84.36% in 1995, peaks at 87.21 percent in 2001 and decreases until 80.66 percent in 2010. The proportion of women in part-time steadily increases throughout the entire period, from 25.82 percent in 1995 to 41.22 percent in 2010. This increasing importance of part-time work among women results in an increase in the gender differentials in part-time rates: from 22.17 percentage points in 1995 to 32.67 percentage points in 2010 (an overall 38.75 percent increase).

White-collar occupations are becoming more prevalent both for women and men: from 66.78 percent and 46.66 percent in 1995 to 78.54 percent and 54.83 percent in 2010, respectively.[11] The gender differential has remained, nevertheless, remarkably similar along the entire period, with the only exception of 1996. While, on average, around

[11] We define a White-collar occupation as any occupation within 1-digit ISCO-88 major occupational categories 1 to 6 and a blue-collar occupation otherwise. Occupations in major groups *Skilled agricultural and fishery workers*, *Craft and related trades workers*, *Plant and machine operators and assemblers*, and *Elementary occupations* are then classified as Blue-collar while all the other major groups are classified as White-collar.

75 percent of women work in White-collar occupations, only around 51 percent of men do so. The Blue- vs. White-collar division of occupations is only a rough proxy for horizontal occupational segregation. Using the ISCO 88 classification of occupations, an alternative notion that incorporates a vertical dimension is the proportion of managerial jobs among the White-collar category. On average, 72.06 percent of managers in White-collar occupations are men. Fluctuations around this average are small: the largest absolute deviation taking place in 1996 with 2.22 percentage points. The proportion of women in White-collar occupations who have a managerial job is 6.73 percent in 1995 and 6.27 in 2003. Then, it becomes 5.31 in 2004 and 5.22 in 2010. The proportion of men in managerial posts follows a somewhat similar pattern in the first period but decreases slightly more in the second period. Hence, the gender differential in managerial jobs is stable before 2004 and decreases only at the end of the 15 year period.[12]

To summarize, during the 1995:2010 period the Austrian labor market experiences a large decrease in the gender differential in labor force participation. In consonance with findings in other countries, this large decrease does not come with a noticeable fall in segregation. We find a moderate decrease in the gender differential in the rate of managerial jobs within White-collar occupations and no clear trends in the gender differentials in the rate of Blue-collar occupations and in the unemployment rates. In contrast, we find a large increase in gender differentials in part-time job rates which is of the same size than the decrease in gender differentials in participation rates.

These findings expose two opposing drivers of the gender division of labor. On the one hand, the increasing female participation rate suggests that women are advancing their

[12]The gender wage gap corrected for human capital differences is also an indicator of vertical segregation. Empirical studies for Austria show even fewer changes towards a reduction of segregation. The male income advantage in particular seems to be a constant factor that persists, despite the continuous trend of the majority of women reaching higher qualification levels (Grünberger and Zulehner 2009, Böheim, Hofer, and Zulehner 2007).

integration into paid work. On the other hand, the increasing gender differential in the incidence of part time, and the slightly increasing occupational segregation signals that this integration in the labor market occurs within a process that contradicts gender equality. Moreover, the slight convergence in managerial jobs suggests that behind the increase in female participation rates for all women hides heterogeneity across women: at the very least, some women accept part-time work without an essential change in their career prospects, while another group of women devote full-time to paid work with the prospect of advancing towards managerial jobs. We can then characterize the increase participation of women into paid work in Austria as a basic signal from a complex process of segregated integration, where the final effect on the overall gender division of labor is, a priori, not possible to predict. The need for an appropriate measurement framework for the gender division of labor is thus clear and we devote the next section to present it.

3 A Measurement of the Gender Division of Labor

3.1 Measures of Independent Sources of Gender Division

Most indexes of occupational segregation by gender capture the tendency of women and men to be distributed unequally across occupations (Flückiger and Silber 1999). The notion of the gender division of labor expands the notion of occupational segregation to capture—in addition to gender differentials in occupational choice—gender differences in the decision to participate in the labor market, in the exposure to unemployment, in the tendency to work in part-time jobs, as well as in the tendency to choose predominantly female occupations.

One could think of using any traditional index of occupational segregation as a measure for the gender division of labor. The novelty would be to replace the original set of occupations by a new set of categories which extends the original ones to include both their interaction with job characteristics—such as Part-time vs. Full-time status of the job—and non-paid economic activities—such as domestic work. For example, to investigate part-time segregation, a traditional index such as the Gini or the Dissimilarity index could be applied to a new classification of jobs based on all combinations between the Full-time vs. Part-time status of the jobs and the original occupational categories. To our knowledge, only Cohen (2004) extends the set of occupational categories to include *keeping house* as an additional occupational category and employs the index of Dissimilarity to study the evolution of segregation in the US.

Yet, our aim is to obtain not only a measure of the gender division of labor, but also an evaluation of the independent contributions to the gender division of labor from all its sources: occupational segregation, labor market participation, and the gender differentials in the tendency to work in part-time jobs and in the tendency to choose predominantly female occupations. Consider, as an illustration, the case of occupational segregation and the division of Blue- and White-collar occupations. An empirical question that may concern us is how much of occupational segregation can be attributed to the Blue- vs. White-collar division as opposed to the detailed occupational categories. Mora and Ruiz-Castillo (2010) show that this empirical question is best answered when the segregation index is strong decomposable.[13]

In their characterization of the Mutual information index M, Frankel and Volij (2011) further prove that the M index is the only index among those that they review that

[13]For any partition of the organizational units into major groups, *Strong Decomposability* requires that the index can be decomposed into a between term that captures segregation along the major groups, and a within term that is a weighted average of the segregation indexes computed within each major group, with the weights equal to the corresponding demographic shares of the major groups.

satisfies *Strong Decomposability*—which they refer to as *Strong School Decomposability*. As we are not aware of any other index that is strong decomposable, M is the natural candidate to conduct our analysis.

The M index is, however, neither composition invariant—i.e. it changes with the proportion of women in the population—nor normalized—it attains its maximum value when men and women are completely segregated. Composition invariance is a property advocated by many researchers of segregation because changes in an index that is not composition invariant capture changes in how men and women are distributed across occupations together with changes in the overall female share. However, this concern should not affect us, as our target population is all individuals living in private households of age between 15 and 74. This is, as stated in footnote 7, the largest age interval that starts at the beginning of the working life and that defines a population split close to 50/50 by gender. Hence, in this case using a composition variant index such as the M index cannot create any problem of interpretation.

Indexes are usually normalized between 0 and 1, with 0 associated with perfect integration and 1 associated with a situation in which men and women are completely separated. Although bounded by above, the M index is generally not normalized because to reach maximum segregation it additionally requires that the groups have the lowest entropy (Mora and Ruiz-Castillo 2010). However, in our case this requirement simply implies that men and women each represent 50 percent of the total population, a requirement met by construction of the population of interest. Therefore, in our application, the M index is normalized in the sense that its limits can be interpreted as those of normalized indexes.[14]

[14]The upper limit of the index is the minimum value between $log\,(N)$ and $log(G)$ where N is the number of organizational units and G is the number of groups. In applications of occupational segregation by gender, the M index is thus bounded between 0 and $log\,(2) \simeq 0.69315$.

For these reasons, we present the recent trends in the Austrian gender division of labor and its sources using the decompositions of the M index.

3.2 The M index for the Gender Division of Labor

Increasing female participation suggests that women are advancing their integration into the labor market. The simultaneous slightly increasing occupational segregation signals that this integration in the labor market contradicts a scenario in which men and women have the same economic roles. Moreover, increasing gender differences in part- vs. full-time jobs and decreasing differences in managerial jobs suggest that the changes in the labor market are complex and do not fit any simple scenario. In this subsection we propose to exploit the decomposability properties of the M index to evaluate the overall effect of these opposing and contradicting trends on the gender division of labor.

Segregation along Economic Activities: Assume, for simplicity, that individuals can be either employed along J occupations or doing housekeeping.[15] Code *housekeeping* as the $J+1$ activity and let p_j be the proportion of workers in activity $j = 1, ..., J, J+1$. Each worker is either male, m, or female, f. Let p_j^m and p_j^f be the proportions of men and women in activity j, respectively. If an individual is drawn randomly from the pool of individuals, the expected information of learning the worker's occupation is measured by her or his entropy $E_J = \sum_{j=1}^{J+1} p_j log\left(\frac{1}{p_j}\right)$(Kullback, 1959). After learning that the worker is a woman, her entropy becomes $E_J^f = \sum_{j=1}^{J+1} p_j^f log\left(\frac{1}{p_j^f}\right)$. Let E_J^m denote the entropy when the worker is known to be a man. If men and women are segregated into different occupations, gender reduces the expected information from learning the

[15] In the empirical section, we consider up to five major active categories within which individuals choose an occupation, five inactivity categories, and unemployment status.

individual's occupation, so that $\left(E_j - E_j^f\right) \geq 0$ and $\left(E_j - E_j^m\right) \geq 0$. The M index of segregation along a classification of $J+1$ activities, M_J, equals these reductions in expected information averaged over female and male workers,

$$M_J = p^f \left(E_J - E_J^f\right) + p^m \left(E_J - E_J^m\right) \tag{1}$$

where p^f and p^m are the female and male shares in the working population, respectively.

The Gender Division of Labor: Consider, again for simplicity, that jobs can be classified into part-time and full-time jobs.[16] The division of jobs along the Full- vs. Part-time divide adds a new dimension to the set of occupations over which segregation takes place. To accommodate this new dimension, we extend the set of organizational units from the original $J+1$ occupational categories to a new set which includes all interactions between the original occupations and the full-time vs. part-time status of the job.[17] Therefore, we now have $2J+1$ categories. In this setup we define the M index for the gender division of labor as the M index over the expanded set of $2J+1$ activitites: $M_{GDL} = p^f \left(E_{2J} - E_{2J}^f\right) + p^m \left(E_{2J} - E_{2J}^m\right)$.

Strong Decomposability: Let M_{FPLF} be the M index of gender segregation where the only organizational units are *working part-time*, *working full-time*, and *housekeeping*. Note that these three organizational units define a partition of the original $2J+1$ classification of activities. Hence, by *Strong Decomposability*:

[16] In the Results section we consider five levels of labor market involvement: no involvement, less than 12 hours a week, between 12 and 21 hours, between 22 and 30 hours, and more than 30 hours a week.

[17] Note that in practice it is possible that some individuals devote part-time to paid work and part-time to housekeeping, while other individuals may devote only part-time to work. Although we take this possibility into account in the empirical section, we abstain to consider these cases here for simplicity.

$$M_{GDL} = M_{FPLF} + M_{2J}^{W(FPLF)} \tag{2}$$

where $M_{2J}^{W(FPLF)}$ can be interpreted as how much the gender division of labor would fall if the only source of segregation was gender differences in the incidence of part-time jobs and housekeeping. Hence, the ratio $\frac{M_{2J}^{W(FPLF)}}{M_{GDL}}$ is a measure of the importance of the contribution of occupational segregation after controlling for gender differences in labor force participation and the incidence of part-time jobs. Note that similar decompositions to equation (2) can be obtained from any partition of the original classification of activities. Hence, in the next section we also examine the isolated role of the increasing female labor force participation and the role of the Blue- vs. White-collar divisions of occupations.

Traditional notions of Occupational Segregation: In traditional studies on occupational segregation, there is no distinction between part- and full-time jobs and only the working population is considered in the analysis. Let M_0 denote the traditional index of occupational segregation using as organizational units the original J occupations over the working population. Using the decomposability properties of the M index it can be shown that:

$$M_{GDL} = M_{PR} + p_{work} M_0 + M_{2J}^{W(PR,occ)} \tag{3}$$

where M_{PR} is the mutual information index which captures to what extent men and women differ in their participation rates, p_{work} is the proportion of individuals who choose to work in the labor market, and $M_{2J}^{W(PR,occ)}$ is a within term that can be interpreted as how much the gender division of labor would decrease if there were no gender differences in labor market involvement. Hence, $\frac{p_{work} M_0}{M_{GDL}}$ captures the contribution of occupational to the gender division of labor after controlling for gender differences in labor force

participation.

4 Results

4.1 The Gender Division of Labor

We first consider six economic activity categories. Active individuals are classified into full-time work (i.e. more than 30 hours a week), part-time work, and unemployment. Inactive individuals are classified as either students, other inactive young (younger than 50 years of age), and other inactive old. Due to changes in the design of the survey, from 1998 onwards we can consider nine economic activity categories. Two additional categories are added for active individuals: working part-time and also doing homework, and working and in maternal/paternal leave. For inactive individuals, we additionally identify individuals who declare to do only homework. From 2005 on, we can distinguish those in part-time work who declare as main economic status to be students and those who are inactive and young who live in a household where there are kids under five (for a total of 11 categories). In addition, we expand the definition of labor market participation and consider five levels of labor market involvement: no involvement, less than 12 hours a week, between 12 and 21 hours, between 22 and 30 hours, and more than 30 hours a week.

We identify the recent evolution of the gender division of labor by computing the M index using as organizational units the 3-digit classification of occupations interacted with the labor market involvement as well as the economic activity categories. We first compute the index using the six-category economic activity variable. We refer to this index as $GDL1$. From 1998 we also compute the index using the nine-category

economic activity variable and refer to is as $GDL2$. Finally, from 2005 we compute the index using the 11-category economic activity variable. This index, that we refer to as $GDL3$, employs a total of 1304 categories to compute gender differences in the division of labor. Each of these indexes capture not only by how much men and women differ in their occupational choices, but also by how much they differ in their economic activity statuses and their labor market involvement.

Table 2: Recent Trends in the Gender Division of Labor (GDL)

Mutual Information Indexes. Selected Years.

	1995	1997	1998	2003	2004	2005	2010
$GDL1$ (using 433 categories)	16.38	18.91	18.80	18.80	16.35	17.04	16.89
$GDL2$ (using 995 categories)			23.31	22.71	19.78	20.15	19.66
$GDL3$ (using 1304 categories)						20.66	20.22
GDL(Gender Division of Labor)	20.84	24.05	23.90	23.29	20.29	20.66	20.22
of which							
$FPLF$ (Full- vs. Part-time & LFP Status)	5.47	5.51	5.54	6.08	6.22	5.91	5.66
LF (Labor Force Participation Status)	2.09	1.90	1.79	1.31	1.00	1.05	0.76
$FPwLF$ (Full-vs. Part-time within LFP Status)	3.37	3.61	3.76	4.77	5.22	4.87	4.89
LMI (Labor Market Involvement)	5.42	5.34	5.36	5.85	6.13	5.87	5.62

Note: Own calculations from the Austrian datafile of the EU Labor Force Survey, selected years. Mutual Information indexes are computed using natural logarithms and multiplied by 100. $GDL1$ is computed using as organizational units the 3-digit ISCO 88 classification of occupations interacted with the labor market involvement as well as the 6 economic activity classification. $GDL2$ and $GDL3$ are computed similarly but with the 9 and 12 economic activity classifications, respectively. GDL is computed by backwards extrapolation of $GDL3$ using the growth rates of $GDL2$ and $GDL1$ for the $1998:2005$ and the $1995:1998$ periods, respectively. $FPLF$ is computed using as organizational units the interaction of labor force status (i.e. whether the individual is working or not) and–in case the individual works–whether it does so in full or part-time work. LF is computed using as organizational units whether the individual is working or not). Full-vs. $FPwLF$ is $FPLF$ minus LF. Labor Market Involvement, LMI, is computed using as organizational units the five categories of labor market involvement (i.e. no involvement, less than 12 hours a week, between 12 and 21 hours, between 22 and 30 hours, and more than 30 hours a week).

The first three rows in Table 2 report $GDL1$, $GDL2$, and $GDL3$ for a selected number of years.[18] While $GDL2$ and $GDL3$ are very similar for the years in which both indexes can be computed, $GDL1$ is, on average, 18.80 percent lower than $GDL3$. Thus, we

[18]See the Appendix for the results for all years.

obtain an alternative measure of the gender division of labor for the entire period by backwards extrapolation of $GDL3$ using the growth rates of $GDL2$ and $GDL1$ for the $1998:2005$ and the $1995:1998$ periods, respectively. In the following, we will use this measure, that we refer to as GDL, as our measure for the gender division of labor. We see that GDL increases from 20.84 to 23.90 in the $1995:2003$ period. In the $2004:2010$ period, it first increases from 20.29 in 2004 to 21.19 in 2007 and then it decreases back to 20.22 in 2010. Annual changes for the entire period $1995:2010$ (excluding the change between 2003 and 2004) are, on average, less than one percent. Since 1996, the average is -0.22 percent.

4.2 Labor Market Involvement

How much of the evolution of GDL is driven by the convergence in labor force involvement across genders? To answer this question, we first compute for each year an M index of segregation using as organizational units the interaction of labor force status (i.e. whether the individual is working or not) and–in case the individual works–whether it does so in full or part-time work. This index, which we refer to as $FPLF$, uses information that has not suffered significant changes in methodology along the entire period, so that no important level breaks between 2003 and 2004 or any other two years take place. In the sixth row of Table 2, we report the values of $FPLF$ for a selected number of years. Since the organizational units used to compute $FPLF$ are a partition of the organizational units in GDL, the latter can be decomposed into the former plus a within term that can be interpreted as the gender division of labor that cannot be attributed to the decision to work, and the decision to work full or part time. Consider, for example, the $FPLF$ index in 1995. Its value, 5.47, implies that most of the gender division of labor, $\frac{20.84-5.47}{20.84}x100 = 73.75$ percent, cannot be attributed to the labor force participa-

tion decision. By 2003, this share is only marginally larger: 73.89 percent. From 2004 to 2010, the decision to participate decreased its importance in the gender division of labor by 2.6 percentage points.

Based on the evolution of $FPLF$, it would be wrong to conclude that around 25 percent of the gender division of labor results from the decision to participate in the labor market. Changes in $FPLF$ capture changes in gender differentials both in the decision to participate and also in the incidence of part time. Thus, to isolate the effect of gender differentials in the incidence of part-time jobs we compute an M index that uses as organizational units whether the individual has a job or not. This index, which we refer to as LF, is reported in the seventh row of Table 2. The strong decomposability properties of the mutual information index ensures that, for each year, the difference between $FPLF$ and LF–reported in row eight in Table 2–can be interpreted as the level of segregation in $FPLF$ that is independent from the labor force participation decision. The increasing female participation rates have a substantial effect on gender segregation across labor force status as LF decreases from 2.09 in 1995 to 0.76 in 2010 (a 63.64 percent decrease). However, these sizable changes hardly matter when it comes to the evolution of GDL, as LF represents only 10.03 and 3.76 percent of GDL in 1995 and 2010, respectively. In contrast, segregation arising exclusively from the full vs. part time division of jobs increases from 3.37 in 1995 to 4.89 in 2010, or from 16.17 to 24.18 percent of GDL, respectively. Hence, the reduction of segregation arising from the convergence in labor force participation rates has been at least partly offset by the effects of increasing differentials in the incidence of part time work. These conclusions do not change when, instead of $FPLF$, we construct an M index of involvement in the labor market by directly using as organizational units the five categories in our definition of labor market involvement. The results for the selected years are reported in the last

row of Table 2: using $FPLF$ is almost exactly equivalent to using the more flexible definition of labor market involvement.

4.3 Occupational Segregation

How important is occupational segregation as a driver of the gender division of labor? Exploiting the decomposability properties of the M index, we can give a precise answer also to this question. To do so, we first compute an M index of segregation using as organizational units the interaction of labor market involvement and the three alternative economic activity variables, $EALMI1$, $EALMI2$, and $EALMI3$. We proceed similarly to the GDL case and extrapolate $EALMI3$ backwards using the growth rates of $EALMI2$ and $EALMI1$ for the 1998:2005 and the 1995:1998 periods, respectively. We refer to the index for the full period as $EALMI$ and report its values for selected years in the sixth row of Table 3.

Since the organizational units used to compute $EALMI$ are a partition of the organizational units in GDL, the latter can be decomposed into the former plus a within term that can be interpreted as the gender division of labor that can be attributed to gender differences in occupational segregation which are independent from economic activity status and labor market involvement. We report this contribution in row nine in Table 3. Results show that occupational segregation is a major component of the gender division of labor. Across all years and periods, this contribution ranges between 42 and 53 percent of GDL. We find increases in both periods. While in the first period this increase takes place only in 1996 with tiny decreases afterwards, in the second period

Table 3: *GDL* AND OCCUPATIONAL SEGREGATION

Mutual Information Indexes. Selected Years.

	1995	1997	1998	2003	2004	2005	2010
GDL (Gender Division of Labor)	20.84	24.05	23.90	23.29	20.29	20.66	20.22
of which							
$EALMI1$	6.58	6.61	6.61	6.89	6.53	6.41	5.95
$EALMI2$			11.56	11.14	10.33	9.86	9.04
$EALMI3$						10.23	9.48
$EALMI$	11.99	12.05	12.03	11.60	10.75	10.23	9.48
$EALMI$ & Blue vs. White Collar	12.82	13.58	13.64	13.43	12.23	12.01	11.27
Contribution of Occupational Segregation to *GDL*							
Within $EALMI$	8.85	12.00	11.87	11.69	9.54	10.43	10.74
Within $EALMI$ & Blue vs. White Collar	8.02	10.47	10.26	9.86	8.06	8.65	8.95
$p_{work}M_0$ (As traditionally measured)	10.77	14.03	13.88	14.19	12.15	13.30	13.76
M_0 (Occupational Segregation)	16.90	22.27	21.84	22.00	19.27	20.53	20.64

Note: Own calculations from Austrian data of the EU Labor Force Survey, selected years. Indexes are computed using natural logarithms and multiplied by 100. *GDL* is reproduced from Table 2. $EALMI1$ is computed using as organizational units the interaction of labor market involvement as well as the 6 economic activity classification. $EALMI2$ and $EALMI3$ are computed similarly but with the 9 and 12 economic activity classifications, respectively. $EALMI$ is computed by backwards extrapolation of $EALMI3$ using the growth rates of $EALMI2$ and $EALMI1$ for the $1998:2005$ and the $1995:1998$ periods, respectively. $EALMI$ & Blue vs. White Collar adds the Blue- vs. White collar division in the taxonomy of the organizational units and is computed backwards in a similar way as $EALMI$. The contribution of Occupational Segregation to *GDL* within $EALMI$ (& Blue vs. White Collar) equals *GDL* minus $EALMI$ (& Blue vs. White Collar). The contribution of Occupational Segregation to *GDL* as traditionally measured is the the product of the proportion of individuals who work, p_{work}, times occupational segregation, i.e. the index using as organizational units the 3-digit ISCO 88 classification of occupations, M_0.

we observe a steady gradual increase in the contribution from $\frac{9.54}{20.29}x100 = 47.02$ percent in 2004 to 53.12 percent in 2010.

It is sometimes argued that the gender division along labor market involvement likely translates into fewer career opportunities for part-timers and can be, at least, partially associated with occupational choices along major White and Blue collar divisions. To further isolate the contribution of occupational segregation from this effect, we report in row ten of Table 3 the contribution within $EALMI$ and Blue vs. White Collar.[19] We do not see an overturn of the two previous findings. First, occupational segregation is

[19]By construction, this is a partition of ISCO-88 occupational categories and, thus, cannot add a new dimension of gender segregation to the notion of occupational segregation.

still a major component of the gender division of labor (ranging from 38 to 44 percent of GDL). Second, we find increases in its contribution to GDL in both periods.[20]

So far we have obtained the contribution of occupational segregation on GDL controlling for economic activity status and the labor market involvement decision. Traditional studies of occupational segregation, however, do not distinguish between full-time and part-time jobs and compute occupational segregation for the entire working population using as organizational units the occupational categories. How does the traditional studies of occupational segregation relate to our GDL index? Equation (3) shows that, within the measurement framework of the mutual information index, the contribution of occupational segregation as traditionally measured is the product of the proportion of individuals who work times the index of occupational segregation. We report this contribution in row eleven of Table 3.

Focusing on occupational segregation provides an inaccurate description of the gender division of labor. In particular, the contribution computed by multiplying the proportion of the employed population to the index of occupational segregation does not take into account that occupational choices are conditioned by activity and labor market involvement decisions. Consider, as illustration, the situation in 1995. The contribution measured by using the traditional index is 10.77—or 51.68 percent of GDL—while the contribution after controlling for labor force participation decisions *and* the incidence of part-time jobs is only 8.85—or 42.47 percent of GDL. The difference, almost 10

[20] Alternatively, for the period 2006:2010 we can create a variable of vertical job stratification using nine categories: family work and employees, employees, self-employed with less than 11 employees, self-employed with between 11 and 20 employees, self-employed with between 20 and 50 employees, self-employed with at least 50 employees, self-employed with an unreported number of employees, and a worker with an occupation belonging to major occupational category *Legislators, officials, and managers* in ISCO-88. Adding this vertical variable induces increases in both GDL (almost a 43 percent increase in 2010) and Occupational segregation within $EALMI$ (a 66.10 percent, or from 10.74 to 17.84). Hence, vertical segregation as measured by this nine-category variable increases the importance of occupational segregation from around 50 percent to around 60 percent.

percentage points, can be attributed to gender differences in labor market involvement and economic activity decisions.

Finally, the original occupational index of segregation is a bad approximation of GDL because it does not capture gender differences in economic activity and labor market involvement. For example, in the second period, our GDL does not show any trending behavior (first row of Table 3) essentially because the increases in gender segregation stemming from increasing differences in occupational choices and the incidence of part-time jobs are counteracted by the desegregation effects of the increasing female labor force participation rates. In contrast, the M index of occupational segregation obtained using as organizational units the occupational categories (last row of Table 3) only reports the increase in occupational segregation, a trend that is also captured by the traditional Gini and Dissimilarity indexes (as shown in Table 1).

4.4 The Role of Education

Given that people accrue education as investment decisions that affect their future earnings and occupations, gender segregation in work should be associated, at least partly, with gender differences in these investments. Hence, a relevant empirical question is by how much gender differences in education investments executed at the beginning of the life cycle affect GDL. To answer this question within the measurement framework of the M index, we first interact the organizational units used in computing GDL with educational categories and compute a new M index of segregation that we refer to as $GDLEd$. Then, we decompose this index into a between term which captures gender segregation induced by gender differences in education, Ed, and a within term that can be interpreted as gender differences in the division of labor after controlling for gender differences in education, GDL^W.

The European LFS includes information that enables us to construct two measures of past educational investments. Combining educational levels and age, we can create educational categories that differ according to highest level of education completed and the cohort of the individual.[21] Hence, we interact 4 age intervals with 3 levels of education into 12 categories ranging from those with low education with age between 16 and 19 to those with high education and age between 60 and 74. From 2004, we can create an alternative measure of educational investments that relates to the educational field of the highest level of education completed. In addition to low education, this alternative measure of educational investments considers 13 categories—five fields for intermediate education and eight fields for high education.[22]

In the second row of Table 4 we report $GDLEd$, that can be decomposed into gender differences in educational categories Ed (third row) and gender differences in the division of labor within educational categories term, GDL^W. Consider the results using educational levels and cohorts. The conclusion is inescapable: most of the gender differences are concentrated in the division of labor. Moreover, gender differences in the division of level are larger within educational levels and cohorts (compare GDL^W with GDL). These results emphatically show how gender convergence in educational levels is consistent with stable or increasing gender differences in the division of labor.

Do these results imply that human capital has no role in the gender division of labor? Not quite. From 2004 onwards, we report the M indexes of gender segregation by ed-

[21] We interact educational levels and cohorts to ensure that we do not neglect changes in the educational system that imply that the same level of education is not comparable across cohorts. Note that, if anything, this approach overestimates the importance of educational levels.

[22] For those individuals with intermediate educational levels, the fields are: *general*, *social sciences*, *sciences*, *engineering*, and *health and services*. For those individuals with high educational levels, the fields are: *humanities*, *social sciences*, *sciences*, *engineering*, *agriculture*, *health*, *services*, and *other*.

Table 4: *GDL* AND THE ROLE OF EDUCATION

Mutual Information Indexes. Selected Years.

	Educational Levels & Cohorts				*Educational fields*		
	1995	2003	2004	2010	2004	2005	2010
GDL	20.84	23.29	20.29	20.22	20.29	20.66	20.22
GDLEd	22.66	24.56	22.00	21.66	28.61	28.70	28.63
Ed (Gender Differences in Education)	1.80	0.97	0.86	0.67	11.72	12.47	12.96
GDL^W (Gender Division of Labor)	20.86	23.59	21.14	20.99	16.89	16.23	15.67
of which							
LF^W (Labor Force Participation Status)	1.38	0.89	0.65	0.51	0.92	0.99	0.75
$FPwLF^W$ (Full- vs. Part-time within LFP Status)	3.35	4.75	5.24	4.95	3.86	3.59	3.41
$EALMI^W$	11.39	11.29	10.67	9.55	8.76	8.30	7.49
Occupational Segregation within $EALMI^W$	9.47	12.30	10.47	11.44	8.12	7.93	8.18
Occupational Segregation within education	17.46	22.49	20.14	21.17	13.86	13.88	13.29

Note: Own calculations from Austrian data of the EU Labor Force Survey, selected years. Indexes are computed using natural logarithms and multiplied by 100. The variable *Educational levels and cohorts* is obtained from the interaction of 4 age intervals with 3 levels of education into 12 categories ranging from those with low education with age between 16 and 19 to those with high education and age between 60 and 74. The variable *Educational fields* considers, in addition to low education, five fields for intermediate education and eight fields for high education (see footnote 22 in main text). *GDL* is reproduced from Table 2. *GDLEd* is computed using as organizational units both educational categories and those used to construct *GDL*. *Ed* is computed using as organizational units the educational categories only. GDL^W is computed as *GDLEd* minus *Ed* and captures gender differences in the division of labor after controlling for gender differences in education. All remaining indexes in the Table are computed in a similar manner.

ucational fields. We first see that these indexes are much larger than those computed using levels and cohorts differences. We also note that they are increasing, showing no gender convergence in educational fields. What is more remarkable is that the gender division of labor index once controlling for educational fields is much smaller than without controlling for educational fields. For example, in 2004, the unconditional index is 20.29 while the index controlling for educational fields is only 16.89, or 16.76 percent less. The role of educational fields appears to be increasing, as GDL^W is 22.50 percent smaller than *GDL* in 2010.

The role of educational levels, however, is not negligible in all the dimensions of the gender division of labor. Gender differences in labor force participation status can be

partly attributed to educational levels. For example, in 2004 $LF = 1.00$ (row seven in Table 2) $LF^W = 0.65$ is 35 percent lower (row six in Table 4). In contrast, the role of educational fields in the gender differences in participation status is minor—$LF^W = 0.95$, or only 8 percent lower .

Why is GDL affected by educational fields and not by educational levels? Consider the role of educational fields in gender differences in the incidence of part-time jobs in 2010. Accounting for educational fields reduces the index from $FPwLF = 4.89$ (row eight in Table 2) to $FPwLF^W = 3.41$, or a $\left(1 - \frac{3.41}{4.89}\right) x100 = 30.27$ percent decrease. Educational fields also help explaining significant parts of the gender differences in economic activity and labor market involvement, and in gender differences occupational choices is large—in 2010 accounting for decreases in the indexes of 20.99 and 23.84 percent, respectively. In contrast, the contribution of educational levels is negligible in all these dimensions of gender segregation.

Finally, we have previously asserted that occupational segregation accounts for about half of the gender division of labor while labor market involvement accounts for more than a fourth. After controlling for educational fields, the relative importance of each term remains. Occupational segregation is still around 50 percent of GDL^W ($\frac{8.18}{15.67} * 100 =$ 48.08 percent in 2004 and 52.20 percent in 2010) and labor market involvement is still over 25 percent (28.30 percent in 2004 and 26.55 percent in 2010).

5 Conclusions

Using micro data from the Austrian Labor Force Survey, in this paper we review recent trends in the Austrian labor market. We are concerned in particular with how an increasing female participation interacts with occupational choice an the incidence

of part-time jobs. We note that during the 1995:2010 period, the Austrian labor market experiences a substantial decrease in the gender differential in participation rates, increasing differentials in the incidence of part-time jobs, and stable or rising levels of occupational segregation by gender. We argue that these somewhat opposing findings highlight that the gradual incorporation of women into paid work is a complex process of segregated integration. To study the overall effect of these opposing trends on the gender division of labor, we propose an index for the gender division of labor based on the Mutual Information index first proposed by Theil and Finizza (1971). Exploiting the strong decomposability property of the index, we then study the incidence on gender division of labor of changes in the gender differentials in participation rates, in the incidence of part-time jobs, as well as in occupational and educational choices.

Our main results show that the gender division of labor is very stable along the 16-year period. This is so because although the rising female labor force participation—which contributes less than a third to the gender division of labor—reduces the gender division of labor, increases in gender differences in the incidence of part-time jobs and increases in occupational segregation—which accounts for around a half of the gender division of labor—both result in a larger division of labor across genders. These results are robust to alternative definitions of economic activity and labor market involvement and can also be found after controlling for educational levels and fields.

A Appendix

See notes in Tables in the main text for the definition of the variables.

Table A.1: *Recent Trends in Gender Differences*

year	*Dissimilarity*	*Gini*	*Concentration*		*Participation*		*Unemployment*		*Part Time*		*Blue Collar*		*Managerial*	
			female	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*
1995	0.4877	0.6457	54.62	40.43	54.15	73.74	4.90	3.93	25.82	3.64	66.78	46.66	6.73	20.43
1996	0.5662	0.7233	59.46	40.82	53.72	73.19	5.22	5.35	26.19	3.36	71.54	47.77	6.47	21.47
1997	0.5648	0.728	59.58	40.39	53.84	72.58	5.28	5.06	26.57	3.31	72.18	48.24	6.72	19.70
1998	0.5588	0.7216	59.13	40.73	54.67	72.78	5.59	5.42	27.84	3.62	73.03	48.87	6.95	20.09
1999	0.5619	0.721	59.76	41.58	55.08	73.02	4.77	4.66	30.02	3.65	72.88	48.35	6.97	21.40
2000	0.554	0.7153	59.27	41.28	55.21	72.66	4.60	4.77	30.52	3.53	74.62	48.94	7.27	20.38
2001	0.5528	0.7157	57.68	42.17	55.28	71.83	4.13	3.92	31.45	3.63	74.97	50.09	7.58	20.95
2002	0.5623	0.7244	58.83	42.32	56.75	72.04	4.54	5.12	33.33	4.19	76.04	50.22	6.56	19.79
2003	0.561	0.7184	59.53	41.34	56.91	72.34	4.35	5.13	32.80	4.08	76.00	51.32	6.27	20.09
2004	0.521	0.6806	59.93	44.51	56.31	69.95	5.31	5.31	36.70	4.72	77.88	55.09	5.31	16.73
2005	0.5311	0.6998	60.30	44.12	58.01	71.78	5.49	4.91	37.86	6.35	77.46	52.76	5.80	18.83
2006	0.5271	0.6982	59.98	42.99	59.15	72.57	5.26	4.34	38.42	6.48	76.65	52.78	5.82	17.63
2007	0.5339	0.7024	60.13	43.27	59.89	73.59	5.02	3.93	39.18	7.03	76.76	52.84	5.45	18.05
2008	0.5265	0.6997	60.60	43.70	60.51	73.30	4.14	3.57	39.23	7.72	77.63	53.31	5.46	17.05
2009	0.5268	0.7038	60.46	43.64	61.27	72.78	4.56	4.99	40.45	8.16	78.44	54.79	4.96	16.50
2010	0.5225	0.6974	60.27	43.40	60.95	72.58	4.22	4.57	41.22	8.55	78.54	54.83	5.22	16.01

Table A.2: *Global Division of Labor*

year	*GDL1*	*GDL2*	*GDL3*	*GDL*	*LF*	*FPwLF*	*LMI*
1995	0.163846			0.208367	0.020984	0.033701	0.054193
1996	0.188295			0.239460	0.020593	0.035132	0.053415
1997	0.189091			0.240472	0.019005	0.036139	0.053356
1998	0.187953	0.233055		0.239025	0.017854	0.037562	0.053562
1999	0.189894	0.231293		0.237218	0.017596	0.042922	0.058978
2000	0.185912	0.228062		0.233905	0.016617	0.044648	0.059410
2001	0.185326	0.228345		0.234195	0.014863	0.046364	0.060252
2002	0.188471	0.228474		0.234327	0.012819	0.048076	0.059206
2003	0.187916	0.227058		0.232874	0.013092	0.047699	0.058542
2004	0.163469	0.197787		0.202854	0.010026	0.052172	0.061298
2005	0.170419	0.201495	0.206600	0.206600	0.010459	0.048666	0.058657
2006	0.171559	0.201733	0.207238	0.207238	0.010058	0.050466	0.060587
2007	0.176871	0.206831	0.211872	0.211872	0.010615	0.050705	0.061610
2008	0.173616	0.203112	0.208315	0.208315	0.009282	0.048077	0.057667
2009	0.172421	0.201218	0.206302	0.206302	0.007511	0.048716	0.055647
2010	0.168889	0.196555	0.202189	0.202189	0.007639	0.048949	0.056283

Table A.3: *GDL and Occupational Segregation*

year	*EALMI1*	*EALMI2*	*EALMI3*	*EALMI*	$p_{work} * M_0$	M_0
1995	0.065850			0.119929	0.107681	0.168991
1996	0.065587			0.119451	0.138533	0.219057
1997	0.066146			0.120468	0.140319	0.222681
1998	0.066055	0.115556		0.120302	0.138792	0.218423
1999	0.070397	0.114896		0.119615	0.139574	0.218508
2000	0.070152	0.116529		0.121314	0.136713	0.214347
2001	0.069596	0.115471		0.120213	0.138267	0.218013
2002	0.068654	0.110735		0.115283	0.143314	0.223084
2003	0.068942	0.111408		0.115983	0.141933	0.220002
2004	0.065310	0.103295		0.107537	0.121480	0.192726
2005	0.064120	0.098555	0.102316	0.102316	0.133018	0.205259
2006	0.065088	0.098870	0.103009	0.103009	0.134779	0.204915
2007	0.066290	0.099328	0.103523	0.103523	0.139100	0.208695
2008	0.061943	0.094185	0.098052	0.098053	0.139199	0.208304
2009	0.059906	0.091760	0.095576	0.095576	0.140514	0.209886
2010	0.059536	0.090391	0.094793	0.094793	0.137613	0.206357

Table A.4: *GDL within Educational Levels*

year	*Ed*	*GDL1*	*GDL2*	*GDL3*	*GDL*	*LF*	*FPwLF*	*EALMI1*	*EALMI2*	*EALMI3*	*EALMI*
1995	.01799366	0.164922			0.208603	0.013826	0.033480	0.061425			0.113853
1996	.01598237	0.188303			0.238176	0.013405	0.034543	0.060830			0.112751
1997	.0136267	0.190195			0.240569	0.012426	0.036384	0.063164			0.117077
1998	.01233595	0.189999	0.233627		0.240322	0.011564	0.037902	0.062606	0.111042		0.116042
1999	.01313889	0.193287	0.232926		0.239601	0.011660	0.042356	0.066594	0.109553		0.114487
2000	.0114398	0.191454	0.231552		0.238188	0.011162	0.044683	0.068478	0.112980		0.118068
2001	.00993315	0.190143	0.231276		0.237904	0.009760	0.046319	0.067730	0.111971		0.117014
2002	.0086654	0.193443	0.231872		0.238517	0.008883	0.047756	0.066975	0.107606		0.112452
2003	.00969835	0.191699	0.229321		0.235893	0.008947	0.047508	0.067114	0.108050		0.112916
2004	.00857734	0.172740	0.205538		0.211428	0.006521	0.052442	0.065521	0.102101		0.106699
2005	.00705839	0.177184	0.207167	0.212873	0.212873	0.007826	0.048687	0.064407	0.097766	0.101770	0.101770
2006	.01010803	0.177678	0.206485	0.212436	0.212436	0.006513	0.050213	0.065031	0.097615	0.102040	0.102040
2007	.01025023	0.183033	0.211439	0.217406	0.217406	0.006814	0.050409	0.066309	0.097932	0.102662	0.102662
2008	.0086931	0.180012	0.208808	0.214792	0.214792	0.006015	0.048068	0.062098	0.093676	0.097894	0.097894
2009	.00816942	0.179968	0.207459	0.213376	0.213376	0.004917	0.048945	0.061183	0.091843	0.095954	0.095954
2010	.00669321	0.176900	0.203546	0.209895	0.209895	0.005079	0.049451	0.061091	0.091000	0.095484	0.095484

Table A.5: *GDL within Educational Fields*

year	*Ed*	*GDL1*	*GDL2*	*GDL3*	*GDL*	*LF*	*FPwLF*	*EALMI1*	*EALMI2*	*EALMI3*	*EALMI*
2004	.11723413	0.135998	0.163337		0.168874	0.009234	0.038598	0.054091	0.083953		0.087624
2005	.12466008	0.131486	0.157307	0.162342	0.162342	0.009864	0.035899	0.051810	0.079450	0.082993	0.082993
2006	.1248534	0.131767	0.156378	0.161563	0.161563	0.008626	0.036568	0.051207	0.077864	0.081515	0.081515
2007	.12252689	0.134844	0.159365	0.164884	0.164884	0.009438	0.035249	0.051535	0.077666	0.081422	0.081422
2008	.12557329	0.132940	0.157828	0.163178	0.163178	0.008691	0.032980	0.047925	0.074087	0.077327	0.077327
2009	.13314972	0.129331	0.152711	0.158182	0.158182	0.007168	0.034206	0.046908	0.071716	0.074980	0.074980
2010	.12963638	0.127622	0.151154	0.156693	0.156693	0.007491	0.034118	0.046543	0.071251	0.074903	0.074903

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