SUMPPLEMENTARY APPENDIX

For

Structural Earnings Losses and Between-Industry Mobility of Displaced Workers, 2003-2008

Table S1. Regression coefficients for the effect of industrial mobility on displaced workers' earnings changes, with fitted interaction effects between datasets and all other variables in the models

Stayers: In manufacturing (the constant) In service -0.135** In wholesale and retail -0.116 In transportation and utilities 0.0601 In construction -0.144** In construction -0.144** In agriculture and mining 0.181 In public administration -0.214 Movers: -0.214 Manufacturing to service -0.358** Manufacturing to service -0.358** Manufacturing to construction -0.411** Manufacturing to transportation and utilities -0.049 Manufacturing to construction -0.520 Manufacturing to gariculture and mining -0.286) Manufacturing to agriculture and mining -0.049 Manufacturing to public administration -0.442** Manufacturing to public administration -0.42** Manufacturing to gariculture and mining -0.038 Manufacturing to public administration -0.42** Manufacturing to public administration -0.42** Manufacturing to public administration -0.42** Manufacturing to public administration -0.42** <t< th=""><th></th><th>Model S1</th></t<>		Model S1
In manufacturing (the constant)In service -0.135^{**} (0.040)In wholesale and retail -0.116 (0.071)In transportation and utilities 0.060 (0.051)In construction -0.144^{**} (0.051)In agriculture and mining 0.181 (0.120)In public administration -0.214 (0.490)Movers: -0.358^{**} (0.065)Manufacturing to service -0.358^{**} (0.065)Manufacturing to vholesale and retail -0.41^{**} (0.125)Manufacturing to construction -0.520 (0.125)Manufacturing to agriculture and mining -0.89 (0.128)Manufacturing to agriculture and mining -0.89 (0.188)Manufacturing to agriculture and mining -0.421^{**} (0.177)All other types of industry movers -0.158^{**} (0.038)Survey year = 2008 0.032 (0.032) × Stay in service 0.018 (0.040) (0.040) \times Stay in wholesale and retail 0.018 (0.040)	Stayers:	
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In transportation and diffues 0.035 (0.051)In construction -0.144^{**} (0.051)In agriculture and mining 0.181 (0.120)In public administration -0.214 (0.490)Movers: -0.358^{**} (0.065)Manufacturing to service -0.358^{**} (0.065)Manufacturing to wholesale and retail -0.431^{**} (0.125)Manufacturing to transportation and utilities -0.049 (0.169)Manufacturing to construction -0.520 (0.169)Manufacturing to agriculture and mining (0.286) -0.089 (0.188)Manufacturing to public administration -0.442^{**} (0.038)Survey year = 2008 0.032 (0.032) × Stay in service 0.002 (0.040) × Stay in wholesale and retail	In transportation and utilities	(0.071)
In construction -0.144^{**} (0.051)In agriculture and mining0.181 (0.120)In public administration -0.214 (0.490)Movers: -0.214 (0.490)Manufacturing to service -0.358^{**} (0.065)Manufacturing to wholesale and retail -0.431^{**} (0.125)Manufacturing to transportation and utilities -0.049 (0.169)Manufacturing to construction -0.520 (0.169)Manufacturing to agriculture and mining -0.089 (0.188)Manufacturing to public administration -0.442^{**} (0.031)All other types of industry movers -0.158^{**} (0.033)Survey year = 2008 0.032 (0.032) × Stay in service× Stay in service 0.002 (0.040) × Stay in wholesale and retail	in transportation and admites	(0.051)
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In public administration -0.214 (0.490)Movers:	In public administration	(0.120)
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Manufacturing to wholesale and retail -0.431^{**} (0.125)Manufacturing to transportation and utilities -0.049 (0.169)Manufacturing to construction -0.520 (0.286)Manufacturing to agriculture and mining -0.089 (0.188)Manufacturing to public administration -0.442^{**} (0.117)All other types of industry movers -0.158^{**} (0.038)Survey year = 2008 0.032 (0.032) × Stay in service× Stay in service 0.002 (0.040) × Stay in wholesale and retail		(0.065)
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Manufacturing to transportation and utilities -0.049 (0.169)Manufacturing to construction -0.520 (0.286)Manufacturing to agriculture and mining -0.089 (0.188)Manufacturing to public administration $-0.442**$ (0.117)All other types of industry movers $-0.158**$ (0.038)Survey year = 2008 0.032 (0.032) (0.032)× Stay in service 0.002 (0.040) × Stay in wholesale and retail		(0.125)
Manufacturing to construction -0.520 (0.286)Manufacturing to agriculture and mining -0.089 (0.188)Manufacturing to public administration -0.442^{**} (0.117)All other types of industry movers -0.158^{**} (0.038)Survey year = 2008 0.032 (0.032) (0.032)× Stay in service 0.002 (0.040) × Stay in wholesale and retail	Manufacturing to transportation and utilities	-0.049
Manufacturing to conduction(0.286)Manufacturing to agriculture and mining -0.089 Manufacturing to public administration -0.442^{**} All other types of industry movers (0.117) All other types of industry movers -0.158^{**} Survey year = 2008 0.032 × Stay in service 0.002 (0.040)(0.040)× Stay in wholesale and retail 0.018	Manufacturing to construction	-0.520
Manufacturing to agriculture and mining-0.089 (0.188) -0.442** (0.117) All other types of industry movers -0.442^{**} (0.117) -0.158** (0.038)Survey year = 2008 0.032 (0.032) (0.032) × Stay in service 0.002 (0.040) (0.040) × Stay in wholesale and retail		(0.286)
Manufacturing to public administration (0.188) $-0.442**$ (0.117) $-0.158**$ (0.038) All other types of industry movers $-0.158**$ (0.038) Survey year = 2008 0.032 (0.032) \times Stay in service× Stay in service 0.002 (0.040) \times Stay in wholesale and retail× Stay in wholesale and retail 0.018 (0.070)	Manufacturing to agriculture and mining	-0.089
Manufacturing to public administration -0.442^{**} (0.117)All other types of industry movers -0.158^{**} (0.038)Survey year = 2008 0.032 (0.032)× Stay in service 0.002 (0.040)× Stay in wholesale and retail 0.018 (0.070)		(0.188)
All other types of industry movers (0.117) $-0.158**$ (0.038) Survey year = 2008 0.032 (0.032) (0.032) × Stay in service 0.002 (0.040) \times Stay in wholesale and retail× Stay in wholesale and retail 0.018 (0.070)	Manufacturing to public administration	-0.442**
All other types of industry movers $-0.138^{+0.1}$ (0.038)Survey year = 2008 0.032 (0.032)× Stay in service 0.002 (0.040)× Stay in wholesale and retail 0.018 (0.070)	All other types of inductry movers	(0.117)
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Survey year = 2008 0.032 × Stay in service 0.002 × Stay in wholesale and retail 0.018 (0.070) (0.070)		(0.050)
× Stay in service (0.032) × Stay in wholesale and retail (0.040) × Stay in wholesale and retail (0.018)	Survey year = 2008	0.032
× Stay in service 0.002 (0.040) × Stay in wholesale and retail 0.018 (0.070)		(0.032)
× Stay in wholesale and retail (0.040) (0.018	× Stay in service	0.002
× Stay in wholesale and retail 0.018		(0.040)
	× Stay in wholesale and retail	0.018

\times Stay in transportation and utilities	-0.104*
	(0.051)
× Stay in construction	-0.059
	(0.051)
× Stay in agriculture and mining	-0.160
	(0.120)
× Stay in public administration	-0.600
	(0.509)
× Manufacturing to service	-0.105
	(0.067)
× Manufacturing to wholesale and retail	0.015
	(0.122)
× Manufacturing to transportation and utilities	0.191
	(0.174)
× Manufacturing to construction	-0.059
	(0.292)
× Manufacturing to agriculture and mining	0.171
	(0.189)
× Manufacturing to public administration	-0.137
	(0.120)
\times All other types of industry movers	-0.039
	(0.039)
All other variables	\checkmark
R-squared	0.04
N	3,281

Source: Current Population Surveys (Displaced Worker Supplement), January 2006 and 2008 combined. Notes: Robust standard errors in parentheses. All variables except industrial mobility variables are centered at their means.

* *p*<0.05, ** *p*<0.01 (two-tailed).

	Model S1	Model S2
Stayers:		
In manufacturing (the constant)	0.041	-0.042
In manaration ing (interesting)	(0.031)	(0.041)
In service	-0.100*	-0.021
	(0.040)	(0.051)
In wholesale and retail	-0.083	-0.050
	(0.074)	(0.134)
In transportation and utilities	0.065	0.166
•	(0.054)	(0.109)
In construction	-0.112*	-0.035
	(0.044)	(0.055)
In agriculture and mining	0.145	0.374
0	(0.127)	(0.212)
In public administration	-0.574	-1.059
	(0.812)	(1.639)
Movers:		
Manufacturing to service	-0.281**	-0.157
6	(0.063)	(0.086)
Manufacturing to wholesale and retail	-0.394**	-0.112
6	(0.139)	(0.130)
Manufacturing to transportation and utilities	-0.029	-0.106
	(0.197)	(0.139)
Manufacturing to construction	-0.305	0.174
	(0.265)	(0.106)
Manufacturing to agriculture and mining	-0.005	0.160
	(0.160)	(0.449)
Manufacturing to public administration	-0.439**	-0.669**
	(0.118)	(0.108)
All other types of industry movers	-0.117**	-0.031
	(0.038)	(0.061)
Long tenure	-0.114**	0.018
-	(0.034)	(0.049)
× Stay in service		-0.123
		(0.077)
\times Stay in wholesale and retail		-0.047
		(0.161)
× Stay in transportation and utilities		-0.160
		(0.121)
× Stay in construction		-0.117
		(0.095)
\times Stay in agriculture and mining		-0.354
		(0.263)
× Stay in public administration		1.012
· .		(1.649)
× Manufacturing to service		-0.200
č		(0.120)

 Table S2. Regression coefficients for the effect of industrial mobility on displaced workers' earnings changes, with voluntary part-time workers excluded from the sample

\times Manufacturing to wholesale and retail		-0.477
Manufacturing to transmostation and utilities		(0.254)
× Manufacturing to transportation and utilities		(0.181)
Mar Cart in the second star		(0.373)
× Manufacturing to construction		-0.867
		(0.476)
× Manufacturing to agriculture and mining		-0.261
		(0.455)
\times Manufacturing to public administration		0.254
		(0.149)
× All other types of industry movers		-0.139
		(0.074)
Education (Less than high school is omitted):		
High school graduates	0.047	0.031
	(0.045)	(0.048)
Some college	0.048	0.032
ũ là chí	(0.048)	(0.048)
College graduates	0.078	0.063
	(0.053)	(0.054)
Advanced degrees	0.104	0.089
	(0.088)	(0.088)
Union according of the last ich	0.069	0.079
Union coverage of the lost job	-0.008	-0.078
Other human accritical and demonstrate the second has	(0.051)	(0.049)
Other numan capital and demographic variables	v 0.04	v 0.04
K-squared	0.04	0.04
N	3,281	3,281

Source: Current Population Surveys (Displaced Worker Supplement), January 2006 and 2008 combined. Notes: R obust standard errors in parentheses. All variables except industrial mobility and long tenure variables are centered at their means

centered at their means. * p < 0.05, ** p < 0.01 (two-tailed).

	Model 1
Constant	6.539**
	(0.003)
Industry (manufacturing is omitted):	
Service	-0.110**
Wholesale and retail	(0.003) -0.149**
Transportation and utilities	(0.004) -0.022**
Construction	(0.006) -0.044**
Agriculture and mining	(0.005) -0.168**
Public administration	(0.011) 0.019**
	(0.005)
Year	-0.006**
× Service	(0.001) 0.003**
	(0.001)
× Wholesale and retail	-0.001
	(0.001)
× Transportation and utilities	-0.001 (0.002)
× Construction	0.005**
	(0.002)
× Agriculture and mining	0.012**
	(0.003)
× Public administration	0.006**
Union Member	0.131**
	(0.004)
× Service	-0.045**
	(0.005)
\times Wholesale and retail	-0.015*
	(0.007)
\times Transportation and utilities	0.0/1**
. Construction	(0.007)
× Construction	0.158**
× Agriculture and mining	0.007)
× Agriculture and mining	(0.020)
x Public administration	0.022**
	(0.007)
Education (Less than high school is omitted):	
High school graduates	0.187**
	(0.002)
Some college	0.262**

Table S3	. Earnings	Regressions for	r the Full Labor	Market, with	Industry-Specific	r Union Variables
Lable 55	• Lai mingo	Regi costono to	i inc r un Labor	Traince, with	muusu y-opeenn	c Omon variables

	(0.002)
College graduates	0.485**
	(0.003)
Advanced degrees	0.577**
	(0.003)
Demographic and other human capital variables ^a	\checkmark
R-squared	996,316
N	0.56

Source: Current Population Surveys (Merged Outgoing Rotation Groups), 2003-2008.

Notes: Robust standard errors in parentheses. All variables except industrial mobility variables are centered.

^a age, age squared, gender, marital status, gender \times marital status, have children, gender \times have children, race, usual work hours, region, and occupations.

* *p*<0.05; ** *p*<0.01 (two-tailed).



Source: Current Population Surveys (Merged Outgoing Rotation Groups), 2003-2008. Note: All other variables except for the union variable are set to their mean values. Industry-level average values are used for the union variable.

Figure S1. Predicted Earnings Trends by Industry for Model 1 in Table S3

The Construction of the Weight that Adjusts for Missing Data on Earnings and Industry

We used weighted regression to adjust the models reported in this article for non-random missingness of data on earnings and on the industry of both the lost job and the current job. The weight utilized is the inverse of the probability of inclusion in the full data subsample. The procedure for constructing the weight is:

- (1) Estimate a model predicting inclusion in the full data subsample
- (2) Construct an estimated weight
- (3) Check the balance of the covariates when adjusted by the estimated weight
- (4) If the covariates remain unbalanced, respecify the model in (1)

After repeating steps (1) through (4) many times, the final specification that was used to construct the weight is presented in Table S3. Below, we describe the procedure in more detail.

Table S4. Logit coefficients for a model predicting inclusion in the full data subsample

Age 0.057^{**} Age squared (0.018) Age squared 0.001^{**} 0.000 Education (Less than high school is omitted): High school graduates 0.399^{**} Some college 0.640^{**} College graduates 0.576^{**} (0.127) Some college College graduates 0.576^{**} (0.132) College graduates Advanced degrees 1.030^{**} Marce (white is omitted) Elack Black -0.152 Hispanic 0.014 Other race 0.404^{*} Metropolitan residency -0.016 Married 0.326^{**} (0.076) Married Married 0.326^{**} (bild 0.039 Y High school graduates -0.127 × High school graduates -0.127 × Some college -0.242		Model S1
Age squared $\begin{pmatrix} 0.018 \\ -0.001^{**} \\ (0.000 \end{pmatrix}$ Education (Less than high school is omitted): High school graduates $0.399^{**} \\ (0.127)$ Some college $0.640^{**} \\ (0.132)$ College graduates $0.576^{**} \\ (0.146)$ Advanced degrees $1.030^{**} \\ (0.194)$ Race (white is omitted) $0.152 \\ (0.127) \\ (0.194)$ Black $0.152 \\ (0.127) \\ (0.194)$ Black $0.014 \\ (0.113) \\ (0.113) \\ (0.164) \\ (0.164) \\ (0.164) \\ (0.076) \\ (0.376) \\ (0.376) \\ (0.087) \\ (0.087) \\ (1id) \\ (0.087) \\ (1id) \\ (0.087) \\ (1id) \\ (0.081) \\ (0.081) \\ (0.041) \\ (1in) \\ Female \\ (0.208) \\ ($	Age	0.057**
Age squared -0.001** Education (Less than high school is omitted): High school graduates 0.399** Some college 0.127) Some college 0.640** (0.132) 0.640** College graduates 0.576** Advanced degrees (0.146) Advanced degrees (0.194) Race (white is omitted) -0.152 Black -0.152 (0.127) 0.014 (0.113) 0.014 Other race -0.404* (0.164) 0.016 Metropolitan residency -0.016 (0.087) (0.087) Child 0.039 Female 0.425* (0.209) × High school graduates × Some college -0.242	-	(0.018)
Education (Less than high school is omitted): High school graduates 0.399** Some college 0.640** (0.127) 0.640** (0.132) 0.132) College graduates 0.576** Advanced degrees (0.146) Advanced degrees (0.132) Race (white is omitted) (0.194) Black -0.152 (0.127) (0.127) Hispanic 0.014 Other race -0.404* (0.113) (0.164) Metropolitan residency -0.016 Married 0.326** (0.087) (0.041) Female 0.425* (0.209) × High school graduates -0.127 × Some college -0.242	Age squared	-0.001**
Education (Less than high school is omitted): High school graduates 0.399** Some college 0.640** College graduates 0.576** Advanced degrees 0.130) Advanced degrees 1.030** (0.127) 0.146) Advanced degrees 0.014 (0.127) 0.152 Hispanic 0.014 Other race -0.404* (0.164) 0.014 Metropolitan residency -0.016 Married 0.326** (0.0076) 0.039 (0.041) -0.016 (0.020) -0.425* (0.209) × High school graduates -0.127 × Some college -0.242		(0.000)
High school graduates 0.399** Some college 0.640** (0.127) 0.576** College graduates 0.576** Advanced degrees 1.030** Marce (white is omitted) 0.194) Race (white is omitted) 0.014 Black -0.152 Mispanic 0.014 Other race -0.404* Metropolitan residency -0.016 Married 0.326** (0.087) (0.041) Female 0.425* (0.209) × High school graduates × Some college -0.242	Education (Less than high school is omitted):	
High school graduates 0.399** Some college 0.640** O.132 0.576** (0.146) 0.40** Advanced degrees 1.030** (0.194) 0.194) Race (white is omitted) -0.152 Black -0.152 (0.127) 0.014 Hispanic 0.014 Other race -0.404* (0.164) 0.016 Metropolitan residency -0.016 (0.076) 0.326** (0.087) (0.041) Female 0.425* (0.209) × High school graduates -0.127 × Some college -0.242		
Some college (0.127) Some college graduates (0.132) College graduates (0.146) Advanced degrees 1.030^{**} (0.194) Race (white is omitted) Black -0.152 (0.127) (0.127) Hispanic 0.014 (0.113) Other race (0.164) (0.164) Metropolitan residency -0.016 (0.076) (0.076) Married 0.326^{**} (Didd) (0.087) Child 0.039 (0.209) × High school graduates -0.127 (0.208) -0.242	High school graduates	0.399**
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College graduates (0.132) Advanced degrees (0.146) Advanced degrees 1.030^{**} (0.194) Race (white is omitted) Black -0.152 Black (0.127) Hispanic 0.014 Other race -0.404^* Metropolitan residency -0.161 Married 0.326^{**} (0.076) (0.076) Married 0.326^{**} (0.041) (0.041) Female (0.209) × High school graduates -0.127 (0.208) $*$ Some college	Some college	0.640**
College graduates 0.576^{**} Advanced degrees 1.030^{**} Advanced degrees 1.030^{**} Race (white is omitted) 0.194 Black -0.152 Hispanic 0.014 Other race 0.014 Metropolitan residency -0.404^{*} Married 0.326^{**} (0.087) (0.087) Child 0.039 Female 0.425^{*} (0.209) \times High school graduates \times Some college -0.242		(0.132)
Advanced degrees (0.146) 1.030** (0.194) Race (white is omitted) -0.152 (0.127) Black -0.152 (0.127) Hispanic 0.014 (0.113) Other race -0.404* (0.164) Metropolitan residency -0.016 (0.076) Married 0.326** (0.087) Child 0.039 Female 0.425* (0.209) × High school graduates -0.127 (0.208) × Some college -0.242	College graduates	0.576**
Advanced degrees 1.030** (0.194) Race (white is omitted) Black -0.152 (0.127) Hispanic 0.014 (0.113) Other race -0.404* (0.164) Metropolitan residency -0.016 Married 0.326** (0.087) 0.039 Child 0.039 Female 0.425* (0.209) × High school graduates -0.127 × Some college -0.242		(0.146)
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Black -0.152 Hispanic (0.127) Hispanic 0.014 Other race (0.113) Other race (0.164) Metropolitan residency -0.016 Married 0.326** Child 0.039 Female 0.425* VHigh school graduates -0.127 × Some college -0.242	Race (white is omitted)	
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Hispanic 0.014 (0.113) (0.113) Other race -0.404* (0.164) (0.164) Metropolitan residency -0.016 Married 0.326** (D.087) (0.087) Child 0.039 (0.041) (0.209) × High school graduates -0.127 (D.208) -0.242		(0.127)
Image: Constraint of the second system (0.113) Other race -0.404* (0.164) (0.164) Metropolitan residency -0.016 (0.076) (0.076) Married 0.326** (0.087) (0.087) Child 0.039 Female (0.041) Female (0.209) × High school graduates -0.127 (0.208) -0.242	Hispanic	0.014
Other race $-0.404*$ Metropolitan residency -0.016 Married $0.326**$ (0.087) (0.087) Child 0.039 (0.041) (0.209) × High school graduates -0.127 (0.208) $×$ Some college	1	(0.113)
Metropolitan residency (0.164) Married -0.016 Married 0.326** (0.087) (0.087) Child 0.039 Female (0.425* (0.209) × High school graduates × Some college -0.127 × Some college -0.242	Other race	-0.404*
Metropolitan residency -0.016 Married (0.076) Married 0.326** (0.087) (0.087) Child 0.039 (0.041) (0.041) Female 0.425* (0.209) × High school graduates × High school graduates -0.127 (0.208) -0.242		(0.164)
Married (0.076) Married 0.326^{**} (0.087) (0.087) Child 0.039 (0.041) (0.209) × High school graduates -0.127 (0.208) -0.242	Metropolitan residency	-0.016
Married 0.326** (0.087) (0.087) Child 0.039 (0.041) (0.041) Female 0.425* (0.209) × High school graduates × High school graduates -0.127 (0.208) -0.242		(0.076)
(0.087) Child 0.039 (0.041) Female 0.425* (0.209) × High school graduates -0.127 (0.208) -0.242	Married	0.326**
Child 0.039 (0.041) 0.425* (0.209) (0.209) × High school graduates -0.127 (0.208) -0.242		(0.087)
Female (0.041) Female 0.425* (0.209) (0.209) × High school graduates -0.127 (0.208) -0.242	Child	0.039
Female 0.425* (0.209) (0.209) × High school graduates -0.127 (0.208) (0.208) × Some college -0.242		(0.041)
× High school graduates (0.209) × Some college -0.127 (0.208) -0.242	Female	0.425*
× High school graduates -0.127 (0.208) × Some college -0.242		(0.209)
× Some college (0.208) -0.242	× High school graduates	-0.127
× Some college -0.242		(0.208)
	× Some college	-0.242

	(0.211)	
× College graduates	0.005	
	(0.232)	
× Advanced degrees	-0.485	
-	(0.299)	
× Black	-0.305	
	(0.179)	
× Hispanic	-0.436*	
-	(0.173)	
× Other race	-0.161	
	(0.252)	
× Married	-0.333**	
	(0.120)	
× Child	-0.104	
	(0.056)	
Constant	-1.362**	
	(0.353)	
Pseudo R-squared	0.02	
Observations	7,132	

Source: Current Population Surveys (Displaced Worker Supplement), January 2006 and 2008 combined. Notes: Robust standard errors in parentheses. All variables except industrial mobility variables are centered at their means.

* *p*<0.05, ** *p*<0.01 (two-tailed).

Based on the model S1 in table S3, we construct the weight variable (w_i) :

For
$$d_i = 1$$
: $w_i = w_{dws, i} \times \frac{1}{\hat{p}_i}$

where w_{dws} is the sampling weight provided by the BLS, d_i is the variable that indicates inclusion in the full data subsample for individual *i*, and \hat{p}_i is the predicted probability from a logistic regression model such as the one reported in Table S3.

After specifying a logit model, we next assessed whether the weight constructed successfully minimizes the differences in covariates between the group with missing data and the group without missing data. This assessment is made by the standardized difference of the mean for each variable in *x*, calculated as:

$$\frac{\left|\overline{x}_{i,di} = 1 - \overline{x}_{i,di} = 0\right|}{\sqrt{\frac{1}{2} Var(x_{i,di} = 1) + \frac{1}{2} Var(x_{i,di} = 0)}},$$

where $\overline{x}_{i,di} = 1$ is the mean for those who are in the full data subsample, $\overline{x}_{i,di} = 0$ is the mean for those who are not in the full data subsample, $Var(x_{i,di} = 1)$ is the variance for those who are in the full data subsample, and $Var(x_{i,di} = 0)$ is the variance for those who are not in the full data subsample.

In addition, we considered the standardized difference of the standard deviation for each variable in *x*, written as:

$$\frac{|Var(x_{i, di} = 1) - Var(x_{i, di} = 0)|}{\sqrt{\frac{1}{2}Var(x_{i, di} = 1) + \frac{1}{2}Var(x_{i, di} = 0)}}.$$

The results of the diagnostics are presented in Tables S4 and S5. Each table presents the mean of the standardized mean differences and the mean of standardized standard deviation differences, which are 0.0008 and 0.0019, respectively. The selection of the specification of the logit model in Table S3 was made with the goal of minimizing these two numbers. The current specification offers the smallest values on these two metrics, among the many specifications that we estimated.

	Cases with missing on earnings and industry data	Cases with no missing on earnings and industry data	Mean differences	Standardized mean differences
Variable names	(1)	(2)	(1)-(2)	
Age	40.0490	40.0320	0.0172	2. 0.0015
Age squared	1746.5000	1745.5000	1.0284	0.0011
Education:				
High school graduates	0.3462	0.3448	0.0014	0.0030
Some college	0.3121	0.3123	-0.0002	0.0005
College graduates	0.1748	0.1749	-0.0001	0.0003
Advanced degrees	0.0596	0.0596	0.0000	0.0000
Race:				
Black	0.1384	0.1390	-0.0006	5 0.0018
Hispanic	0.1515	0.1516	0.0000	0.0001
Other race	0.0542	0.0539	0.0002	0.0010
Metropolitan Residency	0.8671	0.8671	0.0000	0.0001
Married	0.5310	0.5315	-0.0005	0.0010
Child	0.6893	0.6886	0.0007	0.0006
Female	0.4222	0.4218	0.0004	0.0009
× High school graduates	0.1334	0.1335	-0.0001	0.0003
× Some college	0.1501	0.1497	0.0004	0.0012
× College graduates	0.0783	0.0785	-0.0001	0.0005
× Advanced degrees	0.0227	0.0227	-0.0001	0.0004
× Black	0.0656	0.0659	-0.0003	0.0012
× Hispanic	0.0572	0.0572	0.0000	0.0001
× Other race	0.0220	0.0218	0.0001	0.0011
× Married	0.2044	0.2048	-0.0004	0.0009

Table S5. Mean differences between cases with and without missing data with the weight applied

× Child	0.3036	0.3045	-0.0008	0.0011
Mean				0.0008

Table S6. Standard deviation differences between cases with and without missing data with the weight applied

	Cases with missing	Cases with no		
	on earnings and	missing on earnings		Standardized mean
	industry data	and industry data	Mean differences	differences ^a
Variable names	(1)	(2)	(1)-(2)	
Age	11.9400	11.9550	-0.0147	0.0013
Age squared	978.0200	980.2600	-2.2395	<i>i</i> 0.0023
Education:				
High school graduates	0.4758	0.4753	0.0005	5 0.0010
Some college	0.4634	0.4634	-0.0001	0.0002
College graduates	0.3798	0.3799	-0.0001	0.0003
Advanced degrees	0.2367	0.2367	0.0000) 0.0001
Race:				
Black	0.3453	0.3459	-0.0006	5 0.0018
Hispanic	0.3586	0.3586	0.0000) 0.0001
Other race	0.2263	0.2259	0.0004	4 0.0019
Metropolitan Residency	0.3384	0.3385	-0.0001	0.0002
Married	0.4990	0.4990	0.0000) 0.0001
Child	1.0594	1.0541	0.0054	4 0.0050
Female	0.4939	0.4938	0.0001	0.0001
× High school graduates	0.3400	0.3401	-0.0001	0.0003
× Some college	0.3572	0.3568	0.0004	4 0.0012
× College graduates	0.2687	0.2689	-0.0002	2 0.0008
× Advanced degrees	0.1489	0.1491	-0.0002	2 0.0012
× Black	0.2477	0.2481	-0.0005	5 0.0020
× Hispanic	0.2322	0.2322	0.0000) 0.0001
× Other race	0.1466	0.1461	0.0005	5 0.0034
× Married	0.4033	0.4036	-0.0003	3 0.0007
× Child	0.7909	0.7766	0.0143	3 0.0186
Moon				0.0010

Mean

0.0019

Finally, we estimate weighted regressions using the weight variable constructed above.

For more details of this methodology, see:

Morgan, Stephen L. and Jennifer J. Todd. 2008. "A Diagnostic Routine for the Detection of Consequential Heterogeneity of Causal Effects." *Sociological Methodology* 38:231-81.

The Construction of the Occupational Measures from the O*NET Dataset

We used the O*NET 12.0 Database to construct the occupational skill measures. Among comprehensive dimensions of occupational characteristics, we use the dataset that includes occupational skill measures, education, training, experience requirements, and the specific vocational preparation (SVP) range. For more detailed methodology on the creation of these measures, see the technical document provided by Employment Security Commission:

National Center for O*NET Development. 2007. Data Dictionary: O*NET 12.0 Database

- (1) Educational requirements¹: average years of education in the occupation
- (2) Experience requirements: average months of related work experience in the occupation
- (3) On-site training: average months of on-site or in-plant training in the occupation
- (4) On-the-job training: average months of on-the-job training in the occupation
- (5) Job zone: modified SVP score

Job Zone	Name
1	Job Zone One: Little or No Preparation Needed
2	Job Zone Two: Some Preparation Needed
3	Job Zone Three: Medium Preparation Needed
4	Job Zone Four: Considerable Preparation Needed
5	Job Zone Five: Extensive Preparation Needed

Merging the O*NET dataset to the CPS dataset

The O*NET 12.0 and the CPS use different occupational classification schemes. O*NET 12.0 uses its own occupational scheme (O*NET-SOC 2000), which is based on the Standard Occupational Classification (SOC), and CPS uses Census Occupational Codes (COC). Although there are no crosswalks that directly match these two occupational schemes, both datasets can be matched to the SOC scheme. This entails several data matching processes: (1) Convert O*NET-SOC to SOC; (2) Match SOC to COC 2000. First, we matched O*NET-SOC 2000 to SOC. Although there are some differences between SOC and O*NET-SOC 2000, O*NET-SOC is roughly consistent with SOC. The differences are that O*NET-SOC 2000 applies more detailed classifications, which result in 49 SOC occupations matched to more than one SOC occupation. For these occupations, we use the occupational skill measures averaged for multiple O*NET occupations that are matched to the same SOC occupations. Next, we matched this dataset to the CPS dataset after the SOC and COC 2000 were matched using a crosswalk provided by the National Crosswalk Service Center (NCSC). The SOC also tends to be more detailed than COC 2000. As a result, when the datasets were matched, several COC were matched to multiple SOC. For those occupations, we again used their average scores. Also, because O*NET-2000 does not

¹ For the education, experience, and training measures, the original scales from the O*NET are percent of workers in several categories (e.g., % of workers whose educational attainment are less than high school), and we converted them to scale measures.

cover all SOC occupations, the score variables were missing for 69 COC occupations after the matching was completed.