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Abstract

Using a structural model where the decision to search is endogenous, we analyze how various parameters such as the mean wage offer, the search costs, the offer probability and the value of non-market time can explain the gender wage gap. The model, which is implemented on a sample of young Canadian women who suffered a permanent job displacement, can be used to evaluate how much of the gender wage gap can be explained by the presence of young children.

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1 Introduction

For several decades, labor economists have tried to explain the existence of the wage gender gap. As in most western countries, women have constantly increased their share of the labour force, the interest in the persistence of a significant difference in wages paid to female versus male workers has grown steadily. Recent work on the issue include Blau and Kahn (1992, 1994), Light and Ureta (1995), O'Neill and Polachek (1993). To date, economists have retained two fundamental economic frameworks to understand the gender wage gap; human capital theory and statistical discrimination.

In the human capital approach (which dates back to Mincer and Polachek, 1974), the gender wage gap is explained by the fact that females are relatively more productive in household activities than males. For this reason, they tend to invest less in labor market oriented human capital or tend to work in occupations which do not require heavy human capital investments. The gender wage gap is therefore the results of discontinuous work pattern expectations.

The literature on discrimination has, on the other hand, focused on the differential treatment of male and females workers otherwise identical. The notion of discrimination, dating back to Becker (1971), is based on the fact that employers, facing uncertainty about individual productivity or individual labour force attachment, must sometimes focus on observed differences between groups (males and females) when hiring new workers. As a result, women may systematically receive lower wages or may be excluded from various occupations (see Lundberg and Startz, 1983, for an example).

The approach to the wage gender wage gap suggested in this paper is quite different than all previous work mentioned and has, to our knowledge, never been pursued before[1]. In this paper, we investigate the gender differences in Job Search outcomes which take place following a permanent job displacement. We analyze a sample of young males and females in various industries (most women in our sample are however working in the Services and the Manufacturing industries) and use a structural job search (dynamic programming) model to investigate their search behaviour. The model has several distinct features. First, the decision to search is endogenous. Using data on the willingness to search for a new job upon displacement, we specify a model where both males and females may decide to drop out of the labour force. Secondly,

[1]However, Swaim and Podgursky (1994) have investigated, in a reduced-form framework, female unemployment duration following a permamnent job displacement.

unlike most structural models found in the literature, we make use of a relatively large number of regressors to parameterize four most important aspects of the search process; the value of non-market time, the mean wage offer, the offer probability and search costs (rarely analyzed in the empirical literature). As a result, reservation wages are treated as a function of unknown parameters and exogenous regressors and must be solved using dynamic programming principles. This allows us to avoid imposing homogeneity across individuals.

We believe that the investigation of the gender wage gap using a structural model is particularly promising. First, the imposition of all the restrictions imposed by the dynamic programming allows us to obtain separate estimates for all parameters of the mean wage offer and the reservation wage function. This means that we can actually compute how various regressors such the number of young children, marital status, education the search parameters (including the probability of receiving offers and search costs) impact on males and females differently. Notably, this can be achieved without having to impose exclusion restrictions such as needed in reduced-form analysis of female wage functions. In other words, our model allows us to distinguish between supply side versus demand side factors affecting the gender wage gap. Secondly, the tightness of the search problem has implications for the escape rate out unemployment and the probability of dropping out of the labour force (because we actually estimate a search model with endogenous decision to search). Our structural estimates can therefore be used to investigate gender differences in unemployment duration and on the incidence of non-participation upon job displacement.

The model is estimated with the Canadian Labour market activity Survey[2] We use a sample of men and women who have experienced a permanent job displacement. The likelihood function is based on information on the decision to search or not to search upon displacement (we refer to this as participation data), duration data and re-employment wages. At further stage, we also use information on the presence of young children as well as marital status to explain gender differences in job search behaviour.

The paper is constructed as follows. In the next section, the theoretical model is presented in details. Section 3 is devoted to the discussion of econometric issues and the presentation of the likelihood function. The data set is presented in details in Section 4 while Section 5 is devoted to the presentation of the main results. The conclusion is in Section 6.

[2]Jones and Riddell (1995) present a very detailed description of the Canadian labour Market Activity Survey.

2 A Model with Endogenous Job Search

To investigate gender differences in job search outcome,we specify a stationary search model similar to the one estimated by Belzil and Zhang (1995) to investigate child care and search costs. The model is applied to both male and female workers (full-time) who are affected by a permanent job displacement. We disregard temporary layoffs. The model is constructed around the following assumptions.

1. Expected lifetime earnings are maximized over an infinite horizon and discounted at rate $\beta = \frac{1}{1+r}$
2. Individuals receive at most one offer per period and the probability of receiving an offer is given by ξ.
3. The unemployed receive unemployment benefit b for each period of unemployment.
4. The monetary cost of search activities (for each period) is denoted Ψ.
5. For those who decide not to search, the value of non-market time (per period) is given by the following expression

$$\mu_n = \frac{1}{\tau_1} \exp(\tau_1 K)$$

which can be interpreted as the monetary value of the output produced at home. K denotes the number of young children at the time of the displacement.

6. We assume that job offers are indexed by an hourly wage rate and that, upon acceptance, a job is held forever. Wage offers are distributed with density

$$f(w) = \lambda \exp(-\lambda w)$$

Using the previous assumptions, it is straightforward to derive the value functions associated to each state. They are given by

$$V_e(w) = \frac{w}{1-\beta} \tag{1}$$

$$V_u = b - \Gamma + \beta EV \tag{2}$$

$$V_n = \frac{1}{1-\beta}\left(\frac{1}{\tau_1}\exp(\tau_1 K)\right) \tag{3}$$

where $V_e(w)$ is the value of accepting employment at wage w, V_u is the value of unemployment (search) and V_n is the value of leaving the labour force to involve in household activities. The value of following the optimal policy in the future, EV, is given by

$$EV = \frac{1}{1-\beta}\left[w^* + \frac{\xi}{\lambda}\exp(-\lambda w^*)\right] \tag{4}$$

which can be used to derive the equation for w* , that is

$$w^* = b - \Psi + \frac{\beta\xi}{(1-\beta)\lambda}\exp(-\lambda w^*) \tag{5}$$

and where w* denotes the reemployment reservation wage (for those who decide to search and remain in the labour force) .

Equation (5) is sometimes called the "optimality condition". The necessary (and sufficient condition) to remain in the labour force and search (following displacement) is given by

$$\frac{1}{1-\beta}\left(\frac{1}{\tau_1}\exp(\tau_1 K)\right) \leq b - \Psi + \beta EV = \frac{1}{1-\beta}(w^*) \tag{6}$$

where w* is given by (5).

3 Estimation

In this section, we present the estimation strategy used to investigate the gender wage gap and related issues. First, by allowing the decision to search to be endogenous, we avoid self-selection bias introduced if we were to sample only those women searching and therefore work with duration and wage data (such as it is typically done in the previous literature). To do so, we make use of the sample information on the willingness to search or not upon job displacement as reported in the LMAS.[3] To take into account individual unobserved heterogeneity in the value of non market time, we allow the value of non-market time to incorporate a stochastic element. That is

$$\mu_n = \alpha + \frac{1}{\tau_1}\exp(\tau_1 K)$$

We assume that α is normally distributed;

$$\alpha \sim \text{Normal } (0,\sigma^2)$$

If we let $S_i = 1$ for those women who decided to search and 0 for those who dropped out and using the condition expressed in (6), the probability that a woman i will search is given by

$$P(S_i = 1) = P\left[\alpha \leq h(w_i^*)\right] = \Phi\left[\frac{h(w_i^*)}{\sigma}\right] \tag{7}$$

where

$$h(w_i^*) = w_i^* - \frac{1}{\tau_1}\exp(\tau_1 K) \tag{8}$$

where $\Phi(.)$ denotes the standard normal cdf and where w_i^* is given by the optimality condition (5). The probability that a woman decides not to search, $P(S_i = 0)$, follows trivially from (8). As it is the case in most economic surveys of the unemployed, some of the individual reporting that they are searching are still unemployed by the end of the survey time. For those women, we only observe a censored unemployment duration. For those women who completed their unemployment spell, we observe a completed duration t_i and a re-employment

[3]Our model is therefore distinct from those of Flinn and Heckman (1982) and Wolpin (1987), among others, where the decision to search or not is typically ignored.

hourly wage w_i. Completed observations are indexed by the binary variable $c_i = 1$ while censored observations are indexed by $c_i = 0$.

Given that a woman i decides to search, the probability that she is observed reemployed at wage w_i after t_i periods or that she is still unemployed by the end of the survey time is given by

$$\left\{(1-\xi\pi(w_i^*))^{t_i-1}\xi\pi(w_i^*)\frac{\lambda\exp(-\lambda w_i)}{\pi(w_i^*)}\right\}^{c_i}\left\{(1-\xi\pi(w_i^*))^{t_i}\right\}^{1-c_i}$$

where $\pi(w^*)$ is the acceptance probability; that is the probability that an offer exceeds w^*. The log likelihood function for the entire sample is therefore given by

$$\begin{aligned} l(\lambda,\tau_1,\Gamma,\theta) &= \sum_{i:S_i=0}\log\left(1-\Phi\left[\frac{h(w_i^*)}{\sigma}\right]\right)+\sum_{i:S_i=1}\log\Phi\left[\frac{h(w_i^*)}{\sigma}\right]+ \\ &\log\left\{(1-\xi\pi(w_i^*))^{t_i-1}\xi\lambda\exp(-\lambda w_i)\right\}^{c_i}\left\{(1-\xi\pi(w_i^*))^{t_i}\right\}^{1-c_i} \quad (9) \end{aligned}$$

It is easy to see that the following parameters can be identified (and estimated); the variance of α (σ), the parameter of the function representing productivity at home (τ_1), the wage offer distribution parameter (λ), the search costs parameter (Ψ)and the offer probability (ξ).[4] Maximization of the log likelihood function is rendered difficult by the fact that, at each iteration , w_i^* must be evaluated conditional on the values of the structural parameters. Using a Newton-Raphson procedure, the value of w^* which solves this relationship can be obtained relatively easily although these calculations must be updated at each iteration needed to maximize the log likelihood function.[5]

[4]We set the discount rate β to a value of 20% per year.

[5]To do so, we make use of the optimality condition (equation 5) and we define the following implicit equation

$$g(w^*) \equiv w^* - b - \Psi - \frac{\beta\xi}{(1-\beta)\lambda}\exp(-\lambda w^*) \equiv 0$$

The reservation wage, at step p+1, is defined as

$$w_{p+1}^* = w_p^* - \frac{1}{g'(w_p^*)}g(w_p^*)$$

and the maximization of the likelihood function is therefore very time consuming.

In order to introduce observed heterogeneity, we generalize the model to incorporate parametrization of the offer probability, search costs parameters the parameter representing home productivity and the mean wage offer . We allow the offer probability to depend on child status. This might be relevant if for instance, those women with young children searching for a new job are less flexible or have less time to devote to search activities. To take this into account, we specify the offer probability as

$$\xi = \exp(\xi_0 + \xi_1 K)$$

where both ξ_0 and ξ_1 are positive parameters.

Similar arguments can be applied to gender differentials in search costs. The presence of young children are likely to affect female search behaviour. In order to preserve positivity of the search costs, we specify Ψ as

$$\Psi(.) = \Gamma(\gamma_0 + \gamma_1 . I(K > 0)) - .886$$

where $\Gamma(.)$ denotes the gamma function and is given by

$$\Gamma(s) = \int_0^\infty x^s \exp(-x) dx$$

and where I(.) denotes the indicator function.

A representative agent model can also be criticized for ignoring the fact that females with different level of education (human capital) do not search from a same distribution. In standard regression analysis of female earnings, the number of regressors usually included is large. Given that the LMAS does not give a detailed age and a detailed level of schooling, we use the industry and occupation (at the time of the job separation). As our objective is to estimate the structural parameters of the effects of young children on search costs and reservation wages, we do not give a structural interpretation of the regressors included in the mean wage offer equation but rather incorporate all relevant information which allows us to control for individual endowments in human capital. For this reason, we parametrize the parameter of the offer distribution as a function of education binary variables (primary and university are dummy variables indicating the highest degree attained by a given woman). Note that the most important groups (those who have a high school degree) are the reference group. The four (4) industrial categories used are as

follows; primary (including agriculture, forestry and fishing), manufacturing, transportation/communications and Services (including trade, finance and administration). Manufacturing has been used as the reference group. We have three (3) occupation categories; White Collars, Blue Collars and Professionals. Those employed in farming related occupations are excluded from the analysis.

Finally, in some cases, we implement versions of the model where education also raises the productivity at home, we specify the value of non market time as

$$\tau = \exp(\tau_0 + \tau_1 primary + \tau_2 university)$$

4 The Canadian Labour Market Activity Survey

The sample analyzed in this paper is drawn from the 1986-1987 Canadian labour Market Activity Survey (LMAS). The LMAS is a longitudinal data set where the basic unit of observation is the job held by the respondent. The sample used contains only male and female workers who held a full time job and experienced a permanent job displacement. The notion of displacement used in the paper includes layoffs for non-seasonal reasons, plant closure, end of a temporary job and a dismissal by the employer. It is therefore consistent with the notion of displacement used in the empirical literature. In the LMAS, the duration of unemployment is computed from the difference between the starting week of the new job (when applicable) and the week of termination of the previous job. As documented by Jones and Riddell (1995), the exact nature of the non-employment spell is not clear. Every individual is asked to report their weekly status (whether they are searching, not searching but willing to work or simply not available to work) so the post-displacement status is actually a complex sequence of states which, in many cases, might not be consistent with a stationary search model where individuals decide (upon displacement) to search or not. However, in order to estimate our model, we rely on the information provided by individuals when asked if they were available for work over the entire period of non-employment. Those reporting that they were not available at all during the non-employment period are considered as non-participants (those who are not searching)

In the LMAS, hourly wages as well as hours per week are reported for all jobs sampled. This allows us to construct a measure of the level of unemployment benefit received for those who report having received UI benefit. To do

so, we use the fact that, in 1986, the maximum insurable earnings were 495$ per week and the replacement ratio was 60%. On top of the information on the decision to search, upon-employment duration and accepted wages, the LMAS reports information on the number of young children so that we can identify those women who had children when displacement took place. We also observe the marital status (whether married , divorced, single or cohabitating) so that lone mothers and married mothers can be analyzed separately.

In this paper, we focus on young and prime-age workers (less than 45 years old). Around 41% of the women are under 25, 40% are between 25 and 34 and 19% between 35 and 44 years old. More than 75% of the women were actually working in the Service industry while around 14% were in the Manufacturing industry. The large majority of the women in the sample (82%) work in white collar occupations while around 16% are employed in blue collar occupations. The education background of the women of the sample is as follows. About 8% only have completed at most a high school degree while 33% have attended university. The majority (59%) reports having completed a post-secondary degree (technical school).Censoring is quite important in the data. Among 833 women aged below 45, 275 only had found a new job by the end of the survey. The remaining 558 women are split between those who were still searching at the end of the survey and those who report not searching after the loss of their previous job.

For males, the age breakdown is as follows. Around 30% of males are below 20 while 43% are between 25 and 34 and 27% are between 35 and 44. As expected male displaced workers are found in every industrial classifications; 15% in primary industries, 20% in manufacturing, 26% in Communications and Transportation and 40% in the Services industry. White collar workers represent 30% of the males while 62% of the males work in blue collar occupations. The remaining 8% is employed in occupations related to farming. Among the 545 males included in our sample, 12% have completed at most a high School degree, 43% a post secondary degree and 24% have attended university.

The following table (Table 1) illustrate the characteristics of the men and women in the sample.

Table A1

Descriptive Statistics[6]

Sample	Females		Males	
	Mean	St. Dev.	Mean	St. dev.
Unemp. Dur. (weeks)	22.5	(16.1)	20.2	16.1
Dur. Prev. Job (weeks)	67.6	(129.2)	160.8	210.9
Prev. wage (weeks)	6.37$	(3.08)	10.10 $	4.70
UI Benefit				
# of Children	.33	-	0.59	-
Acc. wage (per hour)	7.14$		9.46 $	4.42
% attended university.	33%		24%	-
% not searching	6%		5%	
% found a new job	275/833		277/545	

5 Empirical Results

The set of results presented are grouped in three sub-sections. In section 5.1, we present estimates of the structural models obtained separately for males and females. In section 5.2, we present pooled estimates which can illustrate gender differences in various parameters. Finally, in section 5.3, we present separate estimates by gender in order to illustrate how the presence of young children affect search outcomes of males and females differently.

5.1 Estimates by Gender

As a first step, we estimate a representative agent version of the model for both males and females. The results are in Table 2A. The model is specified under the assumption that the presence of young children only affects the value of non-market time. Neither search costs nor offer probabilities are allowed to depend on child status. The results reveal some interesting differences between males and females; there is a much more significant level of heterogeneity in the value of non market time among women than among men, women face much higher search costs (2.88 dollars versus 1.83) and women receive offers much less frequently than males (the probability of receiving an offer is.047 per week

[6]**Wages and unemployment insurance benefit are on a per hour basis. All durations are measured in weeks.**

for females while it is .144 for males). Interestingly, the difference between the mean wage offer for males and females is very small; 3.65 $ for males and 3.42 $ for females. This implies a gender wage gap of 6.7% in offered wages. However, because females seem to face higher search costs and receive offers less frequently, their discounted expected lifetime earnings will clearly be lower and so will their reservation wages.

Table 2- Representative Agent Model

Age Group	**(Males)**	**(Females)**
Parameter	**Coef. (T-Ratio)**	**Coef. (T-Ratio)**
Unobs. heterogeneity (σ)	5.047 (0.84)	3.64 (2.58)
Home Productivity (τ)	0.262 (0.32)	0.378 (1.71)
Search Costs (γ)	1.83 (1.02)	2.882 (2.57)
Offer Probability (ξ)	0.144 (2.64)	0.047 (4.52)
Wage offer (λ)	0.274 (7.96)	0.292 (8.98)
Log Likelihood	-640.7	-1014.6
Sample size	494	794

5.2 Pooled Estimates

As the estimates of Table 2 suggest that female and males might face different search parameters, it is natural to pool males and females and investigate more precisely which of the parameters are more likely to explain male/female differences in wages. Furthermore, our estimates of the wage gender gap can be improved substantially by incorporating observed heterogeneity. In Table 3, we present estimates obtained when the mean wage offer, the value of non-market time and the offer probability (λ, τ and ξ) are function of a gender binary variable (1 for male and 0 for female) and where both τ, λ and ξ are allowed to be function of education classes (primary, secondary (the reference group) and university).[7] We also incorporate industry dummies and occupation dummies in λ.

The estimates are presented for all males and females column 1, all males and females with no children (in column 2) and all males and females with

[7]In some cases, we have also allowed search costs to be different for males and females but we never found any evidence of gender differences in search costs. To restrict the number of parameters, we therefore restricted search costs to be homogenous .

children in column 3. From the results in column 1, we can see that those individuals with university training (-.8315) are actually more productive at home in the presence of children but that male/female differential in home productivity are basically inexistent. However, wage offers are significantly higher for males than females (-.2784 for λ_{males}) and, moreover, males receive offers much more frequently ($\xi_{male} = .7502$).

A possible (and plausible) explanation for the existence of male/female differential in reservation wages is the presence of young children. In column 2 and 3, we have analyzed males and females together according to whether or not they have young children. The results indicate that males are more productive at home as well as in the labor market (λ_{male} and τ_{male} are both negative significant). This is true for those with and without children. However, the estimates for the male/female differential in offer probability (ξ_{male}) reveal a huge difference between those with and without children. Males and females with no children face a similar offer probability ($\xi_{male} = .1370$ and is insignificant) while females with children receive offers at a much lower rate ($\xi_{male} = 1.33$) and males. Given that male/female differences in wage offer are almost identical for those with and without children, these results imply that child status at job displacement is a strong component of the gender wage gap. A natural step to undertake is therefore to formulate our search model so that search costs and offer probabilities are allowed to depend on child status.

Table 3 - Gender Differences in Job Search Parameters (Pooled Estimates)[8]

		-1- All	-2- With Children	-3- No Children
	Parameter	**Co/Tratio**	**Co/Tratio**	**Co/Tratio**
Non-market time	σ	4.3259 (6.01)	3.4919 (2.24)	2.6529 (3.84)
	$\tau_{intercept}$	-0.9167 (2.44)	-0.9561 (1.96)	-1.2844 (3.72)
	$\tau_{university}$	-0.8315 (2.17)	0.1557 (0.17)	-0.9236 (3.24)
	τ_{male}	-0.2677 (0.88)	-0.6753 (1.93)	-0.5343 (2.58)
Search Costs	$\gamma_{intercept}$	2.5653 (3.79)	2.6278 (3.71)	1.8836 (0.88)
	γ_{male}	-	-	-
Offer Prob.	$\xi_{intercept}$	-3.4729 (10.82)	-2.3391 (3.73)	-2.8390 (7.42)
	$\xi_{primary}$	1.2912 (1.96)	0.0300 (0.02)	0.6712 (0.74)
	$\xi_{university}$	1.6824 (3.54)	-1.1594 (1.55)	0.3655 (0.71)
	ξ_{male}	0.7502 (2.29)	1.3327 (1.88)	0.1370 (0.33)
Wage offer	$\lambda_{intercept}$	-1.3290 (10.83)	-0.7572 (4.12)	-1.0913 (7.27)
	λ_{male}	-0.2784 (2.88)	-0.6681 (3.09)	-0.5814 (3.87)
	Log Lik.	-1264.6	-397.8	-860.4

5.3 Young Children and the Gender Wage Gap

The last group of estimates presented are those obtained when we investigate how the presence of young children affect male/female search behaviour. In order to illustrate those difference, we consider the cases where search costs and offer probabilities are parameterized as a function of the number of young children and compare estimates obtained for males and females separately. In order to take into account that those individuals with higher education have possibly a higher value of non-market time, we still allow τ to be function of education dummies and an intercept using an exponential function.

The results are quite explicit about gender differences and the presence of young children. First, we note that the value of non market time is significantly different for females with university training (a very plausible result) while ,for males, it seems independent from education. More importantly, the probability

[8]**To save space, the parameter estimates for industry and occupation (in λ) and primary education (for τ) are not presented.**

of receiving a job offer is significantly lower for females with children (-.4071 in column 1 and -1.0248 in column 3). This implies that females with children face a lower value of search than females with no children or males and that, as a consequence, the optimal reservation wage is also lowered by the presence of young children. Interestingly, women with young children do not face significantly higher search costs; the estimates indicate that females without children face search costs of the order of 1.20$ per hour while those with children face search costs of the order of 1.35$ per hour. However, as pointed out in Belzil and Zhang (1995), this result might be explained by the equality of child care costs arrangements while employed and unemployed.

Table 4A- The Effects of Young Children (Estimates for Males)

		-1-	-2-	-3-
	Param	**Coef.(Tratio)**	**Coef.(T-Ratio)**	**Coef. (T-ratio)**
Non-market time	σ	5.2699 (1.24)	5.3956 (1.23)	4.2850 (1.84)
	τ_{inter}			
	τ_{prim}	-0.0779 (0.07)	-.0444 (0.04)	.4575 (0.71)
	τ_{univ}	0.2581 (0.14)	0.2420 (0.15)	-0.29 (0.22)
Search Costs[9]	γ_{inter}	2.2836 (1.60)	1.6656 (1.20)	1.6414 (0.22)
	γ_{child}	-	0.1255 (0.04)	0.1550 (0.06)
Offer Prob.	ξ_{inter}	-2.5834 (5.05)	-2.4251 (4.45)	-2.3750 (4.46)
	ξ_{Child}	-.0060 (0.05)	-	-0.1312 (1.52)
	Log Lik,	-556.6	-554.7	-550.5

Table 4B- The Effects of Young Children (Estimates for Females)

		-1-	-2-	-3-
	Param	**Coef.(Tratio)**	**Coef.(Tratio)**	**Coef. (Tratio)**
Non-market time	σ	3.0707 (4.29)	3.9316 (4.17)	4.5988 (4.79)
	τ_{inter}	-0.8374 (2.93)	-0.9498 (2.09)	-0.7785 (2.69)
	τ_{prim}	.3416 (1.33)	0.5733 (1.47)	0.3396 (0.51)
	τ_{univ}	-.8509 (3.04)	-0.5449 (1.31)	-0.7299 (2.22)
Search costs	γ_{inter}	2.5773 (3.67)	2.3738 (3.70)	2.2717 (2.79)
	γ_{Child}	-	0.1527 (0.58)	0.1522 (0.37)
Offer prob.	ξ_{inter}	-2.9019 (7.53)	-2.6526 (7.25)	-1.4648 (3.66)
	ξ_{Child}	-.4071 (5.37)	-	-1.0248 (10.20)
	Log Lik.	-821.9	-830.0	-802.8

6 Conclusion

The fact that males tend to earn more than females is a stylized fact present in all industrialized countries. Several explanations, reviewed in the introduction section, have been proposed by labor economists. In this paper, we have proposed a new approach to the issue; namely, we have investigated how the job search process may differ across males and females. Using a structural job search model with endogenous search, we have estimated how differences in structural parameters can affect the discounted expected lifetime earnings of unemployed females and found that the presence of young children plays an important role in the setting of the optimal reservation wage. Indeed, there is very little evidence that the value of non-market time of females is higher than for males. Our estimates imply that females with no children are quite identical to male workers and are therefore consistent with the claim that the gender wage gap is typically small when males and females enter the labor market but tend to increase with age (or experience).

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