Gender Gaps in Unemployment Rates in Argentina*

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Abstract

The gender gap in unemployment rates in Argentina increased noticeably during the nineties. The aim of this paper is to study the reasons why women, once they have decided to participate in the labor market, have lower probabilities of being employed than men. The results indicate that the larger women's unemployment rate derives from their lower probability of transition from unemployment to employment, which is explained by differences in the effects of men's and women's characteristics.

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1. Introduction

The literature that studies gender gaps in labor force participation rates and wages, as well as the literature that analyzes occupational segregation by gender cover differents countries and time periods and are by now very large.[1] On the contrary, the studies that examine gender gaps in unemployment rates are much more scarce. Lately, however, there has been a growing concern about the factors that may contribute to explain these gaps.

As seen in Table 1, developed countries such as Greece, Spain, Italy, France and Portugal show important gender gaps in unemployment rates. Developing countries have not kept apart from this phenomenon. Table 2 shows that in some Latin American countries gender gaps in unemployment rates are even more important than in developed countries.

The evolution of the gender gap in unemployment rates in Argentina, from the beginning of the 1980s to the present days, has showed some notable peculiarities that make the Argentinian labor market an interesting case of study. Figure 1 presents the evolution of male and female unemployment rates in the Great Buenos Aires between 1980 and 2002. As can be seen in it, in the 1980s female unemployment rates were a little bit higher than male unemployment rates (except in 1985). However, from 1992 to 2000, the differential between both rates increased noticeably. In particular, in 1996 the gender gap in unemployment rates reached more than 5 percentage points. Later, it decreased and in 2002 women's unemployment rate was simitar to men's.[2]

[1] For an introduction to these topics see Altonji and Blank (1999). Some of the most recent articles that study gender wage gaps are Blau and Kahn (2004) for the United States, Beblo et. al (2003) for the European Union (EU) countries, Dolado and Llorens (2004) for Spain, Saavedra for some Latin American countries and Esquivel and Paz (2003) and Paz (2000) for Argentina. Among the papers that analyze occupational segregation by gender we stand out Petrongolo (2004) for the EU countries and Dolado *et al.* (2002) for the EU countries and the United States. All these topics are also analyzed in a study of the Organization for Economic Co-operation and Development (OECD, 2002) and in a paper of the Internacional Labor Organization (ILO, 2003)

[2] The equality of men's and women's unemployment rates in 2002 can be basically explained by two reasons. Firstly, at the beginning of that year the government implemented the Household Head Plan, which main objective is providing economic help to unemployed household heads. In addition, the Household Head Plan seeks to achieve the labor reinsertion of its beneficiaries by means of training courses, productive work for the State and/or agreements with firms. Then, most of the beneficiaries of the plan are working. (For a more detailed description of the Household Head Plan, see López Zadicoff and Paz (2003)). Considering the individuals that receives benefits from the Household Head Plan as employed rose men's unemployment rate above women's. On the contrary, if the beneficiaries of the plan

In response to the above evidence, the aim of this paper is to study the factors that determined the gender gaps in unemployment rates in Argentina during the 1995-2001 period. In other words, we are interested in studying the reasons why women, once they have decided they want a job, have lower probabilities of being employed than men.

The economic theory suggests that there are lot of possible explanations for the gender gaps in unemployment rates. On the demand side, discrimination has been pointed out as one of the factors that would explain the higher female unemployment rate. The economic models distinguish two main sources of discrimination. The first one, formulated by Becker, refers to the prejuices that, at least, part of the employers might have against women. The second one refers to the so called statistical discrimination. It arises as a consequence that employers, in the presence of imperfect information, assume that women, on average, have a lower level of labour market attachment and are less qualified than men. On the supply side, the increase in the female labor force participation combined with the existence of bottlenecks in the economy's capacity to absorb new labor force entrants, the lower attachment of women to the labor force, reflected in higher movements into and out of the labor force and a lower job search intensity, as well as their different characteristics have been some of the factors mentioned as possible causes of the gender gaps in unemployment rates.

Political measures intended for eliminating women's inferiority in the labor market will depend on the causes of the gender gap in unemployment rates. These measures will not only improve women's relative position in the labor market, but also will contribute to mitigate the serious problem of unemployment, increasing the employment opportunities of an important part of the labour force.

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were classified as unemployed, women's unemployment rate would be approximately 6,6 percentage points higher than men's. Given the lower women's labor force participation rate, it is probable that a high percentage of those that were inactive before the plan's implementation entered the labor force to receive its benefits. Secondly, the sudden reduction in the level of activity and the collapse of the Convertibility Plan at the end of 2001 affected the degree of stability of employment of different sectors in different ways. In particular, the manufacturing sector, in which men constitute a relatively large proportion of total employment, experienced higher employment destruction rates than the service sector, dominated by women.

The rest of the paper is structured as follows. In section 2 we review the existing literature on gender gaps in unemployment rates. In section 3 we present some indicators of women's situation in the argentinian labor market during the last two decades. In section 4 we study the determinants of the unemployment probability. As we will see in more detail, gender plays an important rol, with women having a higher unemployment probability than men. This difference seems to be explained not by differences in the characteristics of men and women but by differences in the market returns to these characteristics for both groups. In section 5 we examine the differences in the flows between labor market states of men and women that contribute to determine the gender gaps in unemployment rates. The larger women's unemployment rate is the result of their larger probability of moving from employment to inactivity and their lower probability of moving from unemployment to employment. However, results suggest that, for some reason, flows involving inactivity are similar to direct flows between employment and unemployment. Therefore, in section 6 we focus on studying the differences in the flows from employment to unemployment and from unemployment to employment between men and women. On the one hand, women's probablity of moving from employment to unemployment is lower than men's. An important part of this difference is explained by differences in the characteristics of both groups. On the other hand, the probability of transition from unemployment to employment is higher among men than among women. Such difference is explained almost exclusively by differences in the effects of men's and women's characteristics. Finally, section 7 concludes.

2. Literature Review

The economic literature has devoted little efforts to the study of gender gaps in unemployments rates. From 1950 to 1980, women's unemployment rate was higher than men's in the United States. In order to study this phenomenon, Johnson (1983) redefines the female unemployment rate considering domestic production as an employment. Using data from the Current Population Survey (CPS), she obtains that women's unemployment rate so defined is lower than men's. In addition, she finds that the gender gap in unemployment rates varies procyclically, which is not the expected result if the gender gap in unemployment rates is due to differences in the productive opportunities of men and women. Finally, she presents evidence that a woman has a

lower unemployment probability than a man with equal characteristics. Thus, she concludes that an important part of the observed differential could be attributed to the definition and methodology used to calculate unemployment rates rather than to discrimination of employers against women.

However, in the 1980s the difference between male and female unemployment rates in the United States virtually disappeared. Then, the economic literature focuses on analizing the possible causes of the equality of both rates. DeBoer and Seeborg (1989) study the changes in the probabilities of transition between different labor market states. Using data from the Bureau of Labor Statistics (BLS), the authors find that about half of the narrowing of the unemployment rate differential during the 1968-1985 period was due to the increasing labor force attachment of women and the decreasing attachment of men. The other half reflects changes in men's and women's tendencies to move between employment and unemployment, attributed primarily to the decline of male-dominated industries. Using data from the CPS, Mohanty (1998) obtains that the disappearance of the gap between male and female unemployment rates results partly from a considerable decline in hiring discrimination against females during the last two decades. This study also finds that the growth of employment in government and in the service sector, and migration of workers from the South to other regions have contributed significantly to the convergence of male and female unemployment rates. More recently, using the same database, Mohanty (2003) establishes that the ability of employers to pay lower wages to women raises average female employment probabilities which, in turn, yields lower female unemploymet rates. Then, wage discrimination, among other factors, would be explaining the equality between male and female unemploymet rates. Therefore, the equality of male and female unemploymet rates should not be confused with absence of discrimination against women.

Using macro data for the Canadian economy, Myatt and Murrell (1990) find that bottlenecks in the economy's ability to absorb new labor force entrants do not explain the gap between male and female unemployment rates. According to these authors, the most important determinant of the differential between male and female unemployment rates is the level of the minimum wage. The lower attachment of women to the labor force explains only one-quarter of this differential.

In the OECD framework, using data from the ECHP, Azmat, Güell and Manning (2004) show that in countries where there is a large gender gap in unemployment rates, particularly the Mediterranean countries, there is a gender gap in both flows from employment to unemployment and from unemployment to employment. They investigate different hypotheses about the sources of these gaps. Most hypotheses find little support in the data. However, the gender gap in unemployment rates does seem to correlate with attitudes on whether men are more deserving of work than women. Thus, discrimination against women may explain part of the gender gap in unemployment rates in the Mediterranean countries.

Using data from the European Community Household Panel (ECHP) for the 1994-1998 period, Eusamio (2004) studies the causes of the large differential that exists between male and female unemployment rates in Spain, extending the analysis to the Portugal's case. When studying the empirical determinants of the hazard rates from employment and unemployment of men and women, she finds that women have more difficulties to leave unemployment and a higher probability of leaving employment, at least during the first year in each state. Finally, using a non-linear Oaxaca decomposition, she obtains evidence that men and women have similar characteristics that, nonetheless, are rewarded differently.

Regarding less developed countries, Ham, Svejnar and Terrell (1999) investigate the reasons why women's unemployment rate is above men's in the Czech and Slovak Republics. They find that the differences between men's and women's probabilities of leaving unemployment are explained more by differences in returns to characteristics than by differences in observed characteristics. Therefore, they conclude that differences in men's and women's behaviour and the practices of employers and institutions towards gender are dominating the differences between men's and women's exit rates from unemployment in both countries. Finally, Lauerová and Terrell (2002) analyze the determinants of the gender differences in unemployment rates in post-communist economies, specially the Czech Republic. When analysing the flows between labor market states, they find that an important part of the gender gap in unemployment rates results from married women's lower probability of moving from unemployment to employment and from single women's lower probability of moving from inactivity to employment.

3. Women's Situation in the Argentinian Labor Market

Argentinian legislation, as the one of most democratic western countries, recognizes the fundamental principle of equity between men and women at work. The National Constitution establishes equity of all inhabitants in the admission to employment, without any other condition but suitability, and equal remuneration for equal job. Moreover, international relevant norms in the field of gender discrimination, such as the United Nations' Convention for the Elimination of All Forms of Discrimination against Women and the ILO's agreements related to women's employment, are supported by Argentina. At the national level, the employment relationships in the private sector are regulated by the Work Contract Law (Ley de Contrato de Trabajo Nº 20744), while public sector workers are protected by the National Public Employment Regulation Law (Ley Marco de Regulación del Empleo Público Nacional Nº 25164). These laws clearly express the need to defend equity between men and women workers. Finally, this general legislation is complemented by other numerous detailed regulations.[3]

During the last two decades, women's situation in the Argentinian labor market has been characterized by two important facts: (i) women's unemployment was larger than men's, and (ii) female labor force participation increased noticeably.

Figures 2 to 5 present male and female unemployment rates in the Great Buenos Aires from 1980 to 2002 for groups between 15 and 19 years, 20 and 34 years, 35 and 49 years and 50 and 64 years, respectively. For the first three age groups, the gender gaps in unemployment rates were small in the 1980s and widened considerably in the 1990s. Those under 19 years present the largest gender gaps in unemployment rates. On the contrary, the gender gaps in unemployment rates for those over 50 years were, in general, very small and, sometimes, even favorable to women.

Figures 6 to 10 present male and female labor force participation rates in the Great Buenos Aires from 1980 to 2002 for the population between 15 and 64 years, as

[3] Based on this legislation, in December 2002 a judicial sentence, without precedents in the country, condemned Freddo ice-cream shop to employ women exclusively for considering it discriminated them. The sentence was based in the fundamental fact that, in December 1999, the firm had 646 men and 35 women workers.

well as for the age groups mentioned above. As can be seen in the first of them, following a world trend, female labor force participation rates have risen noticeably during the last two decades. From 1983 to 2002, female participation rate in the Great Buenos Aires has increased from 23% to 37%. In particular, its increase was more intense during the 1990s, which may be explained, among others, by the following two factors: (i) the notable decrease of the fertility rate, that falled from around 3,1 children per women in the 1980s to 2,7 children per women in the 1990s; and (ii) the so called added worker effect, by which some women, in view of the unemployment situation of their husbands, decided to participe actively in the labor market.[4] The participation rates of women between 20 and 34 years, 35 and 49 years and 50 and 64 years have shown a similar behaviour. In particular, the participation rate of the cohort between 50 and 64 years has shown the most pronounced growth. On the contrary, the participation rate of those under 19 years has showed a decreasing trend. This is due to the higher levels of education of the younger cohorts that, as a consequence, delay their entrance to the labour market. Their participation rate was lower than that of the other cohorts (except for the first years of the 1980s when the participation rate of women over 50 was lower).

4. Unemployment Probability

4.1 Probit Models

The economic literature points out the importance of taking into account the different characteristics of men and women when comparing their labor market outcomes. In other words, it is probable that, al least, part of the gender gap in unemployment rates is explained by differences in the characteristics of both groups. In order to investigate this hypothesis, we use a discrete choice model.

Let y_i be the dependent variable that takes value one if the individual is unemployed and zero if she is employed. We model the unemployment probability conditional to a group of exogenous variables, x_i, obtaining

$$E\left(y_i \mid x_i\right) = \Pr\left(y_i = 1 \mid x_i\right) = F(\beta' x_i)$$

[4] For an analysis of the added worker effect among married women in Argentina, see Díaz-Bonilla (2004).

where β represents a group of parameters and $F(\cdot)$ is a cumulated density function. For an N individuals random sample, the likelihood function of this model is written as

$$L = \prod_{i=1}^{N} F(\beta x_i)^{y_i} (1 - F(\beta x_i))^{1-y_i}$$

In the empirical implementation F is specified as a normal distribution $N(0, \sigma_u^2)$, resulting in a probit model of the form

$$\Pr(y_i = 1) = \int_{-\infty}^{\beta' x_i} \phi(t)dt = \Phi(\beta' x_i)$$

which is estimated by maximum likelihood.

4.2 Decomposition of the gap in unemployment probability

The decomposition presented in this section consists in an extension of the well-known Oaxaca's (1973) and Blinder's (1973) decomposition.[5] Let x^M and x^F be the characteristics of men and women, respectively and let β^M and β^F be the returns to these characteristics. The gender gap in the average unemployment probability can be decomposed in the following way

$$\overline{\Phi}(\beta'^F x^F) - \overline{\Phi}(\beta'^M x^M) = \left[\overline{\Phi}(\beta'^F x^F) - \overline{\Phi}(\beta'^F x^M)\right] + \left[\overline{\Phi}(\beta'^F x^M) - \overline{\Phi}(\beta'^M x^M)\right]$$

or alternatively,

$$\overline{\Phi}(\beta'^F x^F) - \overline{\Phi}(\beta'^M x^M) = \left[\overline{\Phi}(\beta'^M x^F) - \overline{\Phi}(\beta'^M x^M)\right] + \left[\overline{\Phi}(\beta'^F x^F) - \overline{\Phi}(\beta'^M x^F)\right]$$

where $\overline{\Phi}$ represents the average unemployment probability. In the first (second) equality it is assumed that β^F (β^M) is the vector of coefficients that would prevail in absence of discrimination. The first term on the right-hand side of the above equalities

[5] For a detailed description of the gender wage gaps decomposition methods, see Beblo *et al.* (2003).

measures the difference in the average unemployment probability that is explained by differences in the observed characteristics, whereas the second term gathers the differences due to different returns to those characteristics. This second term is associated with the discriminatory component of the gap. However, as not all the characteristics that affect the unemployment probability can be taken into account, because information about them is not available or because they are unobservable, this term it is not an accurate measure of discrimination and its magnitude will be overestimated. Nonetheless, when it represents a large percentage of the total gap, the possibility that discrimination exists cannot be ruled out.[6]

The general methodology proposed by Yun (2004) allows us to obtain the individual contribution of each variable when applying the Oaxaca-Blinder decomposition to a non-linear function. Then, the detailed decomposition of the above equalities can be written as

$$\overline{\Phi}(\beta'^{F}x^{F}) - \overline{\Phi}(\beta'^{M}x^{M}) = \sum_{i=1}^{K} W_{\Delta x_i}\left[\overline{\Phi}(\beta'^{F}x^{F}) - \overline{\Phi}(\beta'^{F}x^{M})\right] + \sum_{i=1}^{K} W_{\Delta\beta_i}\left[\overline{\Phi}(\beta'^{F}x^{M}) - \overline{\Phi}(\beta'^{M}x^{M})\right]$$

where

$$W_{\Delta x_i} = \frac{(\overline{x_i^F} - \overline{x_i^M})\beta^F}{(\overline{x^F} - \overline{x^M})\beta^F}, \qquad W_{\Delta\beta_i} = \frac{\overline{x_i^M}(\beta_i^F - \beta_i^M)}{\overline{x^M}(\beta^F - \beta^M)} \qquad \text{y} \qquad \sum_{i=1}^{K} W_{\Delta x_i} = \sum_{i=1}^{K} W_{\Delta\beta_i} = 1$$

or alternatively,

$$\overline{\Phi}(\beta'^{F}x^{F}) - \overline{\Phi}(\beta'^{M}x^{M}) = \sum_{i=1}^{K} W_{\Delta x_i}\left[\overline{\Phi}(\beta'^{M}x^{F}) - \overline{\Phi}(\beta'^{M}x^{M})\right] + \sum_{i=1}^{K} W_{\Delta\beta_i}\left[\overline{\Phi}(\beta'^{F}x^{F}) - \overline{\Phi}(\beta'^{M}x^{F})\right]$$

where

$$W_{\Delta x_i} = \frac{(\overline{x_i^F} - \overline{x_i^M})\beta_i^M}{(\overline{x^F} - \overline{x^M})\beta^M}, \qquad W_{\Delta\beta_i} = \frac{\overline{x_i^F}(\beta_i^F - \beta_i^M)}{\overline{x^F}(\beta^F - \beta^M)} \qquad \text{y} \qquad \sum_{i=1}^{K} W_{\Delta x_i} = \sum_{i=1}^{K} W_{\Delta\beta_i} = 1$$

[6] Neumark (1988) assumes that the vector of coefficients that would prevail in absence of discrimination is the one that results from combining men and women in a single estimation. In this case, the gender gap in the average unemployment probability is decomposed in three parts. The first term, as before, measures the difference in productivity of both groups. The second term, estimates the discrimination in favor of one of the groups, whereas the third term gathers the discrimination against the other group.

where K is the number of explanatory variables and $\overline{x^M}$, $\overline{x^F}$ are the average characteristics of men and women, respectively.

4.3 The data

To investigate the hypothesis that differences in the characteristics of men and women can explain the gap in their unemployment rates we use data drawn from the Permanent Household Survey (Encuesta Permanente de Hogares). This survey is carried out by the National Institute of Statistics and Censuses twice a year (in May and October) since 1974.[7]

The sample used comprises 28 Argentinean cities from May 1995 to October 2001.[8] Given the evidence presented above, only the individuals between 15 and 54 years were included in the sample. The sample contains a total of 357.662 observations, including salaried workers and unemployed workers that search actively for a job and for which there is no missing information.

Table 3 presents some descriptive statistics of employed and unemployed men and women. Regarding individual characteristics, unemployed women tend to be younger than unemployed men, whereas employed men tend to be younger than employed women. A higher proportion of women are divorced, separated or widow, whereas a larger percentage of men are married. A higher (lower) proportion of employed (unemployed) women are single. In addition, women have higher education levels than men in the same labor market state. Regarding household characteristics, in percentage terms, there are more unemployed women than men that have children under 14 years, whereas there are fewer employed women than men that have children under 14. The geographical distribution of men and women is very similar. Finally, women's household income is higher than men's.

[7] In 1998 and 1999 a third survey was carried out in August.
[8] Up to May 1995 the survey comprised 25 cities. In October 1995 three more cities were incorporated into the survey.

4.4 The gender gap

The explanatory variables included in the model comprise individual characteristics (gender, age, education, marital status), family characteristics (presence of children at home, rest of the family income) and economy-wide characteristics (region, year). All variables are dummies, except the income that is continuous.[9] Given the inexistence of a general unemployment protection system in Argentina, it is interesting to study the influence of the rest of the family income on the unemployment probability. In absence of unemployment subsidies, the rest of the family income becomes the only source of income of the unemployed individuals. In this case, income may have two opposite signed effects on the unemployment probability. On the one hand, a higher family income rises the reservation wage of the individual, which implies a larger probability of rejecting a job offer. On the other hand, a larger family income improves the job search conditions, which favors the arrival of job offers. Specifying the relationship between the unemployment probability and the rest of the family income as a cuadratic function allows us to capture the net effect for the different levels of income.[10]

When only the gender dummy is included in the model, its marginal effect is equal to 0.009674, being significant at a one percent level.[11] This marginal effect is comparable to the gender gap in the aggregate unemployment rates. When the rest of the variables are included in the model (first and second columns of Table 4) the marginal effect of the gender variable increases noticeably.[12] Therefore, the individual characteristics do not contribute to explain the gender gap in unemployment rates.

Columns 3-6 of Table 4 present the results of estimating separate regressions for men and women. As pointed out above, from these estimations it is possible to decompose the differencial between the average unemployment probability of men and women into two parts. Table 5 presents the results of such decomposition. The sign of

[9] For a more detailed description of the variables definition, see Appendix C.
[10] For more details, see Arranz *et al.*
[11] In the case of a probit model, the coefficients cannot be interpreted as the partial derivative of the unemployment probability with respect to the independent variables. Then, in this section we present, instead, the marginal effects.
[12] The results are very similar if, instead of using region and year dummy variables to measure the state of the business cycle, we used regional unemployment rates.

the first term is negative which implies that women have larger productive characteristics than men. The second term is positive which means that the market returns to men's characteristics are larger than the returns to women's characteristics. Moreover, given that women are more productive than men, this second component is higher than the observed differential between the average unemployment probabilities. Thus, its magnitude results very high, varying between 173% and 343% of the observed differential.[13] Considering β^F as the coefficient that would prevail in absence of discrimination leads to a larger differential due to differencies in the treatment of men and women and to a smaller differential explained by different characteristics of both groups than when using β^M.[14]

The detailed decomposition shows that an important part of the difference between men's and women's average unemployment probabilities is explained by differences in the returns associated with marital status. [15]

4.5 Other variables

In this section we briefly analyze the influence of the rest of the explanatory variables included in the model on the unemployment probability. In the case of men, the relationship between unemployment probability and age has a U shape, reaching a minimum for the 25-34 years group. In the case of women, unemployment probability decreases with age. In both cases, unemployment probability is higher among young people. Educational level has a negative influence on the unemployment probability. Single, divorced or widow individuals, as well as those that have children under 14 years, have higher possibilities of being unemployed. When considering all individuals, the relationship between unemployment probability and family income is not lineal,

[13] The results obtained when using Neumark's decomposition are between those obtained when considering β^F and β^M as the returns that would prevail in absence of discrimination.
[14] Oaxaca and Ramson (1984) also find this difference when using β^F and β^M.
[15] It is probable that unobserved characteristics are also important when explaining the differences between men's and women's unemployment probabilities. As we have panel data, one possibility in the framework of the fixed effects approach that would allow us to take into account unobserved heterogenity is to estimate a conditional logit model. However, for doing this it is necessary that the explanatory variables have enough time variation and the key variable here is time invariant. Also, it would be possible to use a random effects approach. The problem is that the assumptions required to apply this method are very restrictive. In any case, as Azmat *et al.* (2004) suggest, it is probable that unobserved characteristics related to labor force participation widen the differential between men's and women's unemployment probabilities rather than contributing to explain it.

with an inverted U shape.[16] Unemployment probability is higher during recession years and in the more important regions of the country where a significant fraction of the labor force is concentrated.

In sum, in this section we have showed that the gender gaps in unemployment rates cannot be explained by differences in the characteristics of men and women. In the next section we analyze if the gender gap in unemployment rates is the result of differences in the flows between labor market states.

5. Flows between Labor Market States: Transition Probabilities

Considering three labor market states (employment, *e*, unemployment, *u*, and inactivity, *i*), the transition probability from state *k* to state *j* (h_{kj}) is defined as:

$$h_{kj} = \frac{Flow_{kj}}{Stock_k} \qquad k, j = e, u, i$$

where $Flow_{kj}$ is the number of individuals that at time *t* were in state *k* and in time $t+\Delta$ are in state *j*, and $Stock_k$ is the number of individuals that at time *t* were in state *k*.

If the labor market is in a steady state, then the unemployment rate (*UR*) can be expressed as a function of transition probabilities between the three labor market states[17]

$$UR = (1-\alpha)\frac{h_{eu}}{h_{eu+hue}} + \alpha\frac{h_{eu}/h_{ui}}{(h_{ei}/h_{ui})+(h_{ie}/h_{iu})}$$

where

$$\alpha = \frac{h_{ie}h_{ui} + h_{iu}h_{ei}}{h_{ie}(h_{ui}+h_{eu}+h_{ue}) + h_{iu}(h_{ei}+h_{eu}+h_{ue})}$$

[16] The turning point or minimum of this curve is around 263 Argentinian pesos.

[17] The labor market is in a steady state when the flows into and out of employment are equal ($h_{ue}U + h_{ie}I = (h_{eu}+h_{ei})E$), as are the flows into and out of unemployment ($h_{eu}E + h_{iu}I = (h_{ue}+h_{ui})U$).

According to this equation, the overall unemployment rate can be interpreted as a weighted average of two unemployment rates. The first term on the right-hand side is the unemployment rate that would prevail if there were no flows into and out of inactivity. The second term on the right-hand side is the unemployment rate that would prevail if there were no directs flows between employment and unemployment and there were only indirect flows through inactivity. The weight α is a measure of the relative importance of flows via inactivity in generating unemployment.

The above equation implies that increases in h_{ue}, h_{ui} and h_{ie} lead to decreases in the unemployment rate, while increases in h_{eu}, h_{ei} and h_{iu} lead to increases in the unemployment rate. Therefore, the gender gaps in unemployment rates are due to differences in these probabilities.

Table 6 presents the average transition probabilities between labor market states for the considered period (1995-2001). From these probabilities, we calculate the different components of the above equation for men and women. The probabilities are multiplied by 100 so that they can be interpreted as the percentage of individuals that moves from one labor market state to another. The data used result from matching those individuals that are present in the sample in two consecutive waves. Each semester one quarter of the households is renewed, enabling us to follow individuals for a period of up to four consecutive semesters. As the interval between two observations are six months, multiple transitions can take place between them. However, we assume that if a transition has taken place this is unique.

Since the Argentinian economy has faced enormous structural changes within the last years, it is difficult to argue that its labor market is in a steady state. Nevertheless, as seen in the last two rows of the table, male and female unemployment rates calculated according to the above equation are quite similar to unemployment rates calculated using the convential formula U/(U+E).

The higher women's unemployment rate is the result of their larger probability of moving from employment to inactivity (11.91% *vs.* 3.35%) and their lower

probability of moving from unemployment to employment (27.50% *vs.* 49.17%)[18] which, in turn, leads to a longer average duration of their unemployment spells. [19]

As the weight α is small and the two components of the unemployment rate are similar, the labor market state of inactivity does not seem to be relevant when determining men's unemployment rate. In the case of women, the weight α is higher. However, as the two components of the unemployment rate are quite similar, ignoring the labor market state of inactivity will not lead to seriously misleading conclusions. The results do not suggest that flows involving inactivity are not important to explain the gender gaps in unemploymet rates, but, for some reason, they are similar to direct flows between employment and unemployment. Then, in the following sections the interest will focus on flows between employment and unemployment, ignoring flows involving inactivity.[20]

6. Flows between Employment and Unemployment

6.1 Duration Models[21]

Suppose an individual *i* enters a labor market state at time *t=0.* The probability that this person leaves that state at time *t>0* is given by a proportional hazard model of the form

$$\theta(t, x_i) = \lambda(t)\exp(\beta' x_i)$$

where x_i is a vector of time-invariant explanatory variables, $\lambda(t)$ is the baseline hazard function and β is a vector of parameters to be estimated. The continuous survivor function at time *t* is[22]

$$S(t, x_i) = \exp\left[-\int_0^t \theta(u, x_i)du\right] = \exp\left[-\int_0^t \lambda(u)\exp(\beta' x_i)du\right] = \exp\left[-\exp(\beta' x_i)\int_0^t \lambda(u)du\right]$$

[18] The results are similar to those obtain by Pessino and Andrés (2000).
[19] In October 2001, the percentage of unemployed women that has been in this situation for more than 6 (12) months was 39.29% (11.3%) versus 23.37% (6.3%) of men.
[20] Also, we do not have enough statistic information to analyze the labor market state of inactivity.
[21] Some of the papers that use duration models to analyze flows between labor market states in Argentina are Arranz *et al*. (2000), Beccaria and Mauricio (2003), Cerimedo (2004), Galiani and Hopenhayn (2001), Hopenhayn (2001) and Pessino and Andrés (2003)
[22] By definition $\theta(t, x_i) = \dfrac{-d\ln S(t, x_i)}{dt}$.

Although durations are continuous, they are observed at discrete time intervals. To simplify, intervals are assumed to be of unit lenght. Given a discrete random variable $T_i \in \left[t_i - 1, t_i \right)$ that represents the time at which the end of the spell of individual *i* occurs, the survivor function at the start of the t_i-*th* interval is given by

$$prob\left\{ T_i \geq t_i - 1 \right\} = S(t_i - 1, x_i)$$

and the probability of exit in the t_i-*th* interval is

$$prob\left\{ T_i \in \left[t_i - 1, t_i \right) \right\} = S(t_i - 1, x_i) - S(t_i, x_i)$$

Thus, the hazard of exit in the t_i-*th* interval, defined as the probabilty of leaving a state in the t_i-*th* interval, given that it was not left until the t_i-*1-th* interval, is

$$h(t_i, x_i) = prob\left\{ T_i \in \left[t_i - 1, t_i \right) / T_i \geq t_i - 1 \right\} = \frac{prob\left\{ T_i \in \left[t_i - 1, t_i \right) \right\}}{prob\left\{ T_i \geq t_i - 1 \right\}} = 1 - \frac{S(t_i, x_i)}{S(t_i - 1, x_i)}$$

Substituting the expression obtained

$$h(t_i, x_i) = 1 - \exp\left[-\exp\left(\beta' x_i + \gamma(t_i) \right) \right]$$

where $\gamma(t_i) = \log \int_{t_i - 1}^{t_i} \lambda(u) du$ is constant within duration intervals and varies between them. This feature of the baseline hazard function allows us to introduce duration dependence, that is, that the probability of moving from one state to another depends on the duration of the original state. In particular, we chose a non-parametric specification for the baseline hazard function, based in a group of dummy variables that indicates the duration of the original state.

While some persons leave the state during an interval, others remain in the state. The former group, that is not censured, is identified using a censoring indicator $c_i = 1$.

For the latter group, whose observations are right-censored, $c_i = 0$. Given these assumptions, the likelihood function can be written as

$$L = \sum_{i=1}^{N} \left\{ c_i \, prob\left\{ T_i \in [t_i - 1, t_i) \right\} + (1 - c_i) \, prob\left\{ T_i \geq t_i \right\} \right\}$$

where N is the number of individuals. Taking logarithms and replacing above expressions

$$\log L = \sum_{i=1}^{N} \left\{ c_i \log\left[S(t_i - 1, x_i) - S(t_i, x_i) \right] + (1 - c_i) \log S(t_i, x_i) \right\}$$

This expression can be written in terms of the hazard function as

$$\log L = \sum_{i=1}^{N} \left\{ c_i \log \left\{ h(t_i, x_i) \prod_{s=1}^{t_i - 1} \left[1 - h(s, x_i) \right] \right\} + (1 - c_i) \log \left\{ \prod_{s=1}^{t_i} \left[1 - h(s, x_i) \right] \right\} \right\}$$

$$\log L = \sum_{i=1}^{N} c_i \log \left[\frac{h(t_i, x_i)}{1 - h(t_i, x_i)} \right] + \sum_{i=1}^{N} \sum_{s=1}^{t_i} \log\left(1 - h(s, x_i) \right)$$

Discrete time duration models can be regarded as a sequence of binary choice equations defined on the survivor population at each duration.[23] In this model, the exits or stays at each period are considered as an observation. Let y_{it} be an indicator variable that takes value one if individual i exits the state during the interval $\left[t_i - 1, t_i \right)$ and zero otherwise. Thus, for individuals that do not exit the state $y_{it} = 0$ in all periods, while for individuals that exit the state $y_{it} = 0$ in all periods, except the one in which the exit produces. Then, the logarithm of the likelihood function is written as

$$\log L = \sum_{i=1}^{N} \sum_{s=1}^{t_i} \left\{ y_i \log h(s, x_i) + (1 - y_i) \log\left(1 - h(s, x_i) \right) \right\}$$

In order to have access to longer spells and since we can only observe individuals for a maximum of 4 semesters, we include in our sample individuals whose

[23] See Jenkins (1995), Carrasco (2001) and Bover *et al*. (2002).

spells had already started before they were first interviewed. Therefore, we have to condition exit rates on the probability of the spell surviving up to the time of the first interview. For doing this, we use the retrospective information reported in it. Suppose that at the time of the first interview the individual i has remained j_i periods in the state and remains in it for another k_i periods. Then, total duration is $t_i = j_i + k_i$. The log-likelihood function is rewritten as

$$\log L = \sum_{i=1}^{N} \left\{ c_i \left[\sum_{s=j_i+1}^{j_i+k_i-1} \log\left(1-h(s,x_i)\right) + \log h(j_i+k_i,x_i) \right] + (1-c_i) \sum_{s=j_i+1}^{j_i+k_i} \log\left(1-h(s,x_i)\right) \right\}$$

In order to capture unobserved heterogenity between individuals, we incorporate a random variable to the model. Then, the instantaneous hazard rate is now specified as

$$\theta(t,x_i) = \lambda(t)\varepsilon_i \exp(\beta' x_i) = \lambda(t)\exp[\beta' x_i + \log(\varepsilon_i)]$$

where ε_i is a random variable with unit mean and variante $\sigma^2 = v$. Following Jenkins (2002), we assume that ε_i follows a Gamma distribution function. The discrete-time hazard function is now

$$h(t_i,x_i) = 1 - \exp\left[-\exp\left(\beta' x_i + \gamma(t_i) + \log(\varepsilon_i)\right)\right]$$

and the log-likelihood function then becomes

$$\log L = \sum_{i=1}^{N} \log[(1-c_i)A_i + c_i B_i]$$

where

$$A_i = [1+\sigma^2 \sum_{s=j_i+1}^{j_i+k_i} \exp(\beta' x_i + \gamma(s)]^{-(1/v)}$$

$$B_i = \begin{cases} [1+\sigma^2 \sum_{s=j_i+1}^{j_i+k_i} \exp(\beta' x_i + \gamma(s)]^{-(1/v)} - A_i \text{ si } j_i + k_i > 1 \\ 1 - A_i \text{ si } j_i + k_i = 1 \end{cases}$$

6.2 Decomposition of the gap in flows between employment and unemployment

As in section 4, it is possible to apply an extension of the Oaxaca-Blinder decomposition to the gender gap in average hazard rates. In order to simplify, hazard rates are redefined as

$$h(t_i, x_i) = h(\phi' x_i)$$

where ϕ is the vector of estimated parameters. Then, the gender gap in average hazard rates can be decomposed as

$$\overline{h}(\phi'^F x^F) - \overline{h}(\phi'^M x^M) = \left[\overline{h}(\phi'^F x^F) - \overline{h}(\phi'^F x^M)\right] + \left[\overline{h}(\phi'^F x^M) - \overline{h}(\phi'^M x^M)\right]$$

or alternatively,

$$\overline{h}(\phi'^F x^F) - \overline{h}(\phi'^M x^M) = \left[\overline{h}(\phi'^M x^F) - \overline{h}(\phi'^M x^M)\right] + \left[\overline{h}(\phi'^F x^F) - \overline{h}(\phi'^M x^F)\right]$$

where $\overline{h}$ represents the average hazard rate, the first term on the right-hand side of the above equations refers to differences caused by different men's and women's characteristics and the second term refers to differences in the effects of the same variables on men and women.

Following Yun (2004), the detailed decomposition of the above equations allows us to obtain the individual contribution of each variable

$$\overline{h}(\phi'^F x^F) - \overline{h}(\phi'^M x^M) = \sum_{i=1}^{K} W_{\Delta x_i}\left[\overline{h}(\phi'^F x^F) - \overline{h}(\phi'^F x^M)\right] + \sum_{i=1}^{K} W_{\Delta \phi_i}\left[\overline{h}(\phi'^F x^M) - \overline{h}(\phi'^M x^M)\right]$$

where

$$W_{\Delta x_i} = \frac{(\overline{x_i^F} - \overline{x_i^M})\phi_i^F}{(\overline{x^F} - \overline{x^M})\phi^F}, \qquad W_{\Delta \phi_i} = \frac{\overline{x_i^M}(\phi_i^F - \phi_i^M)}{\overline{x^M}(\phi^F - \phi^M)} \qquad \text{y} \qquad \sum_{i=1}^{K} W_{\Delta x_i} = \sum_{i=1}^{K} W_{\Delta \phi_i} = 1$$

or alternatively,

$$\overline{h}(\phi^{'F}x^{F})-\overline{h}(\phi^{'M}x^{M})=\sum_{i=1}^{K}W_{\Delta x_i}\left[\overline{h}(\phi^{'M}x^{F})-\overline{h}(\phi^{'M}x^{M})\right]+\sum_{i=1}^{K}W_{\Delta\phi_i}\left[\overline{h}(\phi^{'F}x^{F})-\overline{h}(\phi^{'M}x^{F})\right]$$

where

$$W_{\Delta x_i}=\frac{(\overline{x_i^F}-\overline{x_i^M})\phi_i^M}{(\overline{x^F}-\overline{x^M})\phi^M},\qquad W_{\Delta\phi_i}=\frac{\overline{x_i^F}(\phi_i^F-\phi_i^M)}{\overline{x^F}(\phi^F-\phi^M)}\qquad \text{y}\qquad \sum_{i=1}^{K}W_{\Delta x_i}=\sum_{i=1}^{K}W_{\Delta\phi_i}=1$$

and *K* is the number of explanatory variables.

6.3 The data

The survey provides information on relevant variables such as labor market state, employment and unemploymet (not inactivity) spell duration and different socioeconomic characteristics of individuals. This information and the longitudinal character of the survey will allow us to determine the spell duration for those individuals who leave it.

Suppose that an individual is interviewed at two consecutive points of time, *t* and *t+6*. At the time of the first interview, this individual was employed (unemployed), while at the time of the second interview she was unemployed (employed). From the first interview, we have information on the duration of the employment (unemploymet) spell, e_t. From the second interview, we have information on the duration of the unemployment (employmet) spell, $d_{t+6} \leq 6$. Therefore, if only one transition has taken place, total duration of the employment (unemployment) spell is $e_t + 6 - d_{t+6}$.

The sample of employment spells covers the individuals that complete, at least, two consecutive interviews, in the first interview reported to be employed as salaried workers for less than five years and in the following interviews reported to be unemployed or employed in the same job. Also, we excluded the unemployed individuals that do not answer to the question *How long has it been since your last*

occupation?, as well as the individuals with missing information. After filtering the sample we obtain 35.876 employment spells (20.869 men and 15.007 women) of which 4.268 are not censured.

The sample of unemployment spells covers the individuals that complete, at least, two consecutive interviews, in the first interview reported to be unemployed for less than eight years and in the following interviews reported to be employed as salaried workers or to remain unemployed. Also, we excluded the employed individuals that do not answer to the question *How long have you been in this occupation*?, as well as the individuals with missing information. After filtering the sample we obtain 11.209 unemployment spells (6.679 men and 4.530 women) of which 4.582 are not censured.

The explanatory variables that refer to individual characteristics, household characteristics and job characteristics are taken at their values at the time of the first interview.

6.4 Flows from employment to unemployment

6.4.1 The gender gap

As observed in Table 6, women's probability of moving from employment to unemployment is lower than men's. This is confirmed by the results presented in Table 7, in which we investigate if differences in men's and women's characteristics contribute to explain the gender gaps in flows from employment to unemployment.

In the first two columns of the table, we report the estimates of a model for the transition from employment to unemployment that includes only duration and gender variables. The coefficient of the female dummy is negative, which implies that women have lower rates of transition from employment to unemployment than men. In particular, women's rate of transition from employment to unemployment is 25% lower than men's.[24] The second and third columns report the estimates that result from including individual, household and economy-wide characteristics as additional explanatory variables. The effect of introducing these extra variables on the female

[24] The percentage change in a hazard rate as a result of a dichotomic variable is given by 100*[1-exponencial(β)], where β is the coefficient associated to the dummy variable.

dummy is small. The next two columns report the results when we also include job characteristics (full-/part- time, type of contract, public/private firm, sector of activity, size of firm and qualification level) in the model. The inclusion of these variables, that may be endogenous, does not alter the value of the coefficient of the female dummy significantly. Figure 11 shows the predicted hazard rates from employment for the representative men and women.[25]

Table 8 reports men's and women's hazard rates from employment when these are estimated separetly. As mentioned above, this allows us to analyze to what extent the gender gap in average hazard rates from employment is due to differences in the characteristics of both groups or to differences in the effects derived for both groups. The results of the decomposition are reported in Table 9 where we see that between 33% and 47% of the gender gap in average hazard rates from employment is explained by differences in the characteristics of both groups. Among the more relevant characteristics we find the educational level, the sector of activity and the private/public nature of the firm. In other words, women have a higher educational level and are more concentrated in the service sector and in the public sector where jobs are more stable, which explains, in part, their lower hazard rates from employment.

The estimates that result from incorporating a random variable to the model that allows us to take into account unobserved heterogenity between individuals are similar to the ones obtained above, so they have been omitted. The likelihood ratio test suggests that in this context unobserved heterogenity does not significantly affect exit rates from employment.

6.4.2 Other variables

As observed in the tables above, endogenity, captured by the dichotomic variables constructed for the different duration intervals, is statistically significant in all

[25] The representative individual has in 1997 between 25 and 34 years, complete primary education, is married and has children, lives in the *pampeana* region, has a full-time job and a permanent contract, works in the service sector, in a private firm with 1 to 5 employees and is engaged in a low qualified position.

cases. The probability of leaving employment increases during the first months of employment and then decreases progressively. The high hazard rates from employment during the first months may be due to high labor turnover, while the reduced hazard rates from the first year onwards may be vinculated to high firing costs.

For men, the relationship between age and risk of transition from employment to unemploymet has a cuadratic shape, though not statistically significant. In general, medium-age men have lower probabilities of leaving employment than younger and older men. In particular, men between 35 and 44 years have the lowest probability of moving from employment to unemployment. On the contrary, for women age has a positive influence on employment maintenance. Then, young women have the largest probability of leaving employment, while women over 45 years have the lowest probability of leaving employment. Regarding education, we observe that the probability of leaving employment diminishes with the educational level. Then, low-educated individuals have higher probabilities of transition from employment to unemployment than high-educated ones. Regarding marital status, the results show that single and divorced persons have larger probabilities of leaving their employments. Considering household characteristics, we observe that persons with children have higher probabilities of transition from employment to unemployment.

As expected, year dummies used to measure the state of the business cycle indicate that during expansions the probability of transition from employment to unemployment is lower than during recessions. Local labor market conditions play an important rol in explaining the transition from employment to unemployment. Buenos Aires is the province with the highest hazard rates.

Regarding employment characteristics, we observe that hazard rates from employment are higher for those persons that work part-time or have a temporary contract. Workers employed in the public sector, as well as skilled workers have lower probabilities of transition from employment to unemployment. Risk of transition from employment to unemployment diminishes with firm's size. Finally, the hazard rate from employment differs across sectors. Its descendent order is *manufacturing, agriculture and services* for men and *agriculture, manufacturing and services* for women.

6.5 Flows from unemployment to employment

6.5.1 The gender gap

For the construction of the unemployment duration model we use job search theory as theoretical framework. It states that the conditional probability of leaving unemployment is the product of the probability of receiving a job offer and the probability that the individual accepts this offer. As in the previous section, we estimate a reduced-form model. The main disadvantage of a reduced-form model is that, in contrast to a structural model, we can only observe the overall effect of the explanatory variables on the probability of leaving unemployment. In other words, this model does not allow us to separate the effect of the explanatory variables on the probability of receiving a job offer from the effect on the probability of aceppting it.

Table 10 presents the estimates of the hazard rates from unemployment. We observe that the probability of transition from unemployment to employment is higher among men than among women.

The first two columns of the table present the estimates of the hazard rate from unemployment when we only include duration and gender variables in the model. The coefficient of the female dummy is negative, which implies that women have lower hazard rates from unemployment than men. The second and third columns report the estimates that result from including individual, household and economy-wide characteristics as additional explanatory variables. According to these results, women's hazard rate from unemployment is 10% lower than men's. The next two columns report the results when we also include last job characteristics, in particular sector of activity, in the model. The inclusion of these variables does not alter the value of the coefficient of the female dummy significantly. Figure 12 shows the predicted hazard rates from unemployment for the representative men and women.[26]

Table 11 presents men's and women's hazard rates from unemployment when these are estimated separetly. The results of the decomposition of the gender gap in

[26] The representative individual has in 1997 between 25 and 34 years, complete primary education, is married and has children, lives in the *pampeana* region, the rest of his family income is 566 pesos and was never employed before.

average hazard rates from unemployment are reported in Table 12 where we see that this is explained exclusively by differences in the effects of men's and women's characteristics. In particular, differences in the effects of household income and marital status explain a significant part of the gender gap.

Again, the estimates that result from taking into account unobserved heterogenity between individuals are similar to the ones obtained above, so they have been omitted. The likelihood ratio test suggests that in this context unobserved heterogenity does not significantly affect exit rates from unemployment.

6.5.2 Other variables

As above, duration dependende was estimated introducing dichotomic variables for the different duration intervals. The probability of leaving unemployment increases during the first months of unemployment and then decreases. There are three factors that explain that, from a certain moment of time onwards, exit rates decreases with unemployment duration: (i) individual abilities and capacities depreciate with time, (ii) potencial employers stigmatize long-term unemployed and (iii) worker's motivation decreases with time which leads to a lower job search intensity.

The risk of transition from unemployment to employment decreases with age. Education dummies show a non-monotonic relationship with the probablity of leaving unemployment. Medium-educated individuals have the lowest probability of leaving unemployment, while high-educated ones have the highest probability of leaving unemployment. Regarding marital status, it is important to distinguish between men and women. Being single or divorced increases women's probability of leaving unemployment and decreases men's.

In the case of men, the presence of children at home rises the probability of transition from unemployment to employment. It is probable that the need to support his children forces the individual to reduce its reservation wage and to strengthen his job search. In the case of women, the presence of children at home reduces the probability of leaving unemployment, though the effect is not always statistically significant. Children increase women's reservation wage, which makes them more selective when

choosing a job. When considering all individuals, the relationship between hazard rate from unemployment and household income has a U shape.

The year dummies used to measure the state of the business cycle indicate that during expansions the probability of transition from unemployment to employment is higher than during recessions. Among the Argentinian regions, the *pampeana* region has the lowest hazard rate from unemployment.

Regarding last job characteristics, we observe that hazard rates from unemployment are higher for those persons that have been employed before. Among them, hazard rates are larger for those persons that worked in the *agriculture*, possibly due to the high labor turnover in this sector. In descendent order, it follows *manufacturing* for men and *services* for women.

6.5.3 Interpretation of the results

In the above paragraphs, we have estimated that men have higher hazard rates from unemployment than women because of differences in the effects of men's and women's characteristics. Those effects can be affected by two factors: (i) women's own attitude, and (ii) employers' attitude. In this section we analyze these two hypothesis in a very simple way.

Given their traditional domestic responsabilities, it is possible that unemployed women (i) dedicate fewer resources to job search and (ii) have higher reservation wages than unemployed men. A way to consider the first hypothesis is to analyze job search intensity for both groups. In order to do this, we use the Unemployed Annex of the survey where the unemployed report the types of job search methods they use. From this data, we also calculate the number of job search methods used. Table 13 presents the results. Men and women report using the same number of job search methods and its distribution by type of search method is very similar. The evidence presented indicates that unemployed women devote the same efforts to job search than unemployed men. The second hypothesis, refered to the minimum acceptable wage, is more difficult to contrast empirically, since the survey does not contain this information.

There are reasons to believe that when it comes to filling a vacancy employers tend to favour men against women. First, we sometimes hear that employers prefer to hire men because hiring is costly and men are less likely to leave their jobs voluntarily. However, this hypothesis lacks sense in a country like Argentina where firing costs are high and where we would expect employers to favour those groups with larger voluntary exit rates, as women.

Second, it is often argued that maternity, lactation and child-care costs discourage employers from hiring women. In their study for the ILO, Berger and Szretter (2002) knock down the old myth that in Argentina employing a woman is more expensive than employing a man. According to this study, the additional cost of employing a woman to firms is equal to 1% of the monthly gross wage. The main reason why these costs are so low is that monetary benefits that women workers receive during maternity leave are not paid by the employers but by the social security.[27]

The third and last hypothesis refers to employers' prejudices against women. The fact that the percentage of the gender gap in the average hazard rates from unemployment not explained by the different characteristics of men and women is neither explained by the existence of unobserved heterogenity seems to point in this direction. To get some idea of the importance of gender discrimination in the Argentinian labor market we use the 1995 and 2004 Latinobarometer opinion survey. In 1995 it asked respondents whether they believed Argentinian women have the same opportunities to get a good job that Argentinian men. Only 52% of a total of 1200 respondents answered affirmatively. In 2004 it also asked respondents whether they agree with the statement "Is it better that woman concentrate in housekeeping and man in work?". A 37% of respondents answered to agree with the above statement. Also, it is probable that these percentages are higher among men than among women. Hence, as approximately 80% of the employers are males, discrimination hypothesis cannot be disregarded as, at least partial, responsible for the gender gap in unemployment rates.

However, while discriminatory attitudes against women are not recent, the gender gap in unemployment rates is a phenomenon of the last decade (Figure 1). The

[27] Maternity leave comprises 90 days, with a minimum of 30 days before the probable childbirth date and 60 days after it.

explanation for this is found in the aggregate unemployment rate level. When the overall unemployment rate is low, as in the 1980s, there are few applicants for most jobs, which makes it difficult for employers to discriminate among them. In contrast, when the overall unemployment rate is high, as in the 1990s, there are many applicants for most jobs, which makes it easy for employers to put into practice their prejudices.

Finally, the estimation of structural models that enable us to disentangle the effect of the explanatory variables on the probability of receiving a job offer, related to the discrimination hypothesis, from the effect on the probability of accepting it, related to the reservation wage, will allow us to know more about the gender gap in unemployment rates. Therefore, future research in this direction could result very enlightening.

7. Conclusions

Although female unemployment rate is significantly larger than male in many countries of the world, the economic literature has dedicated little efforts to the study of the causes of this differential. In particular, in Argentina the gender gap in unemployment rates, that was small in the 1980s, increased noticeably in the 1990s. The aim of this paper is to study the factors that explain the gender gap in unemployment rates in that country.

The study of the empirical determinants of the unemployment probability indicates that gender plays an important rol, with women having a higher unemployment probability. When decomposing the gender gap in the average unemployment probability we obtain that women have larger productive characteristics than men and that the market returns to men's characteristics are larger than the return to women's characteristics. In particular, an important part of the gender gap in the average unemployment probability is explained by differences in the returns to marital status. Therefore, the gender gap in unemployment rates cannot be explained by differences in men's and women's characteristics.

When investigating the gender differences in the flows between labor market states that determine the gender gap in unemploymet rates, we find that the larger

women's unemployment rate is the result of their larger probability of moving from employment to inactivity and their lower probability of moving from unemployment to employment. However, results suggest that, for some reason, flows involving inactivity are similar to direct flows between employment and unemployment. Then, the interest focuses on gender differences in the flows between employment and unemployment, ignoring flows involving inactivity.

When estimating the hazard rates from employment, we find that women's probablity of moving from employment to unemployment is lower than men's. The results of the decomposition indicate that an important part of the gender gap in the average hazard rates from employment is explained by differences in the characteristics of both groups. Among the more relevant characteristics we find the educational level, the sector of activity and the private/public nature of the firm. Women have a higher educational level and are more concentrated in the service sector and in the public sector where jobs are more stable, which explains, in part, their lower hazard rates from employment.

When estimating the hazard rates from unemployment, we find that the probability of transition from unemployment to employment is higher among men than among women. The results of the decomposition of the gender gap in the average hazard rates from unemployment indicate that this is explained almost exclusively by differences in the effects of men's and women's characteristics. In particular, differences in the effects of household income and marital status explain a significant part of the gender gap.

Those effects can be affected by two factors: (i) women's own attitude, and (ii) employers' attitude. Regarding women's attitude, given their traditional domestic responsabilities, it is possible that unemployed women (i) dedicate fewer resources to job search and (ii) have higher reservation wages than unemployed men. On the one hand, the evidence presented here demonstrates that unemployed women devote the same efforts to job search than unemployed men. On the other hand, the hypothesis that refers to reservation wages is more difficult to contrast empirically, since the relevant information is not available. Regarding employers' attitude, in the Argentinian economy framework, where firing costs are high and where employing a woman is not more

expensive than employing a men, the only hypothesis that seems to have sense is the one related to employers' prejudices against women.

The estimation of structural models that enable us to disentangle the effect of the explanatory variables on the probability of receiving a job offer from the effect on the probability of accepting it will allow us to know more about the gender gap in unemployment rates. Therefore, future research in this direction could result very enlightening.

In sum, the gender gap in unemployment rates in Argentina is mainly explained by women's greater difficulty of leaving unemployment. Therefore, political measures will have to point to improve women's job access.

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A Tables

Table 1
Gender Gaps in Unemployment Rates in some OECD countries. 2003.

Country	Men	Women	Difference	Ratio
Greece	5,9	13,8	7,9	2,3
Spain	8,2	16,0	7,8	2,0
Italy	6,8	11,7	4,9	1,7
Czech Republic	6,1	9,9	3,8	1,6
France	8,3	10,4	2,1	1,3
Portugal	5,9	7,7	1,8	1,3
Polonia	19,3	20,8	1,5	1,1

Switzerland	3,9	4,5	0,6	1,2
Denmark	5,2	5,8	0,6	1,1
New Zeland	4,5	5,1	0,6	1,1
Belgium	7,5	8,0	0,5	1,1
Slovak	17,4	17,8	0,4	1,0
Netherlands	3,5	3,8	0,3	1,1
Australia	5,7	5,9	0,2	1,0
Mexico	2,6	2,7	0,1	1,0

Source: OECD Employment Outlook 2004.

Table 2
Gender Gaps in Unemployment Rates in some Latin American countries. 2001.

Country	**Men**	**Women**	**Difference**	**Ratio**
Dominican Republic	10,9	24,2	13,3	2,22
Ecuador	5,4	12,8	7,4	2,37
Panama	15,1	19,8	4,7	1,31
Colombia	16	20,7	4,7	1,29
Brazil	9,6	13,4	3,8	1,40
Uruguay	11,6	15,4	3,8	1,33
Venezuela	13,6	17,4	3,8	1,28
Peru	8,2	10,6	2,4	1,29
Bolivia	7,5	9,7	2,2	1,29
Costa Rica	5,5	7	1,5	1,27
Chile	8,9	9,7	0,8	1,09
Paraguay	10,5	11,2	0,7	1,07

Source: Panorama Laboral 2003. Regional Office for Latin America and the Caribbean. ILO

Table 3 Summary Statistics

	Employed		Unemployed	
	Men	Women	Men	Women
N	172.627	123.256	35.027	26.755
Personal Characteristics				
Age 15-24	0.22	0.19	0.42	0.42
Age 25-34	0.32	0.31	0.24	0.28
Age 35-44	0.28	0.30	0.18	0.19
Age 45-54	0.18	0.20	0.16	0.12
Incomplete Primary Education	0.08	0.06	0.12	0.08
Complete Primary Education	0.27	0.18	0.31	0.22
Incomplete Secondary Education	0.24	0.17	0.29	0.27
Complete Secondary Education	0.21	0.22	0.16	0.21
Incomplete Tertiary Education	0.11	0.13	0.09	0.15

Complete Tertiary Education	0.09	0.23	0.03	0.08
Single	0.30	0.37	0.54	0.50
Married	0.67	0.51	0.43	0.40
Other Marital Status	0.03	0.12	0.03	0.10
Household Characteristics				
Kids (0-14 years)	0.67	0.62	0.60	0.66
No Kids	0.33	0.38	0.40	0.34
Household Income	447.96	709.48	501.04	600.56
Economy-wide Characteristics				
Northwest	0.20	0.20	0.21	0.21
Northeast	0.13	0.13	0.11	0.09
Cuyo	0.12	0.11	0.09	0.09
Pampeana	0.27	0.28	0.33	0.34
Patagonica	0.15	0.15	0.11	0.09
Great Buenos Aires	0.13	0.13	0.16	0.18
Job Characteristics				
Full-time	0.77	0.45		
Part-time	0.23	0.55		
Permanent Contract	0.80	0.81		
Temporal Contract	0.07	0.06		
Other Contract	0.13	0.13		
Public Sector	0.28	0.38		
Private Sector	0.71	0.62		
Job Tenure	6.39	6.14		
Work History				
Worked Before			0.88	0.80
Not Worked Before			0.12	0.20
Years Since Last Job			0.66	1.54

Table 4 Marginal Effects of Characteristics on the Unemployment Gender Gap

	Total		Men		Women	
	Marginal Effect	*P-value*	*Marginal Effect*	*P-value*	*Marginal Effect*	*P-value*
Personal Characteristics						
Women	**0.026466**	0.000				
Age 15-24	**0.098973**	0.000	**0.062369**	0.000	**0.151557**	0.000
Age 35-44	**-0.023349**	0.000	0.001277	0.548	**-0.062238**	0.000
Age 45-54	**-0.013084**	0.000	**0.036013**	0.000	**-0.087583**	0.000
Incomplete Primary Education	**0.047274**	0.000	**0.044578**	0.000	**0.038612**	0.000
Incomplete Secondary Education	0.000166	0.928	**-0.009574**	0.000	**0.027496**	0.000
Complete Secondary Education	**-0.045493**	0.000	**-0.043546**	0.000	**-0.042506**	0.000
Incomplete Tertiary Education	**-0.048596**	0.000	**-0.047682**	0.000	**-0.045250**	0.000
Complete Tertiary Education	**-0.111798**	0.000	**-0.091374**	0.000	**-0.146361**	0.000

Single	**0.083971**	0.000	**0.137574**	0.000	**0.017769**	0.000
Other Marital Status	**0.039892**	0.000	**0.065976**	0.000	**0.017235**	0.000
Household Characteristics						
No Kids	**-0.008675**	0.000	**-0.003560**	0.031	**-0.029646**	0.000
Household Income	0.000001	0.413	**0.000005**	0.010	**-0.000018**	0.000
Household Income^2 (x10000)	**-0.000019**	0.000	**-0.000014**	0.000	**0.000004**	0.000
Economy-wide Characteristics						
1995	-0.003090	0.182	**0.007302**	0.007	**-0.022262**	0.000
1996	**0.004463**	0.055	**0.012727**	0.000	**-0.010794**	0.015
1998	**-0.022638**	0.000	**-0.015516**	0.000	**-0.036144**	0.000
1999	**-0.007819**	0.001	0.002718	0.316	**-0.027830**	0.000
2000	**0.020466**	0.000	**0.030956**	0.000	0.000441	0.926
2001	**0.047685**	0.000	**0.060732**	0.000	**0.024075**	0.000
Northwest	**-0.025504**	0.000	**-0.017324**	0.000	**-0.039966**	0.000
Northeast	**-0.055702**	0.000	**-0.029442**	0.000	**-0.108633**	0.000
Cuyo	**-0.060107**	0.000	**-0.050108**	0.000	**-0.074193**	0.000
Patagonica	**-0.061425**	0.000	**-0.042002**	0.000	**-0.102765**	0.000
Great Buenos Aires	**0.007280**	0.000	**-0.004313**	0.052	**0.035106**	0.000

Table 5 Decomposition of the Gender Gap in Unemployment

	(A)		**(B)**	
	Absolute Value	**%**	**Absolute Value**	**%**
Observed Differential	**0.009686**	**100**	**0.009686**	**100**
Characteristics	**-0.023502**	**-242.63**	**0.007112**	**-73.42**
Age	-0.003046	-31.441	-0.000731	-7.544
Education	-0.018509	-191.082	-0.015783	-162.936
Marital Status	0.001583	16.339	0.008488	87.627
Kids	-0.000645	-6.654	-0.000092	-0.948
Household Income	-0.003975	-41.038	0.000153	1.582
Year	0.000245	2.534	0.000345	3.560
Region	0.000844	8.716	0.000508	5.240
Returns	**0.033188**	**342.63**	**0.016798**	**173.42**

Age	0.008368	86.389	0.003973	41.018
Education	-0.005463	-56.398	-0.002617	-27.018
Marital Status	0.013790	142.363	0.007523	77.663
Kids	0.002280	23.543	0.001074	11.091
Household Income	0.003466	35.786	0.002209	22.809
Year	0.007594	78.394	0.003309	34.165
Region	0.003153	32.550	0.001326	13.691

Table 6 Flows between Labor Market States

	Men	**Women**
h_{eu}	6.75	4.40
h_{ue}	49.17	27.50
h_{ei}	3.35	11.91
h_{ie}	12.90	10.28
h_{ui}	15.05	43.06
h_{iu}	8.24	6.05
$\frac{h_{eu}}{h_{eu+hue}}$	12.19	13.93
$\frac{h_{eu}/h_{ui}}{(h_{ei}/h_{ui})+(h_{ie}/h_{iu})}$	12.58	14.05
α	0.16	0.50
Steady state unemployment rate	12.24	13.99
Unemployment rate	12.47	14.65

Table 7 Estimates of the Probability of Leaving Employment

	Coefficient	*P-value*	*Coefficient*	*P-value*	*Coefficient*	*P-value*
Duration Dependence						
1-3 months	**-2.851940**	0.000	**-3.013309**	0.000	**-3.564536**	0.000
3-6 months	**-2.185096**	0.000	**-2.348793**	0.000	**-2.840298**	0.000
6 -12 months	**-2.917926**	0.000	**-3.035050**	0.000	**-3.422125**	0.000
12-24 months	**-3.301274**	0.000	**-3.389953**	0.000	**-3.665861**	0.000
More than 24 months	**-3.721567**	0.000	**-3.729145**	0.000	**-3.873147**	0.000
Personal Characteristics						
Women	**-0.288324**	0.000	**-0.241255**	0.000	**-0.178832**	0.000
Age 15-24			**0.093146**	0.023	0.058517	0.153
Age 35-44			0.000430	0.993	0.005809	0.903
Age 45-54			0.087684	0.141	0.094526	0.113
Incomplete Primary Education			**0.194625**	0.000	**0.128934**	0.017

Incomplete Secondary Education		**-0.109867**	0.007	-0.030257	0.456
Complete Secondary Education		**-0.426153**	0.000	**-0.243890**	0.000
Incomplete Tertiary Education		**-0.647378**	0.000	**-0.423263**	0.000
Complete Tertiary Education		**-1.116179**	0.000	**-0.660706**	0.000
Single		**0.413929**	0.000	**0.365484**	0.000
Other Marital Status		**0.357624**	0.000	**0.352356**	0.000
Household Characteristics					
No Kids		**-0.160497**	0.000	**-0.139665**	0.000
Economy-wide Characteristics					
1995		0.085453	0.166	**0.144370**	0.019
1996		**0.140963**	0.014	**0.156531**	0.006
1998		**0.096703**	0.095	**0.095958**	0.097
1999		**0.300159**	0.000	**0.309000**	0.000
2000		**0.381015**	0.000	**0.390891**	0.000
2001		**0.674558**	0.000	**0.676471**	0.000
Northwest		**-0.148100**	0.001	**-0.194845**	0.000
Northeast		**-0.269548**	0.000	**-0.250417**	0.000
Cuyo		**-0.344495**	0.000	**-0.381207**	0.000
Patagonica		**-0.303374**	0.000	**-0.236115**	0.000
Great Buenos Aires		**0.106536**	0.020	**0.135864**	0.003
Job Characteristics					
Part-Time				**0.222089**	0.000
Temporal Contract				**0.667249**	0.000
Other Contract				**0.437874**	0.000
Public Sector				**-0.704873**	0.000
Agriculture				**0.337851**	0.000
Manufacturing				**0.407550**	0.000
Firm with 6-25 employees				**-0.098359**	0.011
Firm with 26-100 employees				**-0.229845**	0.000
Firm with more than 100 employees				**-0.271425**	0.000
Skilled				**-0.424389**	0.003
N	115972	115972		115972	
Log-likelihood	-17613.632	-17162.994		-16849.485	

Table 8 Estimates of the Probability of Leaving Employment

	Men		Women	
	Coefficient	*P-value*	*Coefficient*	*P-value*
Duration Dependence				
1-3 months	**-3.746563**	0.000	**-3.424853**	0.000
3-6 months	**-2.811958**	0.000	**-3.051656**	0.000
6 -12 months	**-3.428272**	0.000	**-3.553659**	0.000
12-24 months	**-3.632985**	0.000	**-3.865586**	0.000
More than 24 months	**-3.794398**	0.000	**-4.152963**	0.000
Personal Characteristics				
Women				
Age 15-24	0.012496	0.808	**0.114386**	0.097
Age 35-44	0.012834	0.831	-0.002070	0.979
Age 45-54	**0.188522**	0.010	-0.041563	0.687
Incomplete Primary Education	0.099927	0.119	**0.210450**	0.037

Incomplete Secondary Education	**-0.112406**	0.020	**0.137898**	0.069
Complete Secondary Education	**-0.390141**	0.000	-0.014912	0.857
Incomplete Tertiary Education	**-0.513882**	0.000	**-0.281580**	0.005
Complete Tertiary Education	**-0.843283**	0.000	**-0.503477**	0.000
Single	**0.415962**	0.000	**0.280374**	0.000
Other Marital Status	**0.375191**	0.003	**0.366371**	0.000
Household Characteristics				
No Kids	**-0.145074**	0.001	**-0.127447**	0.036
Economy-wide Characteristics				
1995	**0.205444**	0.007	0.035719	0.739
1996	**0.146634**	0.041	**0.178251**	0.062
1998	**0.161944**	0.023	-0.034136	0.733
1999	**0.289079**	0.000	**0.338505**	0.000
2000	**0.451022**	0.000	**0.283045**	0.003
2001	**0.761767**	0.000	**0.518997**	0.000
Northwest	**-0.152863**	0.008	**-0.250466**	0.002
Northeast	**-0.158990**	0.022	**-0.385129**	0.000
Cuyo	**-0.437113**	0.000	**-0.266661**	0.005
Patagonica	**-0.186766**	0.004	**-0.326862**	0.000
Great Buenos Aires	**0.136116**	0.017	0.111566	0.166
Job Characteristics				
Part-Time	**0.279641**	0.000	**0.175191**	0.002
Temporal Contract	**0.631821**	0.000	**0.728381**	0.000
Other Contract	**0.429708**	0.000	**0.442596**	0.000
Public Sector	**-0.826047**	0.000	**-0.611059**	0.000
Agriculture	**0.288489**	0.005	**0.758847**	0.014
Manufacturing	**0.393841**	0.000	**0.366099**	0.000
Firm with 6-25 employees	**-0.138344**	0.003	-0.053194	0.461
Firm with 26-100 employees	**-0.245427**	0.000	**-0.228875**	0.016
Firm with more than 100 employees	**-0.262622**	0.000	**-0.314591**	0.013
Skilled	**-0.384568**	0.039	**-0.424542**	0.061
N	67769		48203	
Log-likelihood	-10646.474		-6156.684	

Table 9 Decomposition of the Gender Gap in Hazard Rates from Employment

	(A)		**(B)**	
	Absolute Value	**%**	**Absolute Value**	**%**
Observed Differential	**-0.010360**	**100**	**-0.010360**	**100**
Characteristics	**-0.004831**	**46.635**	**-0.003459**	**33.391**
Duration	-0.000252	2.428	-0.000129	1.248
Age	-0.000187	1.810	0.000069	-0.666
Education	-0.002927	28.254	-0.003573	34.489
Marital Status	0.001828	-17.646	0.001950	-18.823
Kids	-0.000122	1.173	-0.000124	1.194
Year	0.000331	-3.198	0.000392	-3.788
Region	-0.000092	0.891	0.000114	-1.096
Full-/Part-Time	0.002111	-20.375	0.003013	-29.080

Type of Contract	-0.000245	2.363	-0.000184	1.776
Private/Public Sector	-0.002124	20.506	-0.002568	24.785
Sector of Activity	-0.004021	38.814	-0.003349	32.329
Firm Size	0.000974	-9.403	0.001016	-9.802
Skilled/Unskilled	-0.000105	1.018	-0.000085	0.825
Returns	**-0.005529**	**53.365**	**-0.006901**	**66.609**
Duration	-0.008771	84.665	-0.009447	91.191
Age	0.000409	-3.950	0.000156	-1.504
Education	0.007491	-72.307	0.009102	-87.854
Marital Status	-0.001973	19.047	-0.002473	23.870
Kids	0.000225	-2.171	0.000257	-2.482
Year	-0.003198	30.869	-0.003517	33.948
Region	-0.001782	17.202	-0.002128	20.544
Full-/Part-Time	-0.000746	7.199	-0.002124	20.500
Type of Contract	0.000451	-4.351	0.000438	-4.232
Private/Public Sector	0.001318	-12.720	0.002192	-21.161
Sector of Activity	0.000260	-2.508	-0.000014	0.139
Firm Size	0.000861	-8.310	0.000745	-7.194
Skilled/Unskilled	-0.000072	0.700	-0.000088	0.846

Table 10 Estimates of the Probability of Leaving Unemployment

	Coefficient	*P-value*	*Coefficient*	*P-value*	*Coefficient*	*P-value*
Duration Dependence						
1-3 months	**-2.169552**	0.000	**-1.879732**	0.000	**-2.132806**	0.000
3-6 months	**-1.291654**	0.000	**-0.986794**	0.000	**-1.233204**	0.000
6 -12 months	**-1.652289**	0.000	**-1.326073**	0.000	**-1.562675**	0.000
12-24 months	**-1.725470**	0.000	**-1.382221**	0.000	**-1.607296**	0.000
More than 24 months	**-2.012339**	0.000	**-1.601003**	0.000	**-1.802560**	0.000
Personal Characteristics						
Women	**-0.058124**	0.058	**-0.103240**	0.001	**-0.081682**	0.016
Age 15-24			**0.084235**	0.037	**0.128449**	0.002
Age 35-44			**-0.292344**	0.000	**-0.297011**	0.000
Age 45-54			**-0.621351**	0.000	**-0.626615**	0.000
Incomplete Primary Education			0.025346	0.661	0.016672	0.774

Incomplete Secondary Education		-0.043091	0.292	-0.041828	0.308
Complete Secondary Education		**-0.080846**	0.082	-0.057888	0.216
Incomplete Tertiary Education		0.087541	0.104	**0.111881**	0.040
Complete Tertiary Education		0.108170	0.137	**0.141806**	0.052
Single		**-0.216943**	0.000	**-0.196995**	0.000
Other Marital Status		0.036458	0.596	0.042200	0.540
Household Characteristics					
No Kids		**-0.070735**	0.036	**-0.072937**	0.031
Household Income		**-0.000076**	0.048	**-0.000067**	0.084
Household Income ^2 (x100)		**0.000002**	0.020	**0.000002**	0.023
Economy-wide Characteristics					
1995		**-0.479600**	0.000	**-0.477962**	0.000
1996		**-0.267201**	0.000	**-0.265506**	0.000
1998		0.008356	0.870	0.007468	0.883
1999		**-0.143862**	0.008	**-0.148305**	0.006
2000		**-0.254717**	0.000	**-0.265106**	0.000
2001		**-0.346574**	0.000	**-0.354496**	0.000
Northwest		0.071865	0.104	**0.072784**	0.100
Northeast		**0.200323**	0.000	**0.214003**	0.000
Cuyo		**0.399493**	0.000	**0.373048**	0.000
Patagonica		**0.447538**	0.000	**0.433007**	0.000
Great Buenos Aires		**0.245787**	0.000	**0.225603**	0.000
Last Job Characteristics					
Agriculture				**0.322014**	0.002
Manufacturing				**0.248890**	0.000
Services				**0.231434**	0.000
N	26927	26927		26927	
Log-likilihood	-12066.176	-11854.982		-11838.184	

Table 11 Estimates of the Probability of Leaving Unemployment

	Men		Women	
	Coefficient	*P-value*	*Coefficient*	*P-value*
Duration Dependence				
1-3 months	**-1.986641**	0.000	**-2.426308**	0.000
3-6 months	**-0.994879**	0.000	**-1.679909**	0.000
6 -12 months	**-1.313359**	0.000	**-2.011870**	0.000
12-24 months	**-1.385437**	0.000	**-1.996929**	0.000
More than 24 months	**-1.524768**	0.000	**-2.250930**	0.000
Personal Characteristics				
Women				
Age 15-24	**0.191289**	0.000	0.058316	0.363
Age 35-44	**-0.349895**	0.000	**-0.249594**	0.002
Age 45-54	**-0.769042**	0.000	**-0.358880**	0.001
Incomplete Primary Education	-0.023376	0.732	0.139145	0.208

Incomplete Secondary Education	-0.009401	0.850	-0.081968	0.263
Complete Secondary Education	-0.024608	0.681	-0.106379	0.166
Incomplete Tertiary Education	0.080707	0.281	0.109379	0.189
Complete Tertiary Education	0.183443	0.130	0.088413	0.366
Single	**-0.375118**	0.000	0.053107	0.426
Other Marital Status	-0.102131	0.433	**0.210674**	0.016
Household Characteristics				
No Kids	**-0.115993**	0.007	0.015207	0.784
Household Income	**-0.000100**	0.052	-0.000010	0.873
Household Income ^2 (x100)	0.000001	0.148	**0.000002**	0.068
Economy-wide Characteristics				
1995	**-0.542198**	0.000	**-0.376774**	0.000
1996	**-0.306122**	0.000	**-0.221799**	0.005
1998	-0.097948	0.139	**0.150491**	0.061
1999	**-0.228788**	0.001	-0.021380	0.807
2000	**-0.320354**	0.000	**-0.185225**	0.031
2001	**-0.364995**	0.000	**-0.348968**	0.000
Northwest	0.022205	0.695	**0.151261**	0.034
Northeast	**0.114792**	0.089	**0.381336**	0.000
Cuyo	**0.354762**	0.000	**0.389978**	0.000
Patagonica	**0.372148**	0.000	**0.545804**	0.000
Great Buenos Aires	**0.23575**	0.000	**0.196446**	0.005
Last Job Characteristics				
Agriculture	**0.27544**	0.015	**0.615613**	0.058
Manufacturing	**0.229611**	0.000	**0.203819**	0.037
Services	**0.193604**	0.002	**0.265670**	0.000
N	16299		10628	
Log-likilihood	-7196.161		-4598.065	

Table 12 Decomposition of the Gender Gap in Hazard Rates from Unemployment

	(A)		**(B)**	
	Absolute Value	**%**	**Absolute Value**	**%**
Observed Differential	**-0.009698**	**100**	**-0.009698**	**100**
Characteristics	**-0.000151**	**1.562**	**0.003358**	**-34.625**
Duration	-0.000001	0.013	0.000262	-2.701
Age	-0.000012	0.128	0.000911	-9.397
Education	-0.0000003	0.003	0.000385	-3.969
Marital Status	-0.000012	0.122	-0.000175	1.806
Kids	0.000001	-0.006	0.000152	-1.564
Household Income	-0.000149	1.531	0.002503	-25.804
Year	-0.000006	0.062	0.000200	-2.064
Region	0.000015	-0.160	-0.000150	1.544
Sector of Activity	0.000013	-0.132	-0.000730	7.524

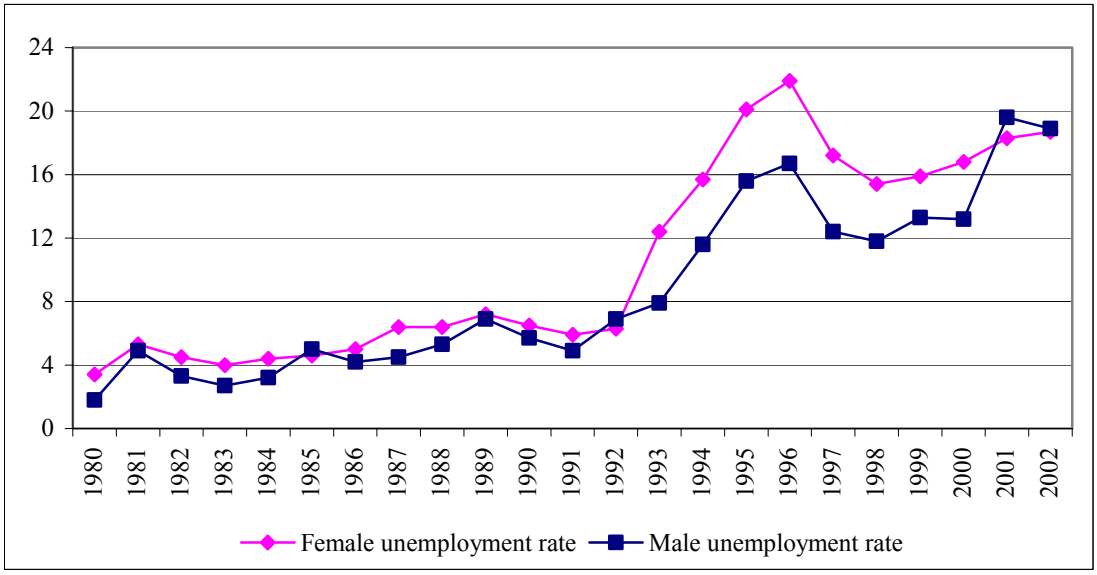
Returns	**-0.009547**	**98.438**	**-0.013057**	**134.625**
Duration	0.022834	-235.438	0.025406	-261.959
Age	-0.000520	5.367	0.000347	-3.576
Education	0.000593	-6.112	0.001316	-13.574
Marital Status	-0.009542	98.388	-0.011433	117.882
Kids	-0.001944	20.044	-0.001824	18.809
Household Income	-0.012965	133.680	-0.018153	187.172
Year	-0.004252	43.840	-0.004644	47.883
Region	-0.002639	27.211	-0.002282	23.525
Sector of Activity	-0.001111	11.458	-0.001791	18.462

Table 13 Unemployed Job Search Methods (%)

	Men	Women
Job agency	25.12	27.83
Job Bag	12.73	14.42
Public employment service	7.46	7.8
Answered advertisements	55.54	58.76
Went to firms	67.38	62.07
Looked at advertisements but did not answer	15.93	17.63
Placed advertisements	13.15	15.06
Asked personal contacts	93.17	92.52
Went to places where you knew were hiring people	7.29	4.06
Made negotiations for putting by its own	2.87	1.55
Went to job capacity programs	2.91	3.58
Others (sent curriculums, internet, etc.)	3.62	4.17
Average number of methods	3.07	3.09
Number of observations	2373	1872

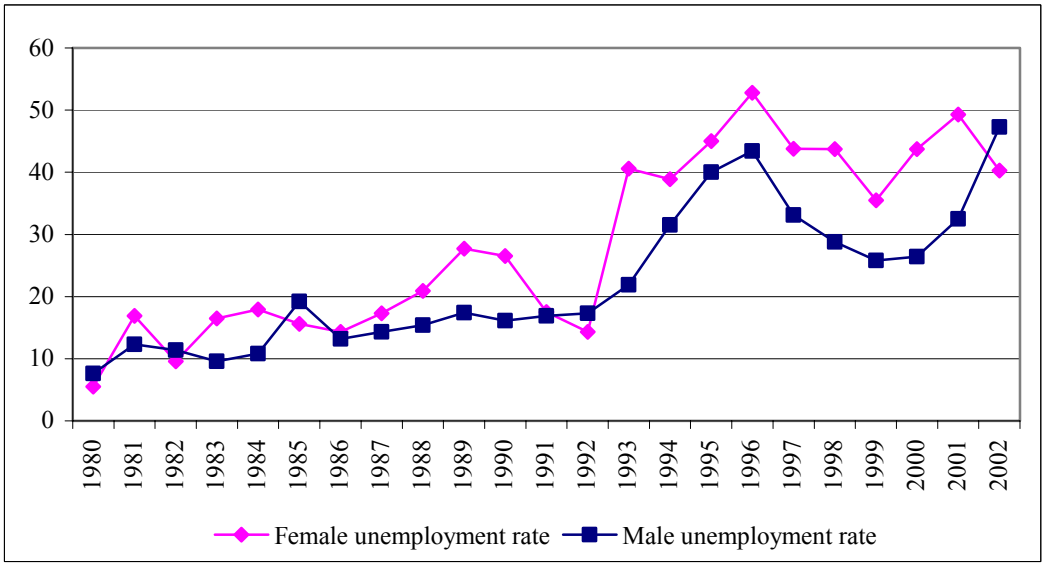
B Figures

Figure 1
Male and Female Unemployment Rates in the Great Buenos Aires.
1980-2002. October of each year



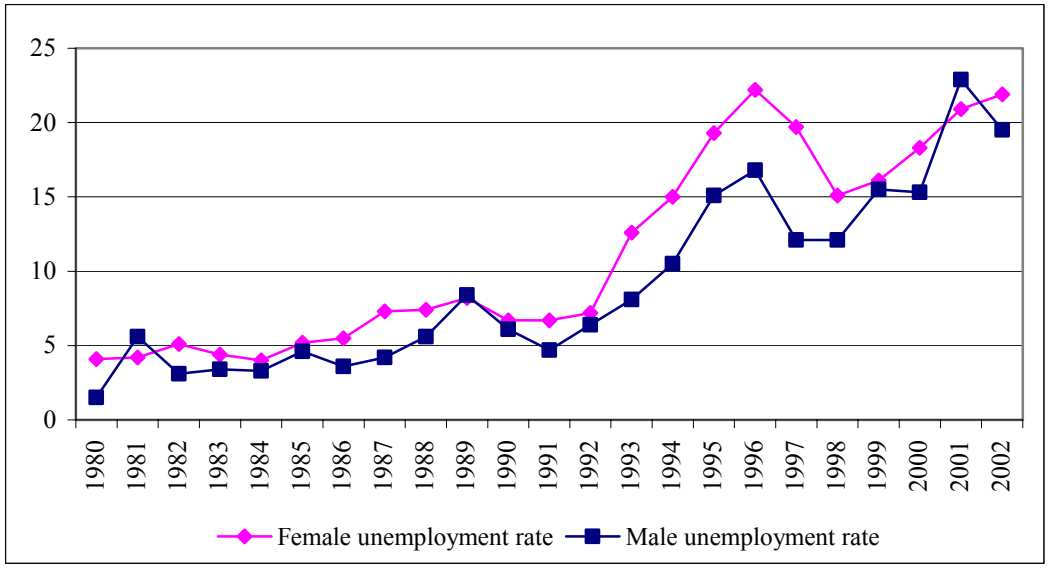
Source: Author's production using data from the INDEC.

Figure 2
Male and Female Unemployment Rates with Ages Ranging from 15 to 19 Years in the Great Buenos Aires. 1980-2002. October of each year



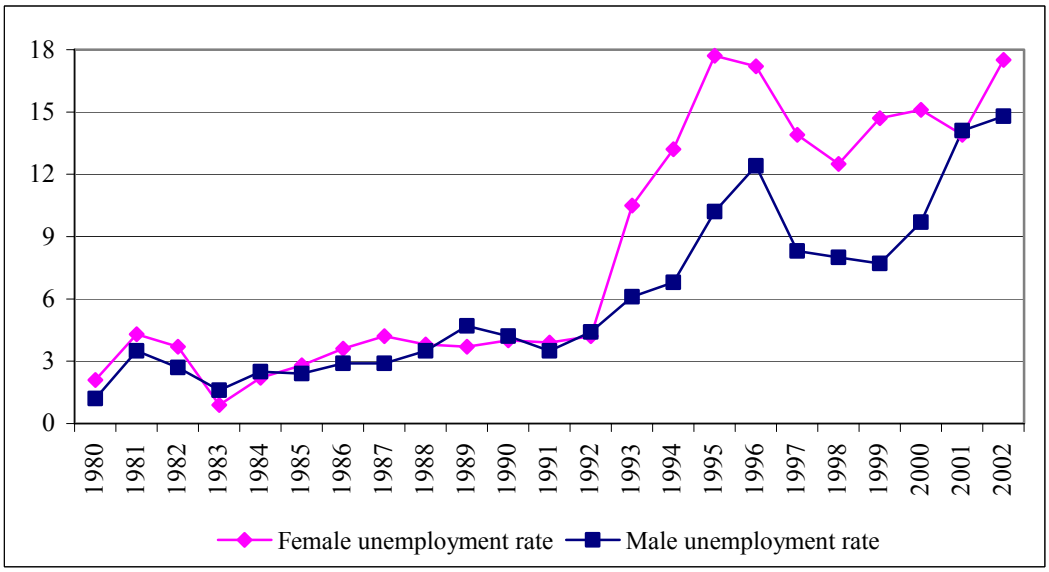
Source: Author's production using data from the INDEC.

Figure 3
Male and Female Unemployment Rates with Ages Ranging from 20 to 34 Years in the Great Buenos Aires. 1980-2002. October of each year
1980-2002. Octubre de cada año



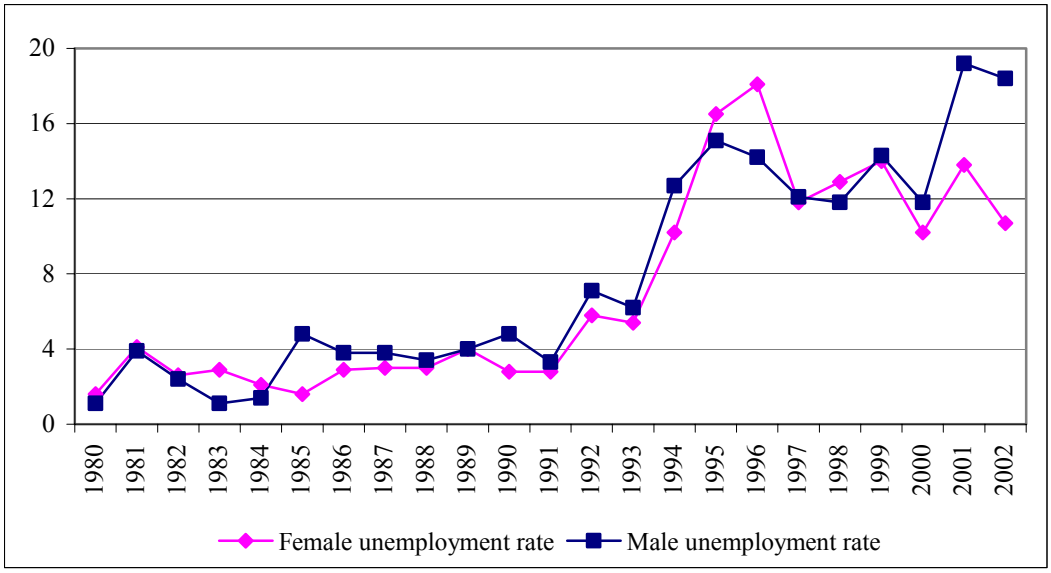
Source: Author's production using data from the INDEC.

Figure 4
Male and Female Unemployment Rates with Ages Ranging from 35 to 49 Years in the Great Buenos Aires. 1980-2002. October of each year



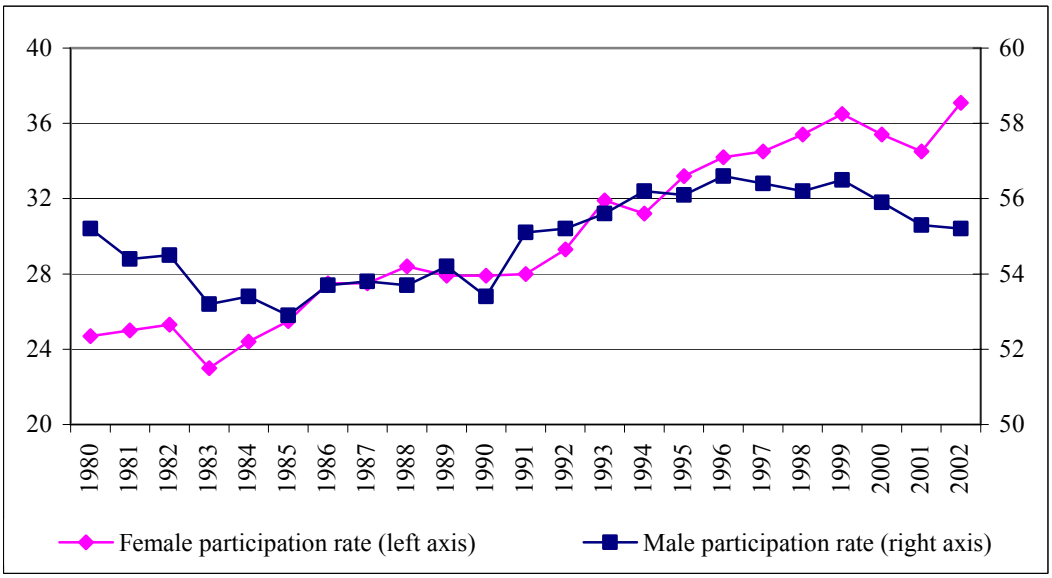
Source: Author's production using data from the INDEC.

Figure 5
Male and Female Unemployment Rates with Ages Ranging from 60 to 64 Years in the Great Buenos Aires. 1980-2002. October of each year



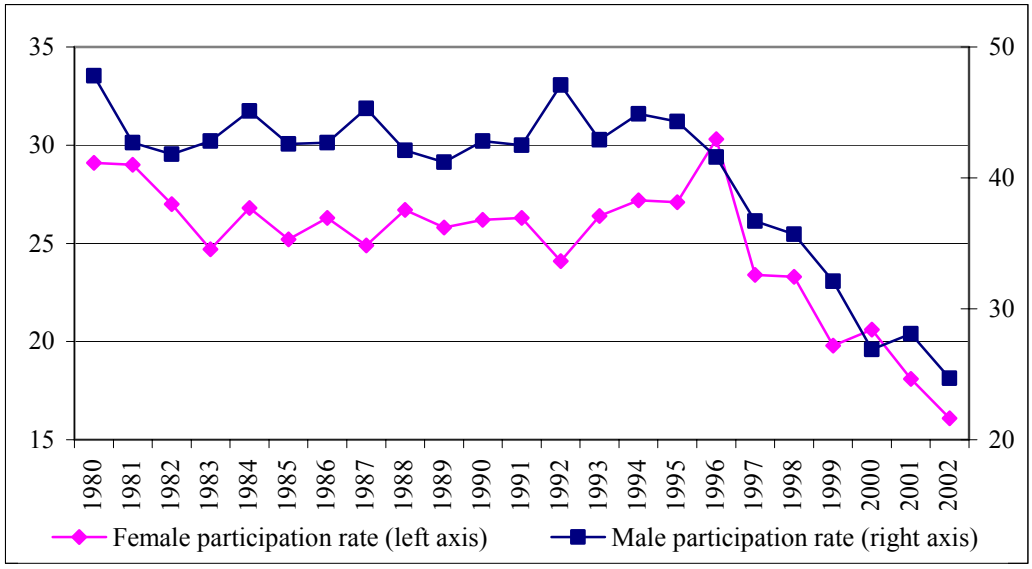
Source: Author's production using data from the INDEC.

Figure 6
Male and Female Labor Force Participation Rates in the Great Buenos Aires. 1980-2002. October of each year



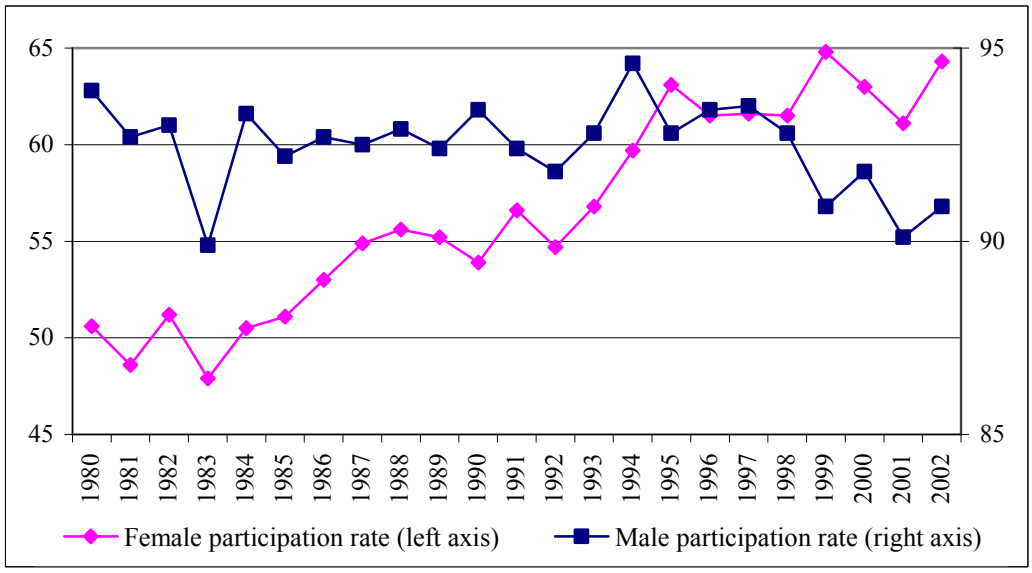
Source: Author's production using data from the INDEC.

Figure 7
Male and Female Labor Force Participation Rates with Ages Ranging from 15 to 19 Years in the Great Buenos Aires. 1980-2002. October of each year



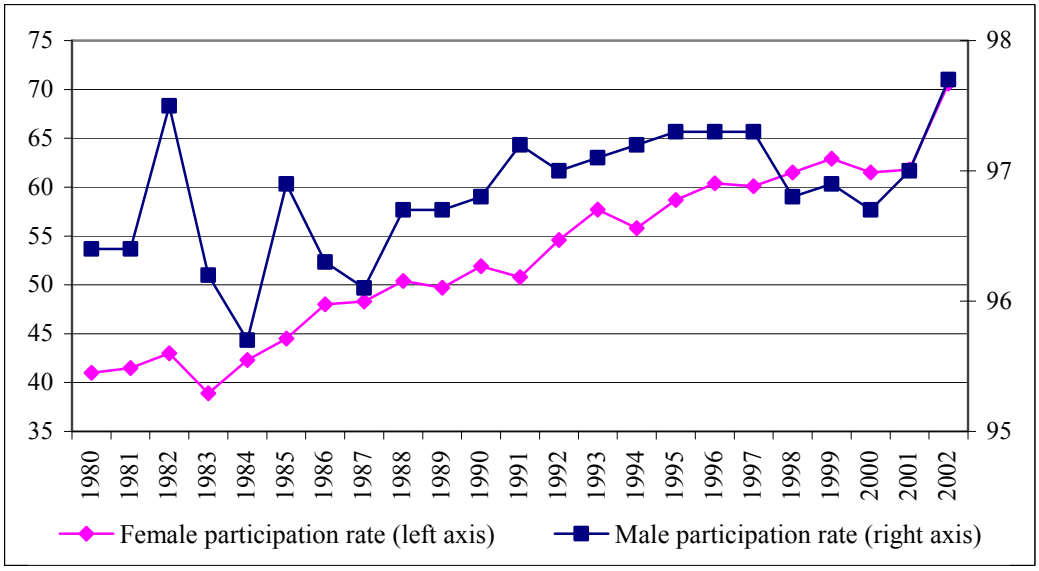
Source: Author's production using data from the INDEC.

Figure 8
Male and Female Labor Force Participation Rates with Ages Ranging from 20 to 34 Years in the Great Buenos Aires. 1980-2002. October of each year



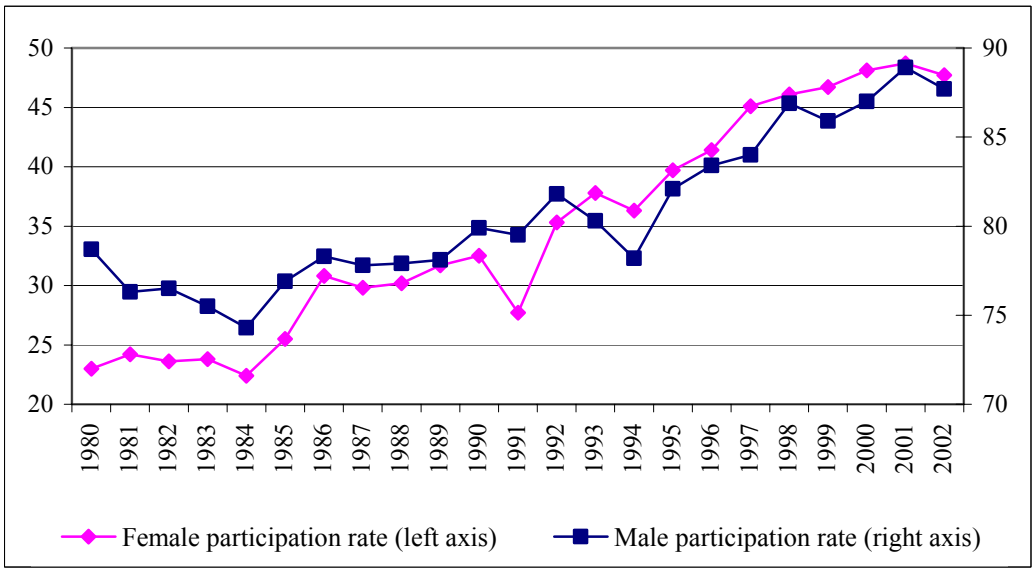
Source: Author's production using data from the INDEC.

Figure 9
Male and Female Labor Force Participation Rates with Ages Ranging from 35 to 49 Years in the Great Buenos Aires. 1980-2002. October of each year



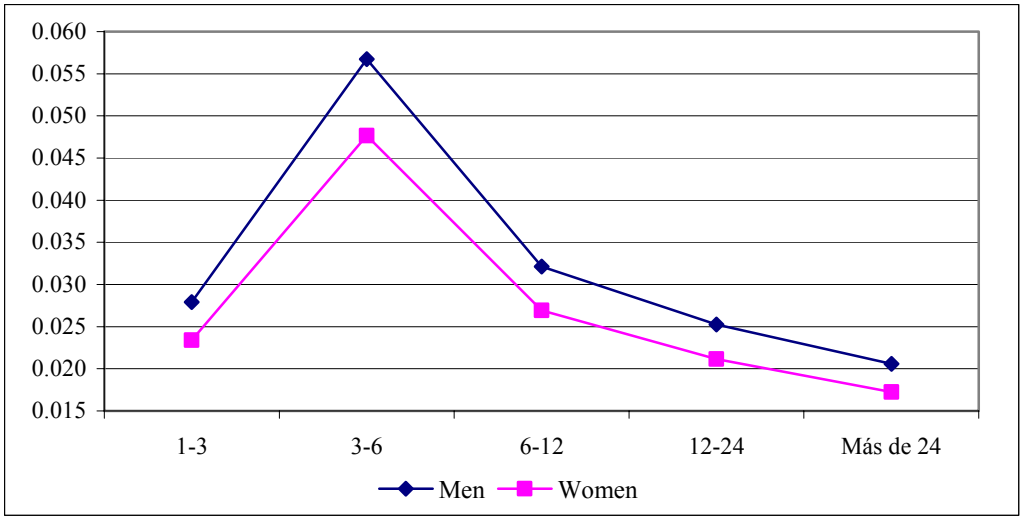
Source: Author's production using data from the INDEC.

Figure 10
Male and Female Labor Force Participation Rates with Ages Ranging from 50 to 64 Years in the Great Buenos Aires. 1980-2002. October of each year



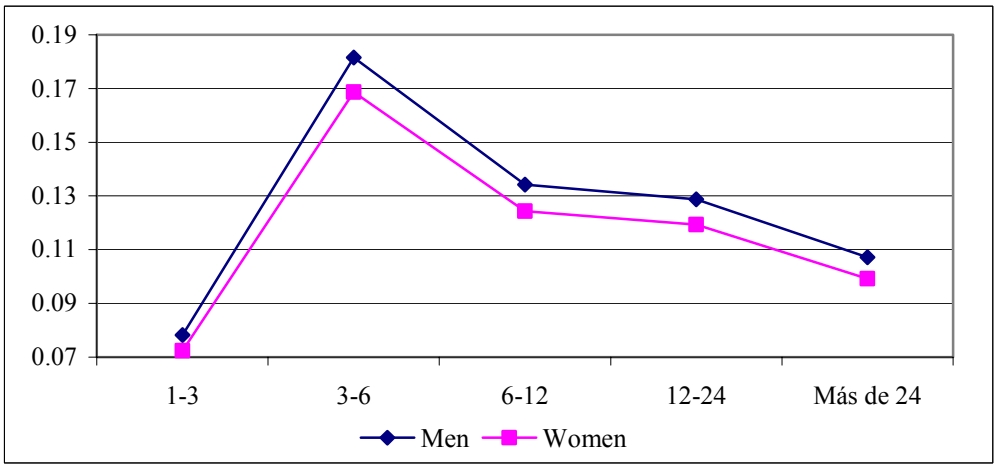
Source: Author's production using data from the INDEC.

Figure 11
Male and Female Hazard Rates from Employment



Source. Author's calculations.

Figure 12
Male and Female Hazard Rates from Unemployment



Source. Author's calculations.

C Variables

Personal Characteristics

Unemployed- It is a dummy variable that takes value one if the individual is unemployed and zero if the individual is employed as a salaried worker.

Women- It is a dummy variable that takes value one if female.

Age- It is measured through four dummies: *age 15-24, age 25-34, age 35-44 and age 45-54*.

Education- We measure the maximum level of education attained by the individual through six dummies: *incomplete primary studies, complete primary studies, incomplete secondary studies, complete secondary studies, incomplete tertiary studies and complete tertiary studies*.

Marital Status- We have constructed three dummies: *single*, that takes value one if the individual is single, *married*, that takes value one if the individual is married and *other marital status*, that takes value one if the individual is divorced or widow.

Household Characteristics

No Kids- It is a dummy variable that takes value one if the person does not have children under 14 years.

Household Income- It is obtained summing up the income of each of the other family members and deflacting it using the Consumer Price Index (base 1999=100).

Economy-wide Characteristics

Region- In order to measure local labor market conditions we have constructed six dummies: *Northwest, Northeast, Cuyo, Pampeana, Patagonica and Great Buenos Aires*[28].

Year- In order to take into account the state of the business cycle we have defined seven dummies: *1995, 1996, 1997, 1998, 1999, 2000* y *2001*.

Duration dependence

[28] The *Northwest region* includes Great Catamarca, Great Tucumán-Tafí Viejo, La Rioja, Salta, Jujuy-Palpalá and Santiago del Estero-La Banda. The *Northeast* region comprises Corrientes, Formosa, Posadas and Great Resistencia. The *Cuyo* region covers Great Mendoza, San Luis-El Chorrillo and Great San Juan. The *Pampeana* region includes Great La Plata, Bahía Blanca-Cerri, Great Rosario, Great Santa Fe, Great Paraná, Great Córdoba, Concordia, Santa Rosa-Toay, Mar del Plata-Batán and Río Cuarto. The *Patagonica* region comprises Comodoro Rivadavia-Rada Tilly, Neuquén-Plottier, Río Gallegos and Ushuaia-Río Grande. *Great Buenos Aires* includes Ciudad de Buenos Aires and Partidos del Conurbano.

Duration-It measures in months the lenght of the spell. It is the sum of three components: initial duration, that measures in months the time the individual reports to have been in the state of interest in the first interview; plus six months for each interview the individual reports to have been in the same state; plus six additional months minus the time the individual declares to have been in a new state when we observe a transition. We construct five dummies: *1-3 months, 3-6 months, 6-12 months, 12-24 months, and more than 24 months.*

Job Characteristics

Type of Contract-It is measured through three dummies that depend on the employment type of contract: *permanent contract, temporal contract,* and *other type of contract.*

Working Hours-It measures the number of weekly working hours and does not take into account the extra hours. We have constructed two dummies: *part-time,* if the person works less than 35 hours *per* week, and *full-time* if the person works more than 35 hours *per* week.

Private/Public Sector-We have constructed two dummies: *private* and *public.*

Sector of Activity-We have constructed three dummies that groups firms according to the sector of activity: *agriculture,manufacturing,* and *services.*

Level of qualification- We have constructed two dummies related to the third digit of the National Classification of Occupations: *skilled* and *unskilled*.

Firm Size-It is measured through four dummies that classify firms according to the number of employees: *1-5 employees, 6-25 employees, 26-100 employees* and *more than 100 employees.*