



School of Business,  
Economics and Law  
UNIVERSITY OF GOTHENBURG

## **WORKING PAPERS IN ECONOMICS**

**No 314**

### **The Part-Time Penalty for Natives and Immigrants**

**Roger Wahlberg**

**September 2008**

**ISSN 1403-2473 (print)**  
**ISSN 1403-2465 (online)**

SCHOOL OF BUSINESS, ECONOMICS AND LAW, UNIVERSITY OF GOTHENBURG

*Department of Economics*

*Visiting adress* Vasagatan 1,

*Postal adress* P.O.Box 640, SE 405 30 Göteborg, Sweden

*Phone* + 46 (0)31 786 0000

# The Part-Time Penalty for Natives and Immigrants

Roger Wahlberg<sup>1</sup>

University of Gothenburg and IZA

## Abstract:

*This study examines the part-time penalty for natives and immigrants in Sweden. We estimate an endogenous switching regression model, and the results indicate that there is evidence of self-selection into part-time and full-time jobs based on unobservable factors. Hence, individuals with full-time (part-time) jobs have unobserved characteristics that allow them to earn more (less) than average workers with full-time (part-time) jobs. We find that the adjusted part-time wage penalties are 20.9 percent for native males, 25.1 percent for immigrant men, 13.8 percent for native women, and 15.4 percent for immigrant women.*

**Keywords:** Part-time penalty, selection bias, natives, immigrants

JEL Codes: J15, J31

---

<sup>1</sup> Corresponding author: Roger Wahlberg, University of Gothenburg, Department of Economics, Box 640, SE-405 30 Gothenburg, Sweden. E-mail: [roger.wahlberg@economics.gu.se](mailto:roger.wahlberg@economics.gu.se). Financial support from the Jan Wallander and Tom Hedelius Foundation for Research in Economics is gratefully acknowledged.

## 1. Introduction

Part-time employment is a common phenomenon in the Swedish labor market. In 2006, 13.4 percent of all workers worked part-time (19.0 percent of all working women and 8.4 percent of all working men), with women representing 67.3 percent of all part-time employment (OECD, 2007). A number of policies such as separate taxation of spouses, generous maternity/parental leave policies, subsidized public day-care, and extended employment security, may explain why part-time employment is relatively common in Sweden.

Few previous studies have focus primarily on the effect of part-time work on wages. Rodgers (2004) investigated part-time and full-time employment in Australia, and found that when controlling for observed characteristics and self-selection into type of employment, the adjusted wage differentials were not statistically significant for either men or women. Hirsch (2005) found a wage gap between part-time and full-time working men in the US, but no statistically significant gap for women, when controlling for observed and unobserved characteristics. Similarly, Hardoy and Schone (2006) did not find a part-time wage gap for women in Norway, when controlling for observed characteristics and selection bias. O'Dorchai *et al.* (2007) analyzed the wage gap between male part- and full-timers in the private sector of six European countries, and found that part-time working males in Belgium, Denmark, Ireland, Italy, Spain, and the UK incur a wage penalty of 14 percent, 7 percent, 9 percent, 12 percent, 41 percent, and 38 percent, respectively, when controlling for observed characteristics. Bardasi and Gornick (2008) investigated the wage gap between part-time and full-time women workers in six OECD countries, and when controlling for observed characteristics and selection bias they found an adjusted part-time wage penalty of 11.5 percent in Canada, 20.8 percent in the US and Italy, 10 percent in UK, and 9 percent in Germany, along with a 2.7 percent advantage in Sweden.

Manning and Petrongolo (2008) analyzed part-time penalty for women in the UK, and found a wage disadvantage of about 10 percent when controlling for observed characteristics.

Against this background, our aim is to examine whether part-time workers receive lower hourly wages than full-time workers in Sweden. We explore the degree to which the part-time wage disadvantage differs between natives and immigrants and between men and women in Sweden. We are not aware of any previous studies that have analyzed the native/immigrant aspect of the part-time wage disadvantage.

The study is based on the 2006 wave of the Swedish register-based data set LINDA. An interesting feature of this data set is the possibility of matching individual records with wage information and the choice of working hours provided by employers.

We estimate an endogenous switching regression model to control for potential self-selection into part-time and full-time jobs, and find evidence of self-selection into part-time and full-time jobs based on unobservable factors. Hence, individuals in full-time (part-time) jobs have unobserved characteristics that allow them to earn more (less) than the average worker in full-time (part-time) jobs. We find that the average adjusted part-time wage penalties are 20.9 percent for native men, 25.1 percent for immigrant men, 13.8 percent for native women, and 15.4 percent for immigrant women. All figures are statistically significant. Thus, we find that men have higher part-time wage disadvantages than women, and that immigrant men have the highest part-time wage penalty: immigrant part-time workers on average earn 25.1 percent less than their full-time counterparts when controlling for observed and unobserved characteristics.

To test the sensitivity of the results to the endogenous switching regression model, the wage equations are estimated by least squares, without the correction for selection bias. We find the least squares wage differentials to severely underestimate the part-time wage penalties.

The paper is organized as follows. Section 2 describes the empirical specification used in this paper. The data is presented in Section 3, and the results are presented in Section 4. The final section provides a summary of the paper.

## 2. Empirical specification

We specify the following empirical model, which describes the behavior of an individual who faces two wage rates, the full-time wage and the part-time wage, and a latent variable  $I_i^*$  that determines individuals' decision regarding the choice of working hours:

$$\ln w_{1i} = \beta_1 X_i + \varepsilon_{1i} \quad (1)$$

$$\ln w_{2i} = \beta_2 X_i + \varepsilon_{2i} \quad (2)$$

$$I_i^* = \gamma Z_i + \delta (\ln w_{1i} - \ln w_{2i}) + \nu_i \quad (3)$$

where  $\ln w_{1i}$  and  $\ln w_{2i}$  are the natural logarithm of hourly wages in full-time and part-time jobs;  $I_i^*$  is a latent variable for the choice of working hours;  $Z_i$  is a vector of characteristics that influence the individual decision regarding the choice of working hours;  $X_i$  is a vector of individual characteristics that influence individual wages;  $\beta_1$ ,  $\beta_2$ , and  $\gamma$  are vectors of parameters; and  $\nu_i$ ,  $\varepsilon_{1i}$ , and  $\varepsilon_{2i}$  are the random disturbance terms.

The latent variable  $I_i^*$  in equation (3) is unknown to the researcher. All that we can observe is whether a person works part time or full time. Thus, we replace the unknown latent variable  $I_i^*$  in equation (3) with a dummy variable  $I$ , which takes the value 1 if the individual works full time and 0 otherwise, i.e.,

$$\begin{aligned}
 I_i = 1 & \quad \text{if} \quad I_i^* > 0 \\
 I_i = 0 & \quad \text{otherwise}
 \end{aligned} \tag{4}$$

If individuals self-select into full-time (part-time) jobs based on unobservable factors, we may have a problem with selection bias. Then there exists a nonzero covariance between the determination of wages and the determination of hours worked. To control for this potential selection bias, we estimate the two wage equations and the switching equation simultaneously using full-information maximum likelihood, assuming that  $\nu_i$ ,  $\varepsilon_1$ , and  $\varepsilon_2$  have a trivariate normal distribution with mean vector zero and covariance matrix

$$\Sigma = \begin{bmatrix} \sigma_1^2 & \cdot & \rho_{1\nu} \\ \cdot & \sigma_2^2 & \rho_{2\nu} \\ \rho_{1\nu} & \rho_{2\nu} & \sigma_\nu^2 \end{bmatrix} \tag{5}$$

$\sigma_1^2$  and  $\sigma_2^2$  are the variances of the random disturbance terms in the wage equations,  $\sigma_\nu^2$  is the variance of the random disturbance term in the switching equation,  $\rho_{1\nu}$  is the covariance of  $\nu_i$  and  $\varepsilon_{1i}$ , and  $\rho_{2\nu}$  is the covariance of  $\nu_i$  and  $\varepsilon_{2i}$ . The covariance of  $\varepsilon_{1i}$  and  $\varepsilon_{2i}$  is not defined since  $\ln w_{1i}$  and  $\ln w_{2i}$  are never observed simultaneously. We normalize the variance of the random disturbance term in the switching equation to one, i.e.,  $\sigma_\nu^2 = 1$ .

All variables that enter equations (1) and (2) are included in equation (3) with two exceptions. Firstly, we include non-labor income in the switching equation (3) following Rodgers (2004) and Hardoy and Schone (2006). Non-labor income is used as an instrument affecting the decision to work full time, but not affecting the wage while employed. Secondly, we include age (and age squared) in the switching equation (3) following Van der Gaag and Vijverberg (1988) and Adamchik and Bedi (2000). Using age as an instrument may be valid since there is nothing in human capital theory that predicts age to be a determinant of wages once controls for work experience are included in the wage equations.

Once we have estimated equations (1) to (3) we are in particular interested in the sign and level of significance of  $\rho_{1v}$  and  $\rho_{2v}$ . If  $\rho_{1v} < 0$  and  $\rho_{2v} < 0$ , it is implied that the individual has unobserved characteristics that allow him/her to have a higher full-time wage than an average full-time worker, while those who work part time are negatively selected compared to a randomly selected group of the population when it comes to part-time work. This negative selection into part-time work may be explained by unobserved characteristics such as lower work motivation among those who work part time.

We have estimated this model using the Stata command `movestay.ado`; see Lokshin and Sajaia (2004).

### **3. Data**

The data used in this paper is taken from a Swedish register-based data set, Longitudinal Individual Data (LINDA). LINDA contains a three percent representative random sample of the Swedish population, corresponding to approximately 300,000 individuals each year. The sampled population consists of all individuals, including children and elderly persons, who lived

in Sweden in a particular year. The sampling procedure used in constructing the panel data set ensures that each cross-section is representative for the population in each year. The sample used in this study consists of information from the 2006 wave of LINDA. For a more detailed description of LINDA, see Edin and Fredriksson (2000).

An interesting feature of this data set is the possibility it gives to match individual records with wage information provided by employers. Employers report monthly earnings to Statistics Sweden expressed in full-time equivalents (giving the amount the individual would have earned if working full time). To obtain hourly wage rates, the monthly earnings are divided by 165. The hourly wage rates obtained in this fashion correspond to the workers' contracted wages and do not suffer from the potential measurement errors that are common in self-reported wages.

We limit the analysis to sampled individuals aged 18 to 65, excluding self-employed workers, students, and individuals with missing values on observed characteristics. After these selections we end up with 41,682 native males, 4,710 immigrant males, 39,759 native women, and 5,005 immigrant women. A person is defined as an immigrant if he/she was foreign born.

Explanatory variables used in the empirical analysis include information on: potential experience (i.e., age – education – 6), highest educational degree (high school, university), area of living (Stockholm, Gothenburg, or Malmo), marital status (i.e., married), local unemployment rate, number of preschool children, age, age squared, and non-labor income (all income that is not work related). Full-time work is defined as working more than 75 % of the workers' contracted full-time hours.

Tables 1 and 2 present descriptive statistics for the sample used in this paper. Part-time work is performed by 20 percent of the native women and 25 percent of the immigrant women,



and 17 percent of the immigrant men work part time while 8 percent of the native men do. The entries in the tables indicate that part-time workers generally have lower hourly wages than full-time workers. Men who work part time are generally younger and single, while women who work part time are married to a greater extent than women with full-time jobs. Individuals with part-time jobs have less work experience than those with full-time jobs. Immigrants have a lower average level of educational attainment than native Swedes, and they are also more concentrated in urban areas. Non-labor income is almost three times as high for individuals with part-time jobs than for individuals with full-time jobs

#### **4. Results**

The results of the switching equation are given in Table 3. Persons with high school or university as their highest educational attainment have a higher probability of choosing full-time jobs than individuals with a compulsory education. Men living in Stockholm and Malmo have a lower probability of working in full-time jobs than men residing outside the three largest Swedish cities, while the reverse applies for women; women living in Stockholm have a higher probability of working full-time jobs than women not living in Stockholm. Married men are more likely to work full-time jobs than men who are single. The opposite is found for women. The local unemployment rate has a negative effect on a person choosing a full-time job. Number of preschool children has a positive effect on the likelihood of men choosing full-time jobs, while the effect is the opposite for women. Non-labor income has a negative impact on a person's probability of choosing a full-time job, while age has a positive effect on people's preferences to work full time. The variables used as instruments are statistically significant and seem to be valid instruments for the decision to work full time.

Tables 4 and 5 present the selectivity-corrected part-time and full-time wage equations for males and females, respectively. Wages follow a parabolic shape in work experience. Persons with a university degree have a wage premium compared to persons with only compulsory schooling: university-educated native men with full-time jobs on average earn 55.3 percent more than full-time native men with only compulsory schooling (see Halvorsen and Palmquist, 1980, for interpretation of dummy variables in semi-logarithmic equations). However, university-educated immigrant women with part-time jobs on average earn only 12.2 percent more than immigrant women with only compulsory schooling. In general, it seems that men, both natives and immigrants, have a higher relative wage premium on a university degree than women in Sweden. There is also a wage premium on marriage for natives. Married men with full-time jobs on average have 9.1 percent higher wages than single men working in full-time jobs. Native women who are married and work part-time jobs on average earn 7.1 percent more than single native women who work part-time jobs.

The correlation coefficients between the disturbance in the switching equation on the one hand and those in the two wage equations indicate that people self-select into part-time and full-time jobs. Hence, the correlation coefficients are negative and statistically significant. This means that those who work full time are positively selected compared to a randomly selected group of the population when it comes to full-time work, while persons in part-time jobs are negatively selected. Hence, individuals in full-time (part-time) jobs have unobserved characteristics that allow them to earn more (less) than the average full-time (part-time) worker; see Lee (1978), Maddala (1983), Van der Gaag and Vijverberg (1988), Adamchik and Bedi (2000), and Hardoy and Schone (2006).

The estimation results presented in Tables 4 and 5 can be used to analyze the wage differentials between part-time and full-time wages. This has been done in Table 6. The unadjusted part-time wage penalties (Line 3) were calculated by taking the average natural logarithm of the full-time wages (Line 1) minus the average natural logarithm of the part-time wages (Line 2). It turns out that native men incur a 14.0 percent unadjusted part-time wage penalty; the figures for immigrant men, native women, and immigrant women are 17.1 percent, 8.9 percent, and 9.8 percent, respectively. These average unadjusted log-wage differentials are all statistically significant. The adjusted log-wage differential is defined as the average log-wage that part-time workers could earn if they were to work full-time minus the average log-wage that part-time workers actually do earn in their part-time jobs; see Stewart (1983), Rodgers (2004), O'Dorchai *et al.* (2007), and Bardasi and Gornick (2008). In Table 6, Line 5, the adjusted log-wage differentials were measured to be 0.209, 0.251, 0.138, and 0.154, which implies that the adjusted part-time wage penalties were 20.9 percent, 25.1 percent, 13.8 percent, and 15.4 percent, respectively (all statistically significant).

To test the sensitivity of the results to the endogenous switching regression model, the wage equations were estimated by least squares, without correcting for selection bias (the estimation results from the least squares estimation are shown in Table A1 and A2 in the appendix). The adjusted log-wage differentials were calculated to 0.066, 0.116, 0.050, and 0.053, respectively (Table 6, Line 7). They are all statistically significant, which implies that Swedish part-time workers have a wage disadvantage of 6.6 percent and 11.6 percent for native and immigrant men, respectively. The numbers for women are lower, 5 percent for natives and 5.3 percent for immigrants. Thus, the least squares wage differentials were about one-third of the result produced when correcting for selection bias. When not controlling for self-selection into

full-time (part-time) jobs based on unobservable factors, we clearly underestimate the wage penalty for part-time jobs in Sweden.

## 5. Conclusions

Part-time employment in the Swedish labor market, the focus of this study, is a common phenomenon, especially among women. More exactly, the main objective of this study was to analyze whether part-time workers receive lower hourly wages than full-time workers who have similar levels of human capital, with a specific focus on natives and immigrants.

The study was based on the 2006 wave of the Swedish register-based data set LINDA. An interesting feature of this data set is the possibility of matching individual records with wage information and for the choice of working hours provided by employers. The hourly wage rates obtained in this fashion correspond to the workers' contracted wage and do not suffer from the potential measurement errors that are common in self-reported wages. Full time was defined as more than 75 percent of the contracted for the choice of working hours.

We estimate an endogenous switching regression model to control for potential self-selection into part-time and full-time jobs. The results indicate that there is evidence of self-selection into part-time and full-time jobs based on unobservable factors. Those who work full time are positively selected compared to a randomly selected group of the population in terms of choosing a full-time job, while persons with part-time jobs are negatively selected. We found the adjusted part-time wage penalties to be 20.9 percent for native males, 25.1 percent for immigrant men, 13.8 percent for native women, and 15.4 percent for immigrant women.

To test the sensitivity of the results to the endogenous switching regression model, the wage equations were estimated by least squares without correcting for selection bias. We found that the least squares wage differential was almost one-third of the results attained when correcting for selection bias. Hence, if we do not control for self-selection into full-time (part-time) jobs based on unobservable factors, we end up clearly underestimating the wage penalty associated with part-time jobs in Sweden.

## References

Adamchika, V. and Bedi, A. (2000), “Wage Differentials between the Public and the Private Sectors: Evidence from an Economy in Transition”, *Labour Economics*, Vol. 7, pp. 203–224.

Bardasi, E and Gornick, J. (2008),”Working for Less? Women’s Part-Time Wage Penalties across Countries”, *Feminist Economics*, Vol. 14, No. 1, pp. 37-72.

Edin, P-A. and Fredriksson, P. (2000), “LINDA – Longitudinal Individual Data for Sweden”, Working Paper 2000:19, Uppsala University.

Halvorsen, R., and Palmquist, R. (1980), “The Interpretation of Dummy Variables in Semilogarithmic Equations”, *American Economic Review*, Vol. 70, pp. 474-475.

Hardoy, I. and Schone, P. (2006), “The Part-Time Wage Gap in Norway: How Large is It Really?”, *British Journal of Industrial Relations*, Vol. 44, No. 2, pp. 263–282.

Hirsch, B. (2005), “Why do Part-Time Workers Earn Less? The Role of Worker and Job Skills”, *Industrial and Labor Relations Review*, Vol. 58, No. 4, pp. 525-551.

Lee, L-F. (1978), “Unionism and Wage Rates: A Simultaneous Equation Model with Qualitative and Limited Dependent Variables”, *International Economic Review*, Vol. 19, No.2, pp. 415-433.

Lokshin, M. and Sajaia, Z. (2004), “Maximum Likelihood Estimation of Endogenous Switching Regression Models”, *The Stata Journal*, Vol 4., No. 3, pp. 282-289.

Manning, A. and Petrongolo, B. (2008), “The Part-Time Pay Penalty for Women in Britain”, *The Economic Journal*, Vol. 118, pp. F28-F51.

Maddala, G.S. (1983), *Limited Dependent and Qualitative Variables in Econometrics*, Cambridge University Press.

O’Dorchai, S., Plasman, R. and Rycx F. (2007), “The Part-Time Wage Penalty in European Countries: How Large is it for Men?”, *International Journal of Manpower*, Vol. 28, No. 7, pp. 571-603.

OECD Employment Outlook 2007 - Statistical Annex

<http://www.oecd.org/dataoecd/29/27/38749309.pdf>

Rodgers, J. (2004), “Hourly Wages of Full-Time and Part-Time Employees in Australia”, *Australian Journal of Labour Economics*, Vol. 7, pp. 231–254.

Stewart, M. (1983), “Relative Earnings and Individual Union Membership in the United Kingdom”, *Economica*, Vol. 50, No. 198, pp. 111-25.

Van der Gaag, J. and Vijverberg, W. (1988), “A Switching Regression Model for Wage Determinants in the Public and Private Sectors of a Developing Country”, *The Review of Economics and Statistics*, Vol. 70, No. 2, pp. 244-252.



Table 1.  
Descriptive Statistics for Part-Time and Full-Time Workers: Men  
(Standard Deviation in Parentheses)

<i>Variable</i>	<b>Native Men</b>		<b>Immigrant Men</b>	
	<i>Part-Time</i>	<i>Full-Time</i>	<i>Part-Time</i>	<i>Full-Time</i>
The choice of working hours	0.08	0.92	0.17	0.83
Log of hourly wage rate	4.94 (0.36)	5.08 (0.32)	4.80 (0.32)	4.97 (0.31)
Age	39.33 (12.52)	42.95 (11.14)	37.92 (10.48)	42.61 (10.19)
Potential experience	18.46 (13.14)	21.86 (11.86)	17.49 (10.80)	21.50 (10.82)
Non-labor income	54,147 (53,442)	12,902 (24,523)	50,693 (53,482)	16,485 (29,037)
Local unemployment rate	4.22 (1.35)	3.90 (1.14)	4.16 (1.13)	3.92 (1.06)
# Preschool children	0.25 (0.58)	0.29 (0.63)	0.33 (0.66)	0.35 (0.68)
Married	0.41	0.60	0.51	0.65
Compulsory school	0.19	0.14	0.34	0.21
High School	0.70	0.69	0.50	0.59
University	0.11	0.17	0.16	0.20
Residing in Stockholm	0.09	0.08	0.17	0.15
Residing in Gothenburg	0.05	0.05	0.08	0.09
Residing in Malmo	0.03	0.02	0.07	0.05
Residing elsewhere	0.83	0.85	0.68	0.71
Number of observations	3,170	38,512	790	3,920

Table 2.  
Descriptive Statistics for Part-Time and Full-Time Workers: Women  
(Standard Deviation in Parentheses)

<i>Variable</i>	<b>Native Women</b>		<b>Immigrant Women</b>	
	<i>Part-Time</i>	<i>Full-Time</i>	<i>Part-Time</i>	<i>Full-Time</i>
The choice of working hours	0.20	0.80	0.25	0.75
Log of hourly wage rate	4.85 (0.24)	4.94 (0.25)	4.78 (0.25)	4.87 (0.26)
Age	40.26 (11.75)	43.98 (10.93)	38.02 (9.65)	42.73 (9.69)
Potential experience	19.00 (12.53)	22.29 (12.01)	17.30 (10.35)	21.47 (10.43)
Non-labor income	53,543 (51,319)	17,917 (32,114)	60,568 (55,923)	22,568 (37,564)
Local unemployment rate	3.52 (1.09)	3.42 (0.88)	3.52 (0.93)	3.43 (0.83)
# Preschool children	0.53 (0.77)	0.21 (0.53)	0.50 (0.74)	0.20 (0.50)
Married	0.71	0.60	0.62	0.60
Compulsory school	0.13	0.09	0.26	0.17
High School	0.69	0.65	0.55	0.57
University	0.18	0.26	0.19	0.26
Residing in Stockholm	0.06	0.09	0.15	0.15
Residing in Gothenburg	0.04	0.05	0.08	0.08
Residing in Malmo	0.02	0.02	0.04	0.05
Residing elsewhere	0.88	0.84	0.73	0.72
Number of observations	7,872	31,887	1,236	3,769

Table 3.

## Estimates of the Switching Equation

(Robust Standard Errors in Parentheses)

Independent Variable	Native Men	Immigrant Men	Native Women	Immigrant Women
Intercept	-0.307 (0.207)	-1.400*** (0.523)	-1.301*** (0.148)	-1.308*** (0.494)
Experience	0.017*** (0.006)	-0.013 (0.014)	0.009** (0.004)	0.015 (0.012)
Experience squared/100	-0.032*** (0.014)	0.011 (0.034)	-0.025*** (0.009)	-0.064** (0.030)
High School = 1	0.111*** (0.031)	0.345*** (0.060)	0.203*** (0.025)	0.199*** (0.057)
University = 1	0.215*** (0.047)	0.248*** (0.090)	0.466*** (0.032)	0.292*** (0.080)
Stockholm =1	-0.197*** (0.036)	-0.154** (0.067)	0.065** (0.031)	-0.021 (0.059)
Gothenburg =1	0.003 (0.046)	0.229** (0.098)	0.033 (0.036)	0.068 (0.083)
Malmö = 1	-0.150** (0.063)	-0.123 (0.102)	0.015 (0.051)	0.209** (0.102)
Married = 1	0.312*** (0.027)	0.264*** (0.059)	-0.318*** (0.019)	-0.071 (0.046)
Local unemployment rate	-0.031*** (0.009)	-0.070*** (0.024)	-0.013 (0.008)	-0.032 (0.026)
# Preschool children	0.175*** (0.022)	0.178*** (0.045)	-0.166*** (0.015)	-0.106*** (0.043)
Non-labor Income	-0.015*** (0.001)	-0.013*** (0.001)	-0.007*** (0.001)	-0.009*** (0.001)
Age	0.079*** (0.012)	0.103*** (0.030)	0.103*** (0.008)	0.082*** (0.028)
Age Squared/100	-0.081*** (0.015)	-0.079** (0.038)	-0.104*** (0.010)	-0.057* (0.034)
Number of observations	41,682	4,710	39,759	5,005

Note: \*, \*\*, \*\*\* denote significance at the 10, 5, and 1 percent levels, respectively.

Table 4.

## Selectivity-Corrected Part-Time and Full-Time Wage Equations: Men.

(Robust Standard Errors in Parentheses)

<i>Independent Variable</i>	<b>Native Men</b>		<b>Immigrant Men</b>	
	<i>Part-Time</i>	<i>Full-Time</i>	<i>Part-Time</i>	<i>Full-Time</i>
Intercept	4.523*** (0.033)	4.775*** (0.008)	4.548*** (0.069)	4.852*** (0.026)
Experience	0.006*** (0.001)	0.016*** (0.001)	0.006* (0.003)	0.007*** (0.001)
Experience Squared/100	-0.007** (0.003)	-0.028*** (0.001)	-0.010 (0.008)	-0.011*** (0.003)
High School = 1	0.056*** (0.014)	0.118*** (0.004)	0.058*** (0.020)	0.081*** (0.009)
University = 1	0.300*** (0.027)	0.440*** (0.006)	0.272*** (0.041)	0.421*** (0.016)
Stockholm =1	0.089*** (0.024)	0.168*** (0.007)	-0.003 (0.031)	0.009 (0.014)
Gothenburg =1	0.028 (0.028)	0.094*** (0.007)	0.040 (0.050)	0.043*** (0.016)
Malmö = 1	0.004 (0.036)	0.043*** (0.010)	0.016 (0.039)	-0.005 (0.024)
Married = 1	0.049*** (0.016)	0.087*** (0.003)	-0.038 (0.026)	0.018* (0.010)
Local unemployment rate	-0.008* (0.004)	-0.024*** (0.001)	0.001 (0.010)	-0.026*** (0.005)
# Preschool children	0.037*** (0.014)	0.000 (0.003)	0.041* (0.022)	-0.001 (0.008)
$\sigma_i^2$	0.351*** (0.008)	0.277*** (0.001)	0.307*** (0.017)	0.276*** (0.005)
$\rho_{i\varepsilon}$	-0.531*** (0.025)	-0.314*** (0.011)	-0.316*** (0.079)	-0.321*** (0.030)
Log-Likelihood	-14,487.30		-2,333.62	

Note: \*, \*\*, \*\*\* denote significance at the 10, 5, and 1 percent levels, respectively.

Table 5.

Selectivity-Corrected Part-Time and Full-Time Wage Equations: Women.

(Robust Standard Errors in Parentheses)

<i>Independent Variable</i>	<b>Native Women</b>		<b>Immigrant Women</b>	
	<i>Part-Time</i>	<i>Full-Time</i>	<i>Part-Time</i>	<i>Full-Time</i>
Intercept	4.408*** (0.019)	4.754*** (0.008)	4.624*** (0.068)	4.798*** (0.024)
Experience	-0.004*** (0.001)	0.012*** (0.001)	0.000 (0.002)	0.004*** (0.001)
Experience Squared/100	0.006*** (0.002)	-0.020*** (0.001)	0.002 (0.006)	-0.004 (0.003)
High School = 1	0.010 (0.009)	0.083*** (0.004)	0.093*** (0.020)	0.089*** (0.008)
University = 1	0.115*** (0.013)	0.302*** (0.005)	0.267*** (0.036)	0.347*** (0.012)
Stockholm = 1	0.072*** (0.013)	0.156*** (0.005)	0.052** (0.020)	0.046*** (0.011)
Gothenburg	0.029** (0.014)	0.085*** (0.006)	-0.014 (0.024)	0.030** (0.015)
Malmö = 1	0.010 (0.019)	0.058*** (0.008)	-0.013 (0.034)	-0.011 (0.016)
Married = 1	0.069*** (0.007)	0.020*** (0.003)	-0.004 (0.015)	0.001 (0.008)
Local unemployment rate	-0.002* (0.003)	-0.029*** (0.001)	-0.022** (0.009)	-0.034*** (0.005)
# Preschool children	0.090*** (0.006)	0.020*** (0.003)	0.050*** (0.018)	0.007 (0.008)
$\sigma_i^2$	0.316*** (0.008)	0.218*** (0.001)	0.238*** (0.016)	0.227*** (0.005)
$\rho_{i\varepsilon}$	-0.922*** (0.010)	-0.253*** (0.009)	-0.335 (0.238)	-0.288*** (0.034)
Log-Likelihood	-11,797.52		-2,014.83	

\*, \*\*, \*\*\* denote significance at the 10, 5, and 1 percent levels, respectively.

Table 6.

## Part-Time/Full-Time Wage Differentials

	Native Men	Immigrant Men	Native Women	Immigrant Women
(1) Mean log-wage of full-time workers in full-time jobs	5.084	4.974	4.941	4.875
(2) Mean log-wage of part-time workers in part-time jobs	4.944	4.803	4.852	4.777
(3) Unadjusted wage differentials (1) - (2)	0.140***	0.171***	0.089***	0.098***
<i>Endogenous Switching Regression Model</i>				
(4) Mean predicted log-wage of part-time workers in full-time jobs	5.153	5.054	4.990	4.931
(5) Adjusted wage differentials (4) – (2)	0.209***	0.251***	0.138***	0.154***
<i>Least Squares Regression (no correction for self-selection)</i>				
(6) Mean predicted log-wage of part-time workers in full-time jobs	5.011	4.919	4.902	4.830
(7) Adjusted wage differential (6) – (2)	0.066***	0.116***	0.050***	0.053***

\*, \*\*, \*\*\* denote significance at the 10, 5, and 1 percent levels, respectively.

## Appendix

Table A1

Least Squares Estimation of Part-Time and Full-Time Wage Equations: Men

(Robust Standard Errors in Parentheses)

<i>Independent Variable</i>	<b>Native Men</b>		<b>Immigrant Men</b>	
	<i>Part-Time</i>	<i>Full-Time</i>	<i>Part-Time</i>	<i>Full-Time</i>
Intercept	4.790*** (0.028)	4.754*** (0.008)	4.659*** (0.058)	4.852*** (0.026)
Experience	0.009*** (0.002)	0.017*** (0.001)	0.006* (0.003)	0.007*** (0.001)
Experience Squared/100	-0.015*** (0.004)	-0.029*** (0.001)	-0.008 (0.008)	-0.011*** (0.003)
High School = 1	0.080*** (0.014)	0.121*** (0.004)	0.081*** (0.020)	0.081*** (0.009)
University = 1	0.359*** (0.028)	0.446*** (0.006)	0.311*** (0.044)	0.421*** (0.016)
Stockholm =1	0.107*** (0.024)	0.165*** (0.006)	-0.008 (0.031)	0.009 (0.014)
Gothenburg =1	0.046* (0.028)	0.095*** (0.007)	0.059 (0.051)	0.043*** (0.016)
Malmö = 1	0.009 (0.037)	0.041*** (0.010)	0.014 (0.039)	-0.005 (0.024)
Married = 1	0.087*** (0.017)	0.091*** (0.003)	-0.033 (0.025)	0.018* (0.010)
Local unemployment rate	-0.022*** (0.004)	-0.025*** (0.001)	-0.006 (0.010)	-0.026*** (0.005)
# Preschool children	0.041*** (0.015)	-0.000 (0.003)	0.050** (0.022)	-0.001 (0.008)
R-squared	0.16	0.27	0.11	0.24
Number of observations	3,170	38,512	790	3,920

Note: \*, \*\*, \*\*\* denote significance at the 10, 5, and 1 percent levels, respectively.

Table A2

## Least Squares Estimation of Part-Time and Full-Time Wage Equations: Women

(Robust Standard Errors in Parentheses)

<i>Independent Variable</i>	<b>Native Women</b>		<b>Immigrant Women</b>	
	<i>Part-Time</i>	<i>Full-Time</i>	<i>Part-Time</i>	<i>Full-Time</i>
Intercept	4.708*** (0.015)	4.729*** (0.008)	4.695*** (0.038)	4.759*** (0.024)
Experience	0.005*** (0.001)	0.013*** (0.001)	0.002 (0.002)	0.005*** (0.001)
Experience Squared/100	-0.010*** (0.002)	-0.021*** (0.001)	0.001 (0.006)	-0.005** (0.002)
High School = 1	0.070*** (0.007)	0.088*** (0.004)	0.113*** (0.013)	0.098*** (0.008)
University = 1	0.280*** (0.010)	0.313*** (0.005)	0.304*** (0.024)	0.360*** (0.012)
Stockholm =1	0.131*** (0.013)	0.158*** (0.005)	0.052*** (0.020)	0.046*** (0.011)
Gothenburg =1	0.061*** (0.013)	0.087*** (0.006)	-0.009 (0.023)	0.032** (0.015)
Malmö = 1	0.035** (0.017)	0.059*** (0.008)	0.000 (0.033)	-0.004 (0.016)
Married = 1	0.033*** (0.006)	0.015*** (0.003)	0.001 (0.015)	0.002 (0.008)
Local unemployment rate	-0.015*** (0.002)	-0.030*** (0.001)	-0.026*** (0.008)	-0.036*** (0.005)
# Preschool children	0.014*** (0.004)	0.011*** (0.003)	0.031** (0.011)	-0.006 (0.008)
R-squared	0.19	0.25	0.19	0.26
Number of observations	7,872	31,887	1,236	3,769

Note: \*, \*\*, \*\*\* denote significance at the 10, 5, and 1 percent levels, respectively.