TITLE: The Role of Labor Market Intermittency in Explaining Gender Wage Differentials

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The Role of Labor Market Intermittency in Explaining Gender Wage Differentials
Julie L. Hotchkiss and M. Melinda Pitts[*]

It is widely accepted that there is a penalty associated with intermittent labor force

participation; workers who engage in intermittent labor market activity earn lower wages than

workers who do not (for example, see Julie L. Hotchkiss and M. Melinda Pitts 2005). This

penalty for intermittency is often offered as one source of the lower wages observed for women

relative to men, as women generally have a higher level of intermittent activity. However, the

importance of this intermittent behavior relative to other contributors (e.g., occupational choice,

discrimination) has not been determined. The goal of this paper is to fill that gap by using

information on lifetime labor market activity and current earnings to quantify the contribution of

intermittency in explaining the observed wage differential.

Standard Oaxaca decomposition techniques (Ronald L. Oaxaca 1973) are applied to

2SLS wage equations that account for potential endogeneity of intermittent labor market

behavior. This decomposition allows the observed wage differential to be separated into

differences in endowments and differences in how those endowments are treated in the labor

market, as well as the identification of the contribution of intermittent behavior.

I. Empirical Specification

A standard linear log wage equation is specified to describe how observed characteristics

translate into labor market wages. In addition to the traditional human capital, institutional, and

geographic determinants of a worker's wage, a regressor indicating past intermittent labor market

experience is included. Since decisions regarding intermittent behavior may be endogenous to

the determination of wages (e.g., the decision to be absent from the labor market might be

affected by the worker's expectation about how such behavior will affect future wages), an

instrument is constructed from a first-stage OLS estimation of intermittent behavior. Since job characteristics are only observed for workers, results presented here are conditional on current labor market activity. Similar results are found from an estimation that includes a Heckman-type selectivity correction for labor force participation (available upon request).

The log wage equation, estimated separately for men and women, is specified as follows:

(1) $\quad W_i = \mathbf{X}_i' \boldsymbol{\beta} + \varphi \hat{I}_i + \varepsilon_i,$

where W_i is log hourly wage; $\mathbf{X}_i$ represent all demographic, geographic, and job characteristics; and $\hat{I}_i$ is the instrument for individual i's intermittency experience.

The estimated parameter coefficients are used to decompose the observed wage differential into components that are explained by differences in observed factors (the endowment effect) and by differences in the estimated coefficients (the coefficient effect):

(2) $\quad \overline{\ln \hat{W}_M} - \overline{\ln \hat{W}_F} = \hat{\boldsymbol{\beta}}_F' \left(\overline{\mathbf{X}}_M - \overline{\mathbf{X}}_F \right) + \overline{\mathbf{X}}_M' \left(\hat{\boldsymbol{\beta}}_M - \hat{\boldsymbol{\beta}}_F \right).$

Given that we are particularly interested in how different intermittent behavior translates into lower wages for women, the estimated coefficients from the female wage equation are used as the basis for the decomposition. Varying specifications are calculated with no appreciable difference in the conclusions. Each piece on the right hand side of equation (2) is broken into the contributing components of demographics, education, job characteristics, and intermittency. The goal of this paper is to determine the relative importance of the intermittent component.

II. Measuring Intermittency

An index of intermittency is constructed by combining the number of spells and the proportion of time spent absent from the labor force, which captures the average length of the spells, weighted by the proportion of time in the labor force that was accrued since the last spell

(this index was developed by Hotchkiss and Pitts 2005):

$$(3) \qquad I_i^* = \left[N_i \left(\frac{1}{T_i} \sum_{j=1}^{N_i} L_{ji} \right) \right]^{\omega_i},$$

where T_i = the total amount of time since first recorded labor market activity for person i;
N_i = the number of spells of absence for person i;
L_{ji} = the length of spell j for person i; and
ω_i = the percent of work life accumulated since last spell of absence for person i.

As the number of spells and/or the length of a spell increases, the measure of intermittency increases. As the total amount of time since the woman first entered the labor force increases, or the time since the last intermittent spell increases, the measure of intermittency decreases. Combining these factors allows the multi-dimensional nature of intermittent behavior to be captured in a single measure, which is likely more reflective of the way employers view intermittent behavior in making hiring and pay decisions. In other words, it is the combination, not the independent values, that matter. Nonetheless, in addition to using the index, each of the index's components is entered into separate specifications in order to investigate the role each plays in determining the impact of intermittency.

The intermittency index and its components are instrumented (separately) using the same set of regressors. Instruments for intermittency were chosen from a set of spousal chronic health conditions and individual life history characteristics that are significantly related to the intermittency measures, which gives us confidence of their quality. The instruments also pass the test for over-identifying restrictions, which also gives us confidence in their validity. The instruments include the percent of adult life spent married; an indicator if the person ever smoked; and indicators for if the spouse (if married) suffers from chronic back, pain, nervous system, or hypertension health conditions. 2SLS is used to correct the standard errors in the wage equation for the presence of a generated regressor.

III. The Data

The data sets used for the empirical analysis are the Health and Retirement Survey (HRS) public release and the HRS Covered Earnings, Version 3.1. The HRS is a nationally representative panel survey of 12,645 individuals who were either born in the period of 1931-1941 or are the spouse of an individual who is age-eligible. The first wave, administered in 1992, is used in the analysis. The Covered Earnings database includes annual data on earnings for the years 1951-1991. The advantage of the HRS is the exhaustive detail on lifetime labor market activity and health conditions, which help to instrument for intermittency.

The sample (with non-missing regressor values) contains 1,852 working men and 2,404 working women. Full sample means can be found in Hotchkiss and Pitts (2007). Men are more likely to be employed in blue collar and managerial occupations and blue collar industries. They are also more likely to be represented by a union, have longer job tenure, have a college degree, be married, have spent more of their adult life married, have ever smoked, and are less likely to be employed part-time. The average ages (57 years for men and 55 years for women) reflect the sampling design of the survey.

Work histories from the Covered Earnings file are used to calculate the index of intermittency (and its components). The index average is 0.30 for women and 0.16 for men and ranges from zero (those who have worked continuously since first entering the labor market) to one. Regarding the components of the index, women have a greater number of spells of absence (1.43 years versus 0.62 years for men), have spent a greater proportion of their working life absent (23 percent versus 8 percent for men), and have been absent more recently than men.

IV. Estimation Results

In general, the regressors in the wage equation estimation perform as expected. Wages

increase with education, union representation, non-wage benefits, and tenure with one's employer. Men earn a marriage premium, women a marriage penalty, and there is evidence of a concave age/earnings profile. First-stage OLS estimation results for the intermittent measures and 2SLS estimates of the log wage equations can be found in Hotchkiss and Pitts (2007).

The results from decomposing the observed wage differential between men and women into the endowment and coefficient effects are found in Table 1. The first row contains the total observed wage differential. On average, men are observed to earn an hourly wage that is 38 percent higher than the hourly wage earned by women. This is similar to the gap reported by others, particularly for this age cohort (see Francine D. Blau and Lawrence M. Kahn 2006).

The endowment effect is reported in the second row of bold numbers. This effect is broken into the components contributed by demographics, education, job characteristics, and intermittency. The first column presents the results obtained when using the intermittency index. The difference in intermittency experience between men and women, as measured by the index, accounts for almost 61 percent of the total impact of differences in endowments. This translates into approximately 19 percent of the total wage differential.

The relative importance of each of the index's components can be seen in the results presented in columns two through four. The contribution to the endowment effect is 41 percent for the number of spells of absence, 63 percent for the proportion of work life since the most recent spell, and 65 percent for the proportion of work life absent. The smaller contribution (and lack of significance) of intermittency when measured only by number of spells suggests that this component of the index is not as important as the other two.

It's not surprising that the proportion of work life absent would be particularly important in determining the influence of endowments on observed wages, since it is essentially a measure

of (the inverse of) total labor market experience. Its impact, however, is somewhat mitigated by how much time has passed since the last spell of absence, which is captured by the intermittency index. In other words, just controlling for labor market experience, and not for its pattern of accumulation, overstates that contribution of experience to gender wage differentials.

The coefficient effect is also broken into each of its contributing factors, including the intercept. Men are penalized more than women for intermittent experience, as indicated by the negative sign on the contribution of intermittency to the coefficient effect. This is consistent with other findings of a higher penalty for men for behavior related to weak labor market attachment, such as part-time employment (e.g., see Hotchkiss 1991).

The last column in Table 1 presents the estimates from a specification in which the regressor for intermittency is omitted. The primary consequence of omitting a measure of intermittency is that the endowment effect is now dominated by differences in job characteristics (such as occupation and industry), suggesting that intermittent activity, or anticipated intermittent activity, may play a role in occupational (or other job-type) choices (see Pitts 2003). Thus, not controlling for intermittent activity places inappropriate importance on job characteristics when explaining wage differentials between men and women.

V. Concluding Remarks

This paper quantifies the importance of intermittent labor market behavior of women in explaining observed wage differentials between older men and women. In explaining the wage gap, it was found that 61 percent of the contribution of differences in observed characteristics or 19 percent of the overall wage differential, is accounted for by the differences in intermittent behavior. In addition, not controlling for intermittent behavior results in inappropriate weight being placed on differences in job characteristics between men and women in explaining wage

differentials. To the extent that intermittent labor market behavior on the part of women is the result of (typically) joint or family utility maximization, earnings parity should not be expected. On the other hand, the fact that the coefficient effect (or differential treatment of worker endowments in the labor market) still accounts for 70 percent of the total observed wage differential indicates that there is still room for improvement.

Table 1. Decomposition of Male/Female Log Wage Differential

	Measure of Intermittency				
	Intermittency Index I_i^*	Proportion Work Life Absent $\left(\dfrac{1}{T_i}\sum_{j=1}^{N_i}L_{ji}\right)$	Number of Periods N_i	Proportion of Work Life Since Most Recent Absence ω^i	No Control for Intermittency
Log Wage Differential $\left(\overline{\ln\hat{W}_M}-\overline{\ln\hat{W}_F}\right)$	0.375	0.375	0.375	0.375	0.375
Endowment Effect	**0.115**	**0.155**	**0.113**	**0.131**	**0.077**
	(0.022)*	(0.037)*	(0.032)*	(0.030)*	(0.012)*
Demographics	0.001	0.006	-0.003	0.002	-0.007
	(0.007)	(0.008)	(0.007)	(0.008)	(0.006)
Education	0.007	0.007	0.006	0.007	-0.017
	(0.001)*	(0.001)*	(0.001)*	(0.001)*	(0.001)*
Job Characteristics	0.037	0.042	0.065	0.038	0.078
	(0.022)^	(0.020)*	(0.015)*	(0.023)^	(0.011)*
Intermittency	*0.070*	*0.100*	*0.046*	*0.083*	--
	*(0.033)**	*(0.045)**	*(0.037)*	*(0.041)**	
Coefficient Effect	**0.260**	**0.220**	**0.262**	**0.245**	**0.299**
	(0.026)*	(0.040)*	(0.035)*	(0.033)*	(0.018)*

Demographics	-0.635	-0.825	-0.782	-0.788	-0.384
	(1.238)	(1.217)	(1.147)	(1.217)	(1.104)
Education	-0.026	-0.022	-0.013	-0.023	-0.017
	(0.014)^	(0.014)	(0.013)	(0.013)^	(0.012)
Job Characteristics	0.167	0.164	0.104	0.160	0.082
	(0.088)^	(0.067)*	(0.073)	(0.089)^	(0.055)
Intermittency	*-0.005*	*-0.041*	*-0.012*	*-0.129*	*--*
	(0.098)	*(0.086)*	*(0.066)*	*(0.313)*	
Intercept	0.760	0.944	0.965	1.024	0.617
	(0.610)	(1.197)	(1.133)	(1.324)	(1.101)

Notes: Demographics includes the combined contribution of age, race, education, physical limitation, and region. Job characteristics includes the combined contribution of industry, occupation, part-time, job tenure, and health and pension benefits. 2SLS estimation results can be found in Hotchkiss and Pitts (2007). Approximate standard errors are obtained via the delta method (see Oaxaca and Michael Ransom 1998). *Significantly different from zero at the 5 percent level. ^Significantly different from zero at the 10 percent level.

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Appendix

Table A1: Full sample means of male and female workers

Variable	Males	Females
Log Wage	2.592 (0.617)	2.217 (0.553)
Age	56.61 (3.91)	54.51 (5.13)
Black = 1	0.120 (0.325)	0.179 (0.384)
Married = 1	0.860 (0.347)	0.707 (0.455)
Number of Children currently under 18	0.328 (0.716)	0.241 (0.601)
Non-labor income	41,362 (36,409)	31,623 (34,929)
Acute health condition = 1	0.221 (0.415)	0.207 (0.405)
Spouse acute health condition = 1	0.180 (0.384)	0.214 (0.410)
Spouse physical limitation index	10.294 (10.638)	7.187 (10.382)
Spouse suffers chronic back condition = 1	0.26 (0.44)	0.23 (0.42)
Spouse suffers chronic pain = 1	0.03 (0.16)	0.01 (0.11)
Spouse suffers chronic nervous system condition = 1	0.01 (0.08)	0.01 (0.10)
Spouse suffers chronic hypertension = 1	0.17 (0.38)	0.20 (0.40)
Percent of adult life spent married	0.779 (0.324)	0.675 (0.419)
Ever smoked = 1	0.749 (0.434)	0.527 (0.499)
Less then HS = 1	0.165 (0.371)	0.147 (0.354)
College graduate = 1	0.225 (0.417)	0.194 (0.396)
Northeast	0.174 (0.380)	0.193 (0.395)

West	0.148 (0.355)	0.132 (0.338)
Midwest	0.258 (0.438)	0.262 (0.440)
Job tenure	16.421 (11.828)	12.199 (9.375)
Occupation1 = 1	0.311 (0.463)	0.287 (0.452)
Occupation2 = 1	0.127 (0.333)	0.371 (0.483)
Occupation3 = 1	0.094 (0.292)	0.211 (0.408)
Occupation4 = 1	0.468 (0.499)	0.130 (0.337)
Industry1 =1	0.544 (0.498)	0.193 (0.394)
Industry2 =1	0.329 (0.470)	0.647 (0.478)
Industry3 = 1	0.126 (0.332)	0.161 (0.367)
Union = 1	0.308 (0.462)	0.215 (0.411)
Part-time = 1	0.110 (0.312)	0.312 (0.464)
Employer pension plan = 1	0.693 (0.461)	0.594 (0.491)
Employer health insurance = 1	0.718 (0.450)	0.693 (0.462)
Physical limitation index	7.862 (7.632)	10.839 (8.413)
Intermittency Index (I_i^*)	0.160 (0.307)	0.299 (0.322)
Proportion of Potential Work Life Spent Absent $\left(\frac{1}{T_i}\sum_{j=1}^{N_i}L_{ji}\right)$	0.081 (0.183)	0.234 (0.250)
Number of Periods of Absence (N_i)	0.618 (1.044)	1.426 (1.288)
Proportion of Work Life Since Most Recent Spell of Absence (ω^i)	0.771 (0.362)	0.571 (0.351)
Number of Observations	1,852	2,404

Notes: Standard Errors are in parentheses. All means are significantly different from each other except percent with less than a high school degree, availability of employer-provided health insurance, and regional indicators.

Industry1 (omitted) = 1 if Agriculture, Forestry, Fishing; Mining and Construction; Manufacturing; Transportation

Industry2 = 1 if Wholesale; Retail

Industry3 = 1 if Finance, Insurance, and Real Estate; Business and Repair Services; Personal Services; Entertainment and Recreation; Professional and Related Services; Public Administration

Occupation1 (omitted) = 1 if Managerial specialty operation; Professional specialty operation and technical support

Occupation2 = 1 if Sales; Clerical, administrative support
Occupation3 = 1 if Service
Occupation4 = 1 if Farming, forestry, fishing; Precision production and repair; Operators; Armed Forces
The index of physical limitation is on a scale from 1 to 100 and represents the degree of difficulty an individual has in performing seventeen activities of daily living and instrumental activities of daily living.

Table A2. First-stage OLS Estimation of Predicted Values of Intermittency Measures

Dep. Variable=	Intermittency Index I_i^*		Proportion of Potential Work Life Spent Absent $\left(\dfrac{1}{T_i}\sum_{j=1}^{N_i} L_{ji}\right)$		Number of Periods of Absence N_i		Proportion of Work Life Since Most Recent Spell of Absence ω^i	
Variable	Males	Females	Males	Females	Males	Females	Males	Females
Age/10	0.229	0.291^	0.032	0.152	-0.407	1.582*	-0.354	-0.404+
	(0.225)	(0.153)	(0.135)	(0.118)	(0.754)	(0.605)	(0.262)	(0.160)
Age^2/1000	-0.178	-0.214*	-0.012	-0.088+	0.656	-1.096^	0.282	0.300+
	(0.203)	(0.145)	(0.121)	(0.112)	(0.681)	(0.576)	(0.236)	(0.153)
Black	0.026	-0.019	0.008	-0.038*	0.216*	-0.149+	-0.051^	0.030^
	(0.022)	(0.017)	(0.013)	(0.014)	(0.076)	(0.069)	(0.026)	(0.018)
Married	-0.011	-0.083*	0.017	-0.074*	0.166	-0.467*	0.012	0.081*
	(0.035)	(0.030)	(0.021)	(0.023)	(0.118)	(0.118)	(0.041)	(0.031)
Less than HS	-0.001	0.013	-0.005	-0.006	-0.009	-0.011	0.002	0.000
	(0.020)	(0.019)	(0.012)	(0.015)	(0.068)	(0.078)	(0.024)	(0.020)
College Grad	0.022	0.095+	0.023^	0.081*	0.259*	0.113^	-0.036	-0.087*
	(0.021)	(0.020)	(0.012)	(0.015)	(0.070)	(0.078)	(0.024)	(0.021)
Northeast	-0.042+	-0. 045*	-0.022^	-0.017+	-0.067	-0.143+	0.049^	0.036+
	(0.020)	(0.017)	(0.012)	(0.013)	(0.067)	(0.069)	(0.023)	(0.018)
West	0.022	0. 061+	0.021^	0.045*	0.030	0.077	-0.016	-0.058*
	(0.021)	(0.020)	(0.013)	(0.015)	(0.071)	(0.080)	(0.025)	(0.021)
Midwest	0.028	.002	0.019^	0.016	-0.041	0.031	0.029	-0.009
	0.017	(0.016)	(0.010)	(0.012)	0.059	(0.062)	(0.020)	(0.016)
Tenure/10	-0.026	-0.158*	0.017	-0.052*	-0.043	-0.404*	0.040	0.144*
	(0.024)	(0.023)	(0.014)	(0.018)	(0.080)	(0.091)	(0.028)	(0.024)
Tenure^2/1000	0.044	0.274*	-0.016	0.066	-0.058	0.205	-0.025	-0.173+
	(0.059)	(0.066)	(0.036)	(0.051)	(0.199)	(0.263)	(0.069)	(0.070)
Occupation2	0.018	-0.008	0.014	0.015	0.115	-0.134^	-0.024	0.007
	(0.025)	(0. 018)	(0.015)	(0.014)	(0.085)	(0.072)	(0.030)	(0.019)
Occupation3	0.014	0.015	-0.005	0.014	0.019	-0.003	-0.018	0.002
	(0.029)	(0.022)	(0.017)	(0.017)	(0.098)	(0.087)	(0.034)	(0.023)
Occupation4	-0.060*	-0.083*	-0.036*	-0.052+	-0.101	-0.178	0.066*	0.090*
	(0.021)	(0.028)	(0.012)	(0.021)	(0.070)	(0.110)	(0.024)	(0.029)
Industry2	0.082*	0.035^	0.063*	0.023	0.234*	0.135^	-0.090*	-0.042+
	(0.018)	(0.020)	(0.011)	(0.016)	(0.062)	(0.080)	(0.021)	(0.021)
Industry3	-0.031	0.002	-0.015	0.005	-0.048	0.010	0.043	-0.019
	(0.023)	(0.024)	(0.014)	(0.018)	(0.078)	(0.093)	(0.027)	(0.025)
Union	0.059*	0.061*	0.035*	0.052*	0.186*	0.138+	-0.060*	-0.058*
	(0.017)	(0.016)	(0.010)	(0.013)	(0.057)	(0.065)	(0.020)	(0.017)
Part-time	0.084*	0.101*	0.025^	0.067*	0.130^	0.165*	-0.082*	-0.087*
	(0.023)	(0.014)	(0.014)	(0.011)	(0.078)	(0.057)	(0.027)	(0.015)
Pension	-0.068*	-0.076*	-0.025+	-0.037*	-0.267*	-0.148+	0.095*	0.082*
	(0.018)	(0.015)	(0.011)	(0.012)	(0.063)	(0.061)	(0.022)	(0.016)
Health Ins.	-0.030^	-0.051*	-0.010	-0.034*	-0.190*	-0.129+	0.036+	0.046*
	(0.016)	(0.015)	(0.010)	(0.011)	(0.055)	(0.058)	(0.019)	(0.015)
Phys Limitation	0.001	-0.001	0.000	-0.000	0.006+	0.003	-0.002+	-0.000
	(0.001)	(0.001)	(0.001)	(0.001)	(0.003)	(0.003)	(0.001)	(0.001)
Percent of adult life spent married	**-0.079+**	**0. 135***	**-0.046+**	**0.133***	**-0.544***	**0.521***	**0.109+**	**-0.150***
	(0.037)	**(0.031)**	**(0.022)**	**(0.024)**	**(0.124)**	**(0.124)**	**(0.043)**	**(0.033)**

Ever smoked	**0.006**	**0. 029[+]**	**-0.004**	**0.011**	**0.055**	**0.272***	**-0.016**	**-0.042***
	(0.016)	**(0.013)**	**(0.010)**	**(0. 001)**	**(0.054)**	**(0.050)**	**(0.019)**	**(0.013)**
Sp suffers chronic back condition	**-0.020**	**-0.036[+]**	**-0.013**	**-0.013**	**-0.050**	**-0.041**	**0.030**	**0.032[^]**
	(0.016)	**(0.016)**	**(0.009)**	**(0.012)**	**(0.055)**	**(0.063)**	**(0.019)**	**(0.017)**
Sp suffers chronic pain	**-0.007**	**0.120[+]**	**0.021**	**0.056**	**-0.065**	**0.418**	**0.006**	**-0.118[^]**
	(0.043)	**(0.059)**	**(0.026)**	**(0.045)**	**(0.146)**	**(0.232)**	**(0.051)**	**(0.062)**
Sp suffers chronic nervous sys cond	**0.009**	**0.046**	**0.010**	**0.080**	**-0.037**	**0.076**	**0.009**	**-0.030**
	0.090	**(0.066)**	**(0.054)**	**(0.051)**	**(0.301)**	**(0.261)**	**(0.104)**	**(0.069)**
Sp suffers chronic hypertension	**-0.024**	**-0.009**	**-0.009**	**0.009**	**-0.072**	**0.011**	**0.044[+]**	**0.013**
	(0.019)	**(0.016)**	**(0.011)**	**(0.013)**	**(0.063)**	**(0.065)**	**(0.022)**	**(0.017)**
Intercept	-0.445	-0.561*	-0.048	-0.340[+]	1.269	-3.559[+]	1.688[+]	1.790*
	(0.624)	(0.398)	(0.374)	(0.308)	(2.092)	(1.580)	(0.726)	(0.419)

Notes: * indicates significant at the 99% level; [+] indicates significant at the 95% level; [^] indicates significant at the 90% level. Regressors unique to these estimations are in bold.

Table A3: 2SLS estimates of log wage for different measures of intermittency

Variable	Intermittency Index I_i^*		Proportion of Potential Work Life Spent Absent $\left(\dfrac{1}{T_i}\sum_{j=1}^{N_i}L_{ji}\right)$		Number of Periods of Absence N_i		Proportion of Work Life Since Most Recent Spell of Absence ω^i	
	Males	Females	Males	Females	Males	Females	Males	Females
I*	-0.539 (0.562)	-0.507+ (0.235)	--	--	--	--	--	--
$\left(\dfrac{1}{T_i}\sum_{j=1}^{N_i}L_{ji}\right)$	--	--	-1.156 (1.017)	-0.657+ (0.291)	--	--	--	--
N_i	--	--	--	--	-0.075 (0.097)	-0.056 (0.046)	--	--
ω^i	--	--		--	--	--	0.249 (0.350)	0.416+ (0.206)
Age/10	0.128 (0.386)	0.352* (0.225)	0.032 (0.381)	0.318 (0.219)	0.030 (0.354)	0.271 (0.217)	0.095 (0.373)	0.370 (0.229)
Age²/1000	-0.152 (0.344)	-0.328* (0.209)	-0.061 (0.343)	-0.290 (0.204)	-0.003 (0.324)	-0.261 (0.200)	-0.128 (0.333)	-0.342 (0.210)
Black	-0.065^ (0.039)	0.026 (0.024)	-0.069^ (0.039)	0.010 (0.026)	-0.062 (0.041)	0.026 (0.024)	-0.066^ (0.039)	0.022 (0.024)
Married	0.099+ (0.047)	-0.030* (0.020)	0.104+ (0.041)	-0.018 (0.021)	0.110* (0.042)	-0.040+ (0.019)	0.109+ (0.044)	-0.025 (0.020)
Less than HS	-0.193* (0.033)	-0.078* (0.027)	-0.197* (0.035)	-0.090* (0.027)	-0.191* (0.032)	-0.086* (0.026)	-0.192* (0.032)	-0.085* (0.026)
College Grad	0.255* (0.036)	0.285* (0.034)	0.271* (0.043)	0.290* (0.034)	0.263* (0.041)	0.245* (0.026)	0.252* (0.035)	0.274* (0.031)
Northeast	0.115* (0.040)	0.158* (0.025)	0.111* (0.041)	0.169* (0.024)	0.132* (0.032)	0.172* (0.023)	0.125* (0.036)	0.166* (0.024)
West	0.195* (0.037)	0.181* (0.031)	0.208* (0.042)	0.179* (0.031)	0.185* (0.033)	0.155* (0.027)	0.187* (0.034)	0.174* (0.030)
Midwest	0.026 (0.033)	0.028 (0.021)	0.020 (0.035)	0.038^ (0.022)	0.039 (0.028)	0.029 (0.021)	0.034 (0.029)	0.031 (0.021)
Tenure/10	0.154* (0.041)	0.129* (0.049)	0.187* (0.044)	0.176* (0.035)	0.164* (0.037)	0.187* (0.036)	0.158* (0.040)	0.149* (0.043)
Tenure²/1000	-0.232+ (0.099)	-0.166 (0.111)	-0.275* (0.102)	-0.265* (0.093)	-0.259* (0.093)	-0.293* (0.088)	-0.249* (0.093)	-0.233+ (0.964)
Occupation2	-0.243* (0.042)	-0.291* (0.025)	-0.237* (0.045)	-0.277* (0.025)	-0.244* (0.041)	-0.295* (0.025)	-0.246* (0.041)	-0.290* (0.025)
Occupation3	-0.528* (0.048)	-0.509* (0.030)	-0.543* (0.050)	-0.507* (0.030)	-0.534* (0.046)	-0.516* (0.029)	-0.531* (0.046)	-0.516* (0.030)
Occupation4	-0.371* (0.048)	-0.449* (0.042)	-0.381* (0.052)	-0.441* (0.041)	-0.347* (0.035)	-0.417* (0.037)	-0.355* (0.040)	-0.444* (0.041)
Industry2	-0.013 (0.055)	-0.022 (0.029)	0.015 (0.071)	-0.025 (0.029)	-0.041 (0.036)	-0.033 (0.027)	-0.036 (0.043)	-0.023 (0.029)
Industry3	-0.089+ (0.041)	-0.173* (0.032)	-0.089+ (0.041)	-0.171* (0.032)	-0.076+ (0.037)	-0.175* (0.031)	-0.084+ (0.039)	-0.167* (0.032)
Union	0.151* (0.043)	0.143* (0.026)	0.160* (0.046)	0.147* (0.027)	0.133* (0.032)	0.120* (0.022)	0.134* (0.034)	0.136* (0.025)
Part-time	0.061	0.046	0.045*	0.040	0.025	0.003	0.036	0.031

	(0.061)	(0.031)	(0.047)	(0.028)	(0.038)	(0.020)	(0.047)	(0.027)
Pension	0.198*	0.138*	0.206*	0.153*	0 215*	0.168*	0.211*	0.143*
	(0.050)	(0.027)	(0.041)	(0.024)	(0.040)	(0.021)	(0.045)	(0.027)
Health Ins.	0.092*	0.017	0.096*	0.020	0.093*	$0.037^{\wedge}$	0.099*	0.024
	(0.031)	(0.024)	(0.029)	(0.023)	(0.031)	(0.020)	(0.028)	(0.022)
Phys Limitation	-0.005*	$-0.002^{\wedge}$	-0.006*	-0.002^{+}	-0.005*	-0.002^{+}	-0.005*	-0.002^{+}
	(0.002)	(0.001)	(0. 001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
Intercept	2.182^{+}	1.42^{+}	2.387^{+}	1.443^{+}	2.528^{+}	1.562	$-1.997^{\wedge}$	0.973
	(1.039)	(0.568)	(1.055)	(0.566)	(0.987)	(0.553)	(1.141)	(0.672)

Notes: Estimates were obtained via 2SLS to account for the presence of generated regressors in the estimation (see Pagan 1984 and Wooldridge 2002). Each measure of intermittency is instrumented using the same sets of intruments. Instruments chosen were those exhibiting the highest level of explanatory power in the first-stage regression and those that could pass the test for over-identifying restrictions. First-stage estimation results are found in the Appendix. * indicates significant at the 99% level; $^{+}$ indicates significant at the 95% level; $^{\wedge}$ indicates significant at the 90% level.