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by

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Gender Discrimination and Self-Employment Dynamics in Europe

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Abstract

This paper examines the effect that gender-based earnings discrimination has on self-employment dynamics among females, with a focus on four countries in Western Europe. Using data from the European Community Household Panel in the 1999-2001 time period, we test the hypothesis that the probability of moving into self-employment is positively related to prior earnings discrimination, as measured by unexplained deviations from expected (male) earnings. Our findings suggest that women who have lower than expected wage sector earnings relative to other women are more likely to leave wage employment in the following year. The results with respect to discrimination, however, are mixed.

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I. INTRODUCTION

Over the past several decades, identifying the determinants of self-employment and entrepreneurship behavior has been an important topic in the labor economics literature, both in the United States and abroad. Researchers have sought to explain changes in self-employment rates over time, as well as differences in rates across demographic groups. Part of the motivation for these studies has been the fact that governments have pursued the promotion of self-employment as a strategy for reducing unemployment or for increasing labor force activity among disadvantaged groups in particular, including youth, immigrants, ethnic minorities, and women. It is therefore important to identify the factors that affect the choice between employment sectors. It is especially important to determine whether self-employment is a desirable move "upward" for workers, or whether it is a second choice for those dissatisfied in the wage and salary sector. One source of dissatisfaction could be wage or salary earnings less than "expected," as compared with other workers.

In the present paper we examine this question for the case of women. In particular, we focus on gender-based earnings discrimination as a source of the dissatisfaction that could lead women to choose self-employment. Our hypothesis is that women who have earnings less than predicted according to male returns in one period will be more likely to choose self-employment in the following period.

We examine the hypothesis using data for four European nations, from the European Community Household Panel survey (ECHP) for the 1999-2001 time period.

Our analysis yields mixed results, with a strong effect of deviations from expected female earnings, but less strong results for deviations from male earnings, depending on the model estimated.

The paper is organized as follows: section II presents a brief summary of recent papers focusing on the role of earnings in explaining sectoral choice. Section III presents the rationale for the hypotheses studied, while section IV describes the methodology and data used in the study. Results are presented in section V. Conclusions and topics for further research are presented in section VI.

II. PREVIOUS WORK

Previous empirical analyses have identified several factors related to the self-employment versus wage and salary employment decision, including the individual's preferences for income and risk, entrepreneurial ability, wealth, marginal tax rate, skill level, and various other personal characteristics.[1] Studies focusing on female self-employment in particular also include variables related to marital status and the presence or ages of children, with child caring behavior studied as well. These factors are related to the perceived greater degrees of autonomy and job flexibility in self-employment.[2]

The most obvious factor related to the choice between self-employment and wage and salary work is the relative earnings expected in each of the respective sectors. Bernhardt (1994), using a sample of Canadian white males, finds that relative potential earnings is the dominant factor in determining the probability of employment in the self-

[1] See Parker (2004) for a survey of the literature.

[2] See, for example, Boden (1999), Carr (1996), Connelly (1992), Hundley (2000), and Hildebrand and

employment sector.[3] This finding has been confirmed by many others, including Rees and Shah (1986) and Taylor (1996) for the UK, Clark and Drinkwater (2000) for England and Wales, Johansson (2000) for Finland, and recently Hammarstedt (2006) for Sweden.

The relative earnings (actual or predicted) between wage sector employment and self-employment is determined both by the wage earned in the wage sector and the earnings in the self-employment sector. Gender based earnings discrimination in the wage sector can therefore impact the sectoral choice, depending on the existence and extent of customer discrimination in the self-employment sector (Borjas and Bronars, 1989). This relationship has been studied most explicitly by Leung (2006).[4] Using data from the Canadian Survey of Labour and Income Dynamics, he finds that the male/female log-earnings gap is larger in self-employment than in wage employment, but that the unexplained wage gap is larger in the wage sector. His estimates suggest that gender based discrimination in the wage sector leads to an increase in the self-employment rate of women. Hammarstedt (2006) arrives at a similar conclusion, but for immigrants, in Sweden.

Another paper related to the present analysis examines the effect that deviations from expected earnings in the wage sector have on the probability of self-employment among men (Andersson and Wadensjo, 2006). They hypothesize that workers who are

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Williams (2003).

[3] One weakness of that analysis (and others like it) is its reliance on estimates of self-employment income, which can be suspect given the unallocated returns to capital as opposed to labor and the higher propensity of the self-employed to understate income. The present paper does not suffer from this criticism, as its methodology does not require estimates of self-employment income.

[4] Another paper which studies explicitly the relationship between gender discrimination and the level of female self-employment, but using a very different approach, is Rosti and Chelli (2005). Other work related to discrimination and self-employment tends to focus on the effect that discrimination has on the incomes of the self-employed (e.g., Borjas and Bronars, 1989; Coate and Tennyson, 1992).

"underpaid" (that is, have earnings less than expected compared with other men) in a given period will be more likely to make the transition to self-employment in the following period. Using Swedish register data for the 1998-2002 period, they estimate probit equations for the probability of self-employment, including dummy variables indicating whether the worker is underpaid or overpaid ("high achievers") as independent variables, allowing for a non-linear effect. Their results suggest that both groups (underpaid and overpaid) are more likely to make the transition to self-employment than the reference group.

This paper examines the effect of gender earnings discrimination using a method similar to that of Andersson and Wadensjo. Our approach allows us to differentiate, however, between the variations in earnings resulting from discrimination and that resulting from under or overpayment as in their paper, thereby extending their analysis. One advantage to this approach, over that of Leung for example, is that we are not required to use self-employment earnings information, which can suffer from measurement error (see fn. 2 above).

III. WAGE DISCRIMINATION AND SECTOR CHOICE

Standard economic models suggest that the choice between self-employment and working in the wage and salary sector depends on several factors.[5] First is the expected gross return in self-employment, which might depend on the choice of occupation or industry of self-employment, coupled with perceived managerial and entrepreneurial

[5] Again, see Parker (2004) for examples of models of the choice of sector. Sectoral choice is closely related to other labor market decisions, including whether to work part-time or full-time, whether to work at more

abilities of the worker. Second are costs of capital and other inputs necessary for self-employment. These factors are weighed against the expected wage that can be earned in wage and salary sector employment. Finally, adjustments must be made for the preferences of the worker, such as the desire for autonomy, and the degree of risk aversion. The worker is assumed to choose the sector that maximizes expected lifetime utility. Transitions between the sectors arise over time as a result of receipt of new information represented by changes in any of the values of the variables noted above. The realization that one's wage and salary earnings are not as high as expected, for example, may increase (ceteris paribus) the probability that an individual will move into self-employment from the wage and salary sector. We hypothesize that gender based wage discrimination, which decreases the expected wage for women in the wage and salary sector, will lead to an increase in the rate of transition to self-employment among women.

It must be noted, however, that the above is true only to the extent that we can assume that gender based wage discrimination is not correlated with any gender discrimination in the self-employment sector. In general the literature considers these to be based on employer and customer preferences, considered quite separate for this purpose, so we are confident in making this assumption.

To the extent our main hypothesis is true, one could argue that labor market discrimination leads to a suboptimal choice of sector. Presuming that women who initially chose the wage and salary sector were maximizing their utility, then a subsequent move to self-employment as a result of discrimination must decrease it.

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than one job, whether to work at home, etc. The joint nature of these decisions is ignored in this analysis

IV. EMPERICAL METHODOLOGY AND DATA

Suppose the (log) wages of females and males in the wage and salary sector are determined by the following wage equations:

$$Wi_F = a_F + \mathbf{b}_F Xi_F + ei_F$$

and $$Wi_M = a_M + \mathbf{b}_M Xi_M + ei_M$$

where $\mathbf{X}_F$ and $\mathbf{X}_M$ are vectors of worker, firm, and industry characteristics for females and males, respectively, a is a constant term, **b** is a vector of regression coefficients, and "e" represents an individual-specific random error. Then inserting the mean values of the Xs, the average log wages are given by

$$\mathbf{W}_F = a_F + \mathbf{b}_F \mathbf{X}_F$$

and $$\mathbf{W}_M = a_M + \mathbf{b}_M \mathbf{X}_M,$$

Let $\mathbf{PW}_{iF}$ and $\mathbf{PW}_{iM}$ represent the expected (predicted) log wages for an individual female i with a given set of values of characteristics, $\mathbf{X}_i$, using the female and male wage equations, respectively:

$$\mathbf{PW}_{iF} = a_F + \mathbf{b}_F \mathbf{X}_i$$

$$\mathbf{PW}_{iM} = a_M + \mathbf{b}_M \mathbf{X}_i.$$

That is, $\mathbf{PW}_{iF}$ is the wage a female would expect to earn in the wage and salary market, given her characteristics $\mathbf{X}_i$, and $\mathbf{W}_{iM}$ is the wage the same female would expect to earn in the wage and salary market if she were treated as a male. Let d_{iF} and d_{iM} be the deviations of a female's observed earnings (W_i) from the expected earnings ($d_{iF}=W_i-\mathbf{PW}_{iF}$, $d_{iM}=W_i-\mathbf{PW}_{iM}$). Note that d_{iF} is the same as the error term in the individual female

wage equation (= e_{iF}). This error is the focus of the analysis (for men) in Andersson and Wadensjo (2006).

The term d_{iM} is the difference between what the female worker earns and the predicted (average) earnings for a comparable male (as measured by the variables in **X**). This measure is similar to the measure of "discrimination" arising from the standard Blinder-Oaxaca decomposition, except that it is calculated at an individual level.[6]

Then variable d_{iM} can be written as:

$$\begin{aligned} d_{iM} &= W_i - \mathbf{PW}_{iM} \\ &= (a_F + \mathbf{b}_F\mathbf{X}_i + e_{iF}) - (a_M + \mathbf{b}_M\mathbf{X}_i) \\ &= [(a_F - a_M) + (\mathbf{b}_F - \mathbf{b}_M)\,\mathbf{X}_i] + e_{iF} \\ &= D_i + e_{iF,} \end{aligned}$$

where D_i is the part of the earnings difference due to differences in the coefficients between males and females, usually ascribed to labor market discrimination. Note that if "discrimination" is present, then $D<0$. The second term, e_{iF}, is the individual female's deviation from expected female earnings. Negative values indicate a woman earns less than would be expected, given her values of the characteristics X. On average, $D=d_{iM}$, as in the Blinder-Oaxaca decomposition, since the expected value of e_{iF} is zero.

The goal of this analysis is to determine the effect that this individual-specific gender-based differential, as measured by the deviation D_i, has on the probability of making a transition from wage and salary sector employment to self-employment. If females base expected wages only on the wages of other females, then D should have no effect on the probability of future wage employment. Our hypothesis, however, is that a

woman will be more likely to leave wage employment, the lower (greater in absolute value) her value of D. We also expect a similar effect of deviations from expected female earnings, as measured by e_{iF}, consistent with the hypothesis put forth (for men) by Andersson and Wadensjo.

The methodology is straightforward. First, standard log-linear wage equations are estimated separately for males and females:

$$W_i = a + \mathbf{b}\mathbf{X}_i + e_i.$$

The variables used in the vector **X** include controls for several usual personal and job characteristics, including age, educational level, sector of employment, occupation, and health status (described below).[7] The samples are made up only of individuals in wage and salary employment in their current job in an initial period, t (either 1999 or 2000).[8] A two-step Heckman model controlling for selection into employment is used.[9] Using the cofficients from the log-wage equations, we calculate the female wage residuals, d_{iF} and d_{iM}, as the difference between the actual and predicted values of W_i, as described above. The difference between the two is the individual-specific discrimination measure, D_i.

Given estimates of the residual and discrimination terms, the parameters are estimated for a specification for the conditional probability of making the transition to self-employment in period t+1 (year 2000 or 2001), given wage and salary employment in period the previous year, t:

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[6] In the Blinder-Oaxaca decomposition, the usual measure is for the average within a sample.

[7] Several specifications were examined, including those without the occupational controls and with a tenure variable. The high prevalence of missing values for the tenure variable precluded its inclusion in the final analysis. The qualitative results were the same as those presented in the paper.

[8] Many observations are repeated, since it is possible to be wage-employed in both periods. The correlation across observations is controlled using the "cluster" option in STATA.

[9] Note that simple OLS estimates yield similar qualitative results.

$$\text{Prob}[self_{t+1}=1|self_t=0] = f(\mathbf{Z}, d_{iF}, D_i).$$

The probability of making the transition is assumed to be a function of a set of personal characteristics (**Z**), and the deviations from expected income (hereafter called RESIDF and DISCRIM). Our hypotheses are that the coefficients on the latter two terms are negative. We use a logit specification to estimate the parameters.

The analysis is conducted using data from the European Community Household Panel (ECHP). A description of the data and on-line user's manual are available at the Resource Center for Access to Data on Europe, http://www-rcade.dur.ac.uk/echp/. See also the description found in Peracchi (2002). The ECHP contains information for a sample of households and individuals first interviewed in 1994 and through 2001. We use the data from the last three waves, for the 1999-2001 time period. The complete ECHP survey includes households from 15 countries in Western Europe. There were approximately 60,000 households sampled in 1995. We focus on only four countries in this: France, Belgium, Luxembourg, and Germany.[10] Our main samples were made up of individuals aged 18 and above in either 1999 or 2000.

The ECHP has several desirable properties: the initial sample was representative of the population in 1994, the data set is relatively large, its longitudinal nature allows for identification of changes in labor market sectors over time, and it includes many personal characteristics not found in other large samples (e.g., the national Labour Force Surveys). Most importantly, the survey was conducted utilizing a harmonized questionnaire, such that the same questions were asked in each of the countries, which is important for comparing results across nations or for combining the national samples.

The key variables of concern for this analysis are the definition of self-employment status (versus wage and salary sector employment) and earnings. The self-employment variable is constructed from the "status in employment" variable from the person-level file, such that individuals who were classified as normally or currently working and who give self-employment as their main activity status are categorized as self-employed. Because the question is aimed at the "main" job, self-employment in a secondary job is not captured here. Both full- and part-time employed are included.

The earnings variable is measured as the annual wage and salary earnings. There is no job-specific wage variable in the ECHP, nor a measure of annual hours or weeks worked. We adjust for differences in hours worked with a weekly hours variable included in the wage regression. Attempts to adjust the annual earnings variable for hours had no impact on the results.

The variables used in the analysis are defined in Table 1. Some of these variables are used in both the wage equation and logit analyses. The children variable (KIDS00) is used as the instrumental variable in the first stage of the analysis. Most of the explanatory variables for the logistic regression, determinants of the probability of moving to self-employment, have been used by others in the literature. Standard variables like age, marital status and educational level are expected to have positive effects on this transition, as found in both the cross-sectional and dynamic literature. The home ownership variable, a proxy for wealth, is expected to have a positive effect as well. The "other income" variable, which includes spousal income, is included under the hypothesis that increases in spousal income free a worker to engage in entrepreneurial

[10] For an analysis of self-employment in a broader set of countries, see Blanchflower (2000).

activity, as suggested by Devine (1994).[11] The hypothesized effects for both home ownership and other income are consistent with the liquidity-constraint story told by Evans and Jovanovic (1989).[12] The number of children in the household is included to examine the hypothesis that individuals desire self-employment for flexible hours and the ability to work at home.[13] Increases in the number of children are expected to increase the probability of self-employment. Finally, the female residual and discrimination measures of interest in this study, RESIDF and DISCRIM, are expected to be inversely related to the transition to self-employment probability (since an underpayment and discrimination are indicated by negative values of these variables), as noted above. We control for cross-national differences with country dummy variables.

V. RESULTS

Table 2 shows the average log-wages and the raw gender wage differentials for the sample period, separately by country. In every country there is a substantial wage gap, consistent with the work of others.

Descriptive statistics for the variables used in the analysis are presented in Table 3, for the pooled (all countries) sets of males and females who were employed in the first period. After deletion of observations with missing values, the samples consisted of xx,xxx female and xx,xxx male workers.

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[11] The dynamic approach taken here mitigates the problem of the endogeneity of asset accumulation and self-employment (Fairlie 1999).

[12] Evans and Jovanovic utilize a "wealth" measure in their analysis.

[13] The endogeneity of the child-care and self-employment decisions is explored in Connelly (1992).

The results of the log-earnings regression estimation for both males and females are presented in the Appendix Table A1. The results are consistent with other work regarding earnings determination. The human capital, firm, and other personal characteristics variables all perform as expected, and the models are highly significant. The mean values of RESIDF and DISCRM, calculated from the predicted wages based on these log-earnings regressions, are presented in Table 3. The mean value of RESIDF is zero, as expected, while the mean value for DISCRIM is about -.30, the negative sign indicating that differences in returns to characteristics cause the earnings of females in this sample to be lower on average than those of comparable males.

The results from the transition probability analysis are presented in Table 4, for three different specifications of the logit equation. In column (1) we present the coefficient estimates (and standard errors) for a specification which includes, in addition to a set of control variables, only the residual from the female wage equation, RESIDF. The significant negative coefficient indicates that women who earned less than expected in the first period (compared to other women) had an increased likelihood of moving to self-employment, ceteris paribus. This finding is consistent with a model of sector choice based upon expected earnings, and is consistent with the results for men in Andersson and Wadensjo (2006). Column (2) presents the coefficients when only DISCRIM is included with the control variables. The negative coefficient on that variable indicates that women who earned less than expected in the first period (when compared to men) also had an increased likelihood of making the wage and salary sector to self-employment transition. The coefficient is not statistically significant from zero, however. Column (3) presents the results for a specification with both RESIDF and DISCRIM included. This

model yields the highest chi-square and r-square values. The coefficient estimates and standard errors indicate that, like in the first two equations, the direction of the effects are consistent with the hypotheses, but only the effect of RESIDF is statistically significant at conventional levels. This may be due to the small number of observations making a transition (less than 1 percent). The evidence regarding the question of whether labor market discrimination in the wage and salary sector contributes to female self-employment is, therefore, mixed.

The goodness-of-fit statistics indicate the models perform well. The chi-square statistics indicate overall significance at the .0001 level. Despite the performance of the model, only a few of the other explanatory variables have statistically significant impacts on the sectoral transition probability. The move from wage to self-employment is found to be more likely among women who have children and who have higher levels of other household income. Both of these findings are consistent with other work. There do not appear to be any statistically significant differences in transition rates across the countries.

We should note that the analysis does not capture other transitions that could be made more likely as a result of wage discrimination. Women who perceive they are underpaid relative to men may move to another firm, or to unemployment or non-participation. Our analysis therefore understates the total effect that such discrimination might have.

In order to partially gauge the importance of this effect, we estimated the same model for any transition from wage employment, rather than only exits to self-

employment.[14] The results are presented in Table 5. Because this includes workers making other transitions, the sample size is larger than in the previous table. The results are similar to those in Table 4, in the sense that the RESIDF and DISCRIM variables have similar effects. One difference is that the coefficients for the DISCRIM variable are significantly different from zero in specifications (2) and (3), perhaps in part due to the more precise estimates which result from the significantly larger number of people exiting employment for one of the three other states. The magnitude of the DISCRIM coefficient is much larger in this specification, however, indicating that discrimination may indeed have a pronounced effect on these other transitions (to unemployment and inactivity). Again the models perform well as indicated by the chi-square statistic, and in this case more of the control variables are found to have statistically significant effects and there is a higher pseudo R-squared. In particular, educational level and marital status are now found to affect the probability of exiting employment. Regarding these other explanatory variables, however, it should be noted that their interpretations may be different, as they now refer to the effect on the probability of any exit from employment as opposed to the probability of entering self-employment from employment. In addition, it is now found that female workers in France are significantly more likely to exit employment than are females in the other countries.

The specifications in Tables 4 and 5 all assume that the effect of the RESIDF and DISCRIM variables are the same in the four countries. We relaxed this assumption in another specification of the overall exit rate in which we allowed interaction terms between these variables and the country dummy variables. The results (available upon

[14] Still the analysis does not account for movements across employers.

request) showed significant interactions with RESIDF for all of the countries (relative to Germany as the excluded group), with lesser impacts of the female residual in France and Belgium and greater impacts in Luxembourg. The interactions with the discrimination variable were significant only for Luxembourg, again with a greater impact on the exit rate.

V. SUMMARY AND CONCLUDING REMARKS

Self-employment is an important alternative for employed women, and has been encouraged in some countries in order to increase female activity rates and incomes. This paper examines the hypothesis that gender based wage discrimination in the wage and salary sector is one factor that increases the attractiveness of the self-employment option. Using data for a sample of workers in four countries in Europe, we estimate the impact that measured wage discrimination in one year has on the probability a woman chooses self-employment in the following year. The analysis yields mixed results, suggesting that discrimination does not significantly impact the self-employment decision, but it does affect the overall exit rate from employment. The results consistently support the hypothesis of Andersson and Wadensjo (2006), however, indicating that women who are "underpaid" relative to other women are more likely to leave wage-employment for self-employment.

The analysis here is considered a first step, with several topics for further research to be addressed. For example, the paper ignores the issue of self-selection into wage and salary employment, which can affect the results of the initial wage regressions. One

solution is to estimate a Heckman two-step selection model, with multiple selection in the first step. A second issue has to do with the simple measure of discrimination used in this paper. Many alternative measures have been proposed in the literature over the past four decades.[15] While it is possible that the results are sensitive to the measure used, we doubt this is a serious concern, however. A third extension would be to conduct a multinomial analysis of the exits from employment, allowing separate effects for transitions to self-employment, unemployment and non-activity. Finally, we can expand the analysis to include additional years and countries, which might help address the problem of small numbers of transitions.

An important question not addressed in this paper is the likelihood of success in self-employment for those who make the transition. Andersson and Wadensjo (1996) find that men who leave wage employment because they are underpaid tend to have less success in self-employment as well. Further research might address this question for women, with the extension of including a wage and salary sector discrimination measure as an explanatory variable. We could therefore address the question of whether women who suffered wage and salary sector discrimination are any more or less likely to succeed when self-employed than other women. If they are less likely to succeed, then again the question is raised of whether self-employment is an optimal outcome for these women. One concern in studying self-employment success, however, is whether the data regarding earnings are reliable, as previously noted.

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[15] For a recent discussion of the measurement of gender discrimination, see Oaxaca (2007).

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TABLE 1

DEFINITIONS OF VARIABLES

VARIABLE	DEFINITION
RESIDF	Residual from female log-earnings equation.
DISCRIM	Measure of gender wage differential (equation in text)
LWG	Natural log of annual earnings in period 0
MSP00	1 if married with spouse present; 0 otherwise.
ED300	1 if third level education; 0 otherwise
ED200	1 if secondary level of education; 0 otherwise
AGE00	Age (in years) at interview date
AGESQ	AGE squared
PUB00	1 if employed in public sector; 0 otherwise.
FSIZE600	1 if employed at firm with 100-499 employees; 0 otherwise
FSIZE700	1 if employed at firm with 500 or more employees; 0 otherwise
HRS00	Usual hours worked per week in main job
BADHLTH	1 if respondent indicates general health is poor or bad; 0 otherwise.
HLTHHAM	1 if respondent has health limitation that hampers ability to work
KIDS00	Number of children in household
OTHINC00	Total household earnings less respondent's earnings/1000
OWN00	1 if respondent owns home; 0 otherwise
LUX00	1 if resides in Luxembourg; 0 otherwise
BEL00	1 if resides in Belgium; 0 otherwise.
FRA00	1 if resides in France; 0 otherwise.
GER00	1 if resides in Germany; 0 otherwise (excluded group)

Note: the analysis also includes dummy variables indicating employment in the agricultural or industrial sectors of the economy, as well as occupational dummy variables for professional, managerial, technical, clerk, and other occupations.

TABLE 2

Average Male and Female Annual Earnings
Wage and Salary Workers
1999-2000

	Belgium	France	Germany	Luxembourg
Male log-earnings	9.580	9.543	9.567	10.139
Female log-earnings	9.120	9.137	9.011	9.523
Gender Differential	.460	.406	.556	.616

Source: calculated from ECHP.

TABLE 3

DESCRIPTIVE STATISTICS
VARIABLES USED IN WAGE AND TRANSITION EQUATIONS
Workers in Wage and Salary Sector Employment

	FEMALES		MALES	
VARIABLE	MEAN	ST. DEV.	MEAN	ST.DEV
LWG	9.139	.985	9.667	.906
AGE00	37.607	11.051	38.603	11.479
AGESQ	1536.423	868.094	1621.953	927.311
ED300	.281	.450	.272	.445
ED200	.405	.491	.408	.491
MSP00	.566	.496	.613	.487
PUB00	.266	.442	.205	.403
HRS00	29.416	15.970	38.096	14.811
FSIZ6	.097	.296	.144	.351
FSIZ7	.027	.161	.048	.214
BADHLTH00	.053	.224	.043	.203
HLTHHAM00	.025	.156	.023	.151
LUX00	.133	.339	.176	.381
BEL00	.162	.368	.153	.360
FRA00	.315	.465	.277	.447
KIDS00	.699	.919	.779	1.017
OTHINC00	376.213	675.355	301.329	553.586
RESIDF	-0.000	.663	---	---
DISCRIM	-0.294	.706	---	---
Sample Size	21261		25039	

Note: means and standard deviations for the “sector” and “occupation” dummy variables are available on request.

TABLE 4

LOGIT PARAMETER ESTIMATES
Female Transitions from Employment to Self-Employment

	Coefficient (St. Error)		
	Specification		
VARIABLE	(1)	(2)	(3)
INTERCEPT	**-6.166**	**-5.150**	**-5.987**
	(1.720)	(1.804)	(1.967)
RESIDF	**-1.040**	-	**-1.032**
	(.2422)	-	(.2550)
DISCRIM	-	-.6923	-.4234
	-	(1.921)	(1.582)
AGE00	-.0019	- .0495	- .0142
	(.0945)	(.1070)	(.1100)
AGESQ	.0002	.0007	.0003
	(.0012)	(.0013)	(.0014)
ED300	-.1283	-.0487	-.0886
	(.4127)	(.4555)	(.4436)
ED200	- .2500	-.1557	-.2383
	(.3940)	(.4036)	(.3992)
KIDS00	**.4665**	**.4379**	**.4521**
	(.1404)	(.1568)	(.1637)
MSP00	-.4088	-.5915	-.5281
	(.3193)	(.6380)	(.5684)
OTHINC00	**.0005**	**.0005**	**.0005**
	(.0001)	(.0001)	(.0001)
OWN00	.1845	.1940	.1845
	(.3166)	(.3132)	(.3170)
LUX00	-.7927	**-.9465**	-.7925
	(.4965)	(.4955)	(.4976)
BEL00	-0.6200	-0.4450	-0.5808
	(.4772)	(.4611)	(.4846)
FRA00	-.4963	-0.4202	-0.4282
	(.4257)	(.5335)	(.5505)
Sample Size	16350	16350	16350
-2Dlog L	**82.80**	**85.07**	**86.37**
Pseudo R-square	.1032	.0405	.1034

Note: Bold indicates significance at .05 level or better.

TABLE 5

LOGIT PARAMETER ESTIMATES
Female Transitions from Employment

Coefficient
(St. Error)

Specification

VARIABLE	(1)	(2)	(3)
INTERCEPT	**2.721**	**3.908**	**3.483**
	(.3842)	(.3840)	(.4089)
RESIDF	**-1.257**	-	**-1.248**
	(.0643)	-	(.0656)
DISCRIM	-	**-2.325**	**-2.056**
	-	(.2334)	(.2659)
AGE00	**-.3307**	**-.3978**	**- .3867**
	(.0231)	(.0234)	(.0252)
AGESQ	**.0043**	**.0050**	**.0049**
	(.0003)	(.0003)	(.0003)
ED300	**-.4185**	**-.2019**	**-.2333**
	(.0942)	(.0927)	(.0972)
ED200	- .0253	.1025	.0717
	(.0816)	(.0781)	(.0829)
KIDS00	**.1507**	**.1209**	**.0782**
	(.0422)	(.0422)	(.0444)
MSP00	**.2056**	**-.4259**	**-.3571**
	(.0793)	(.1052)	(.1097)
OTHINC00	**0.0002**	**.0002**	**.0002**
	(.0000)	(.0000)	(.0000)
OWN00	**-.2935**	**-.2958**	**-.2806**
	(.0710)	(.0686)	(.0714)
LUX00	-0.1132	-0.1577	-0.0790
	(.1316)	(.1300)	(.1324)
BEL00	0.0274	0.0932	0.2149
	(.1363)	(.1283)	(.1433)
FRA00	**0.7336**	**1.008**	**1.086**
	(.0856)	(.0953)	(.0998)
Sample Size	17469	17469	17469
-2Dlog L	**759.43**	**456.43**	**764.18**
Pseudo R-square	.1382	.0682	.1469

Note: **Bold** indicates significance at .05 level or better.

APPENDIX
TABLE A1

LOG -EARNINGS REGRESSION PARAMETERS
Maximum Likelihood Estimates

	FEMALES		MALES	
VARIABLE	Coeff.	St. Err.	Coeff..	St. Err.
Intercept	**5.580564**	.0763722	**5.550477**	.0848529
age00 |	**.1010448**	.0041252	**.1360311**	.0045812
agesq |	**-.0011129**	.000052	**-.00153**	.0000581
ed300 |	**.3427608**	.0185962	**.2867683**	.0159153
ed200 |	**.1664185**	.0147001	**.1216699**	.0121177
msp00 |	**-.07955**	.0120853	**.1586553**	.0118804
pub00 |	**.1774585**	.0122131	**.1613031**	.0119414
hrs00 |	**.0317087**	.0005871	**.0211623**	.0005718
ag00 |	**-.2667356**	.074236	**-.243517**	.0504709
ind00 |	**.1051471**	.0162077	**.1053901**	.0110533
prof00 |	**.2033963**	.0482936	**.3432661**	.0240637
mang00 |	**.3263199**	.0236493	**.2645078**	.020314
man200 |	**.2112577**	.0180904	**.1796667**	.0133874
clerk00 |	**.1654945**	.0162766	**.1132368**	.015226
othocc00 |	**-.0734255**	.0191659	**-.104364**	.0209942
fsiz6 |	**.1580391**	.014615	**.1647125**	.0111768
fsiz7 |	**.1232898**	.0236992	**.1595637**	.015424
badhlth00 |	**-.0550605**	.0261711	**-.0744684**	.023921
hlthham00 |	-.1200748	.0414654	**-.2358736**	.0370755
lux00 |	**.5660283**	.0187091	**.5555524**	.0144081
bel00 |	**.1201221**	.0213164	-.0006247	.0198834
fra00 |	**.2345255**	.0146483	**.1071417**	.0138474
Mills	**.1022354**	.0114862	**.037218**	.0121785
Sample Size	44013		39563	
Chi-Sqaured	**12412.71**		**12529.61**	

Bold indicates significantly different from zero at .01 level of confidence better.

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