

Heterogeneity in Labor Income Profiles: Evidence from Turkey

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Motivation

- Turkey ranks as one of the most **unequal** economies among OECD countries 
- Despite its notable economic size, there is limited research on *how labor income changes over the lifecycle* in Turkey
- This paper investigates ...
 - labor income profiles over the lifecycle in Turkey
 - the role of *education, gender, and public vs. private sector employment* in generating labor income profile disparities
 - labor income profiles using multiple data sets and employing numerous robustness experiments for credible findings

Related Literature and Marginal Contribution

- *Labor Income Profiles*
 - [Lagakos et al. \(2018\)](#) studies life-cycle wage growth across countries, focusing on male private-sector workers
 - This paper extends by including *gender* and *public sector* dimensions
- *Turkish Labor Market Studies*
 - [Cilasun and Kirdar \(2009\)](#) analyze income profiles but not specifically labor income or sectoral differences; [Ekşi and Kirdar \(2015\)](#); [Bakış and Polat \(2015\)](#) examine wage inequality in Turkey without focusing on lifecycle profiles; [Tansel \(2005\)](#); [Tansel et al. \(2018\)](#) study gender pay gaps and public vs. private sector wage differences in Turkey
 - This paper integrates these dimensions into *lifecycle income profile analysis*
- *Turkey's Economic Inequalities*
 - [Torul and Öztunalı \(2018\)](#); [Tamkoç and Torul \(2020\)](#); [Kaçmaz et al. \(2024\)](#) study wage, income, wealth and consumption inequality in Turkey
 - This paper novelly reports on *economic inequality over age*
- *Pseudo-Panel Methodology*
 - Introduced by [Deaton \(1985\)](#) applied in various contexts; [Cilasun \(2009\)](#) uses pseudo-panels for Turkey but lacked detailed heterogeneity analysis; [Tunalı et al. \(2021\)](#) uses synthetic cohorts to examine female labor force participation
 - This paper uses synthetic cohorts to *estimate labor income profiles and its heterogeneity*

Main Findings

- Average labor income profile exhibits a moderate hump shape, peaking around age 45–50
- Educational attainment strongly positively correlates with labor income levels and affects the shape of income profiles
- Public sector employment is associated with higher average income (*except for university graduates*) and lower cross-sectional dispersion
- There exists a pronounced gender pay gap, particularly among primary school graduates
- Labor income profiles differ significantly over education, gender, and sector

Data and Methodology

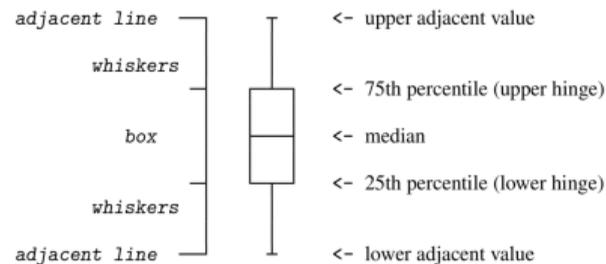
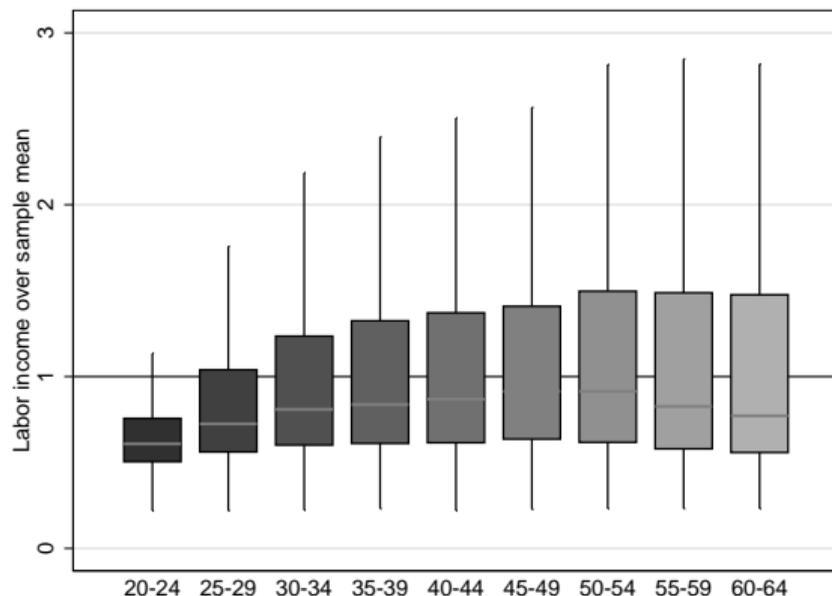
Data Sources

- *Household Labour Force Survey (HLFS)*: 2004–2018, 1,105,600 observations
- *Household Budget Survey (HBS)*: 2002–2017, 124,073 observations (for robustness)
- Focus on individuals aged 20–59, working full-time (≥ 35 hours/week)
- Labor income adjusted to real terms using CPI (base year: 2018) [Descriptive Statistics ▶](#)

Methodology

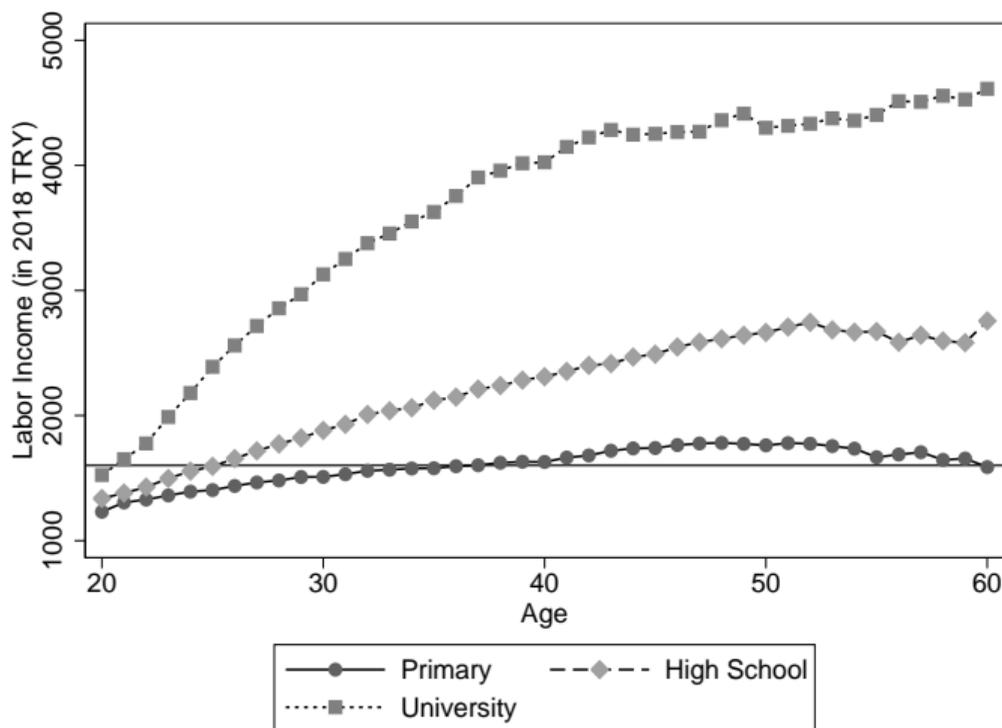
- *Descriptive Analysis*: Box plots for income distributions by age, education, gender, and sector
- *OLS Regressions*: Estimate effects of age, education, gender, and sector, with controls for tenure and year-fixed effects
- *Pseudo-Panel Estimations*: Synthetic cohorts by birth year, education, gender, and sector to analyze income trajectories

Average Labor Income Profile



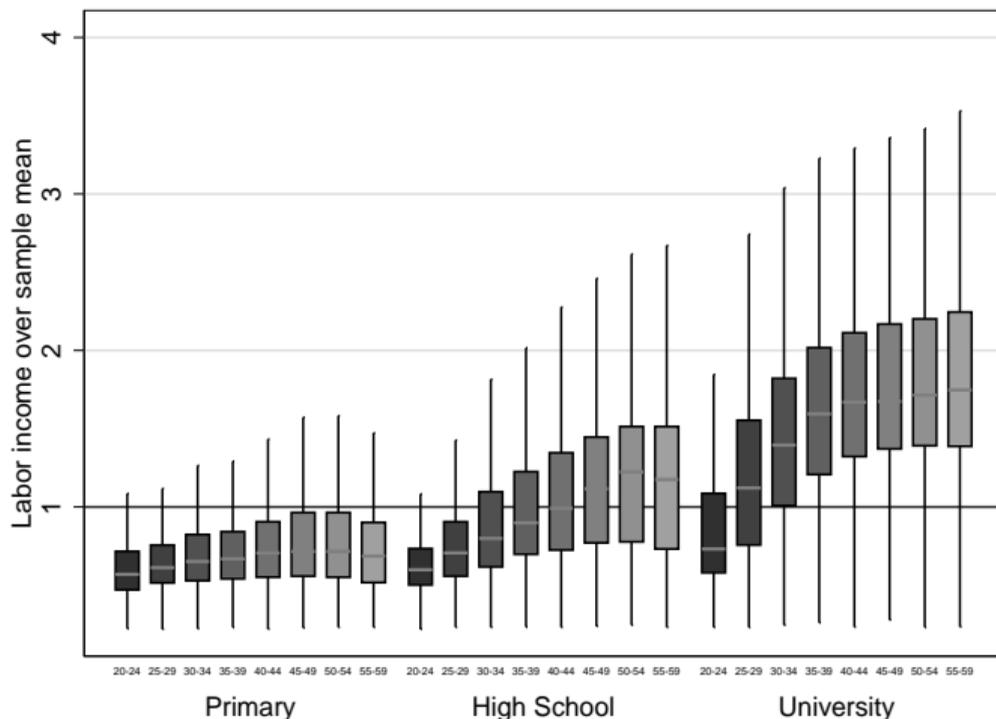
- Hump-shaped profile peaking at 50–54 years, as in [Lagakos et al. \(2018\)](#) for the United States and Germany

Average Labor Income Profile by Education



- Labor incomes positively (and non-linearly) correlated with education: University graduates 128% > Primary edu. & High school graduates 38% > Primary edu.

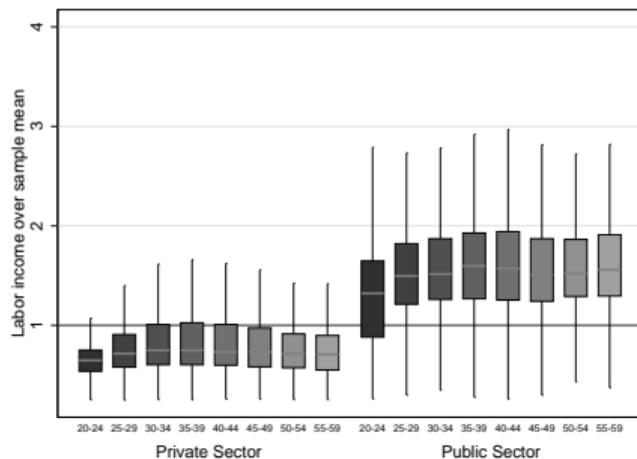
Labor Income Profile by Education



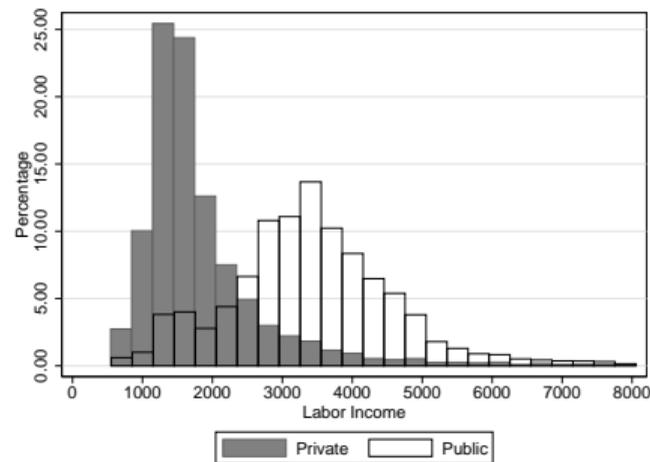
- Stagnant trajectory for primary edu.; moderate hump-shape for high school edu.; monotone increase for university edu.

Labor Income Profile by Sector of Employment

Public vs. Private Sector Profiles

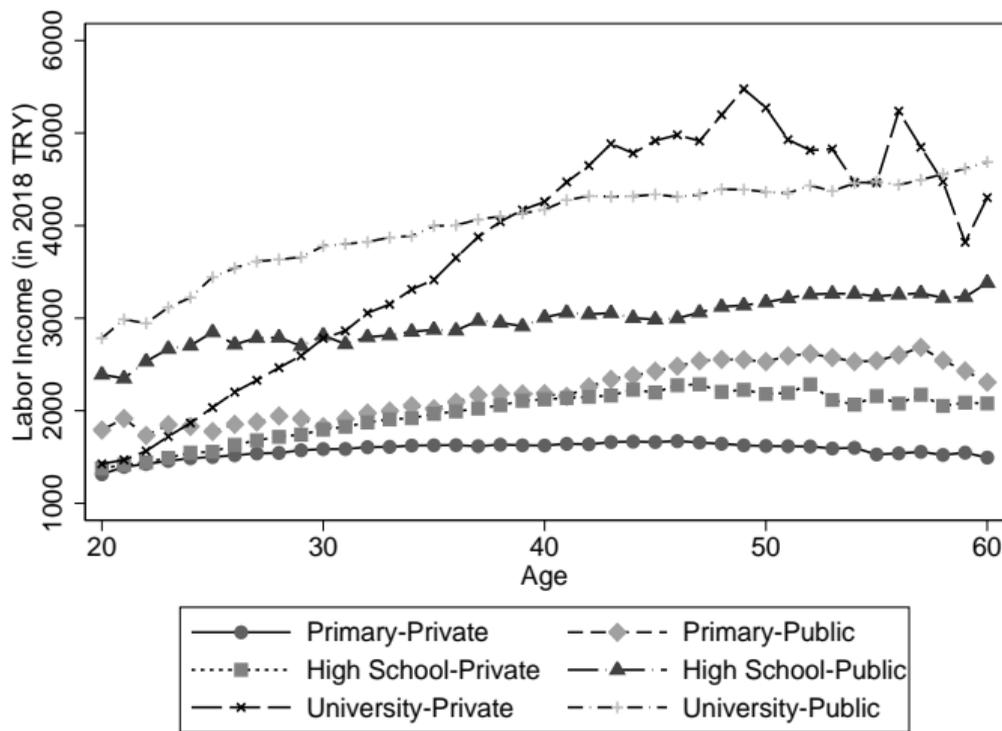


Public vs. Private Sector Histogram



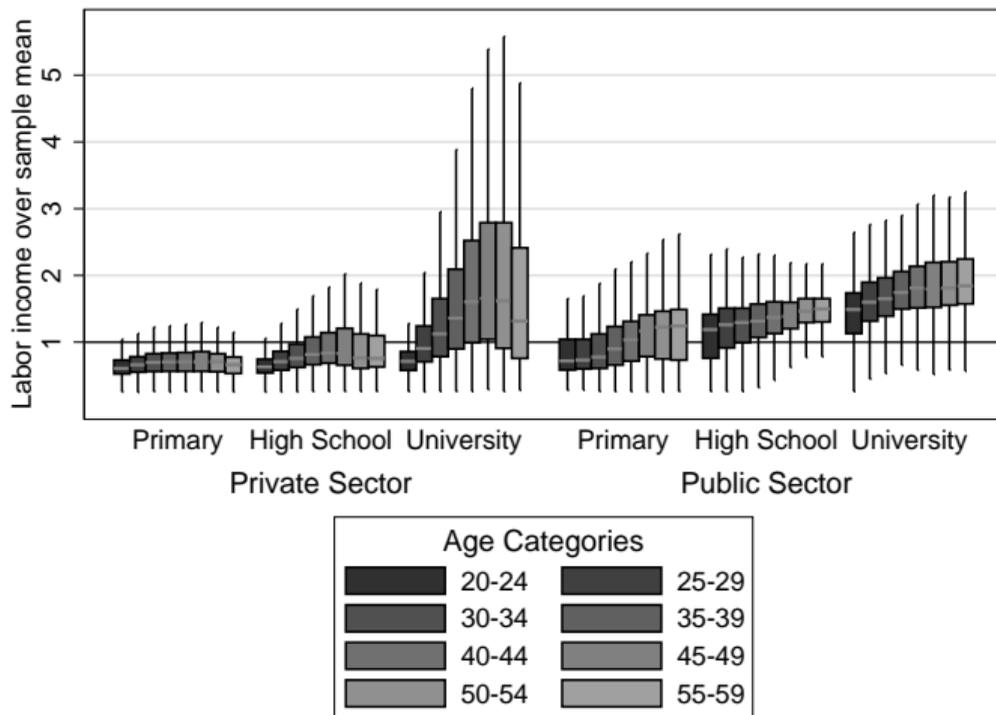
- Public sector incomes rise steadily due to tenure-based pay, while private sector peaks reflect market dynamics
- Public sector sizeable, accounting for a quarter of full-time employment

Labor Income Profile by Education and Sector



- Hump-shape in private sector incomes only
- Private sector income of university graduates singles out

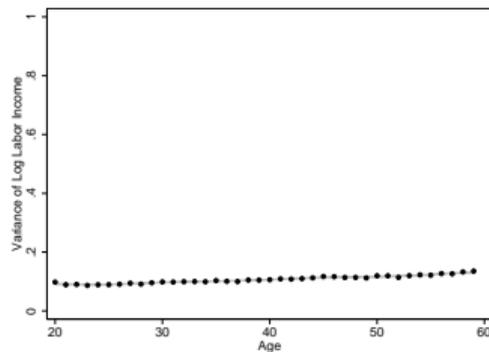
Labor Income Profile by Education and Sector



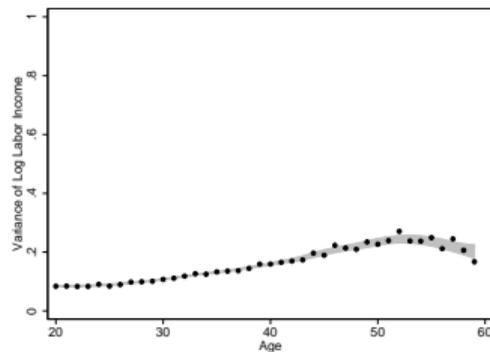
- Public sector salaries monotonically increase over tenure
- Private sector salaries exhibit hump-shaped trajectories

Sector Effects: Dispersion in the Private Sector

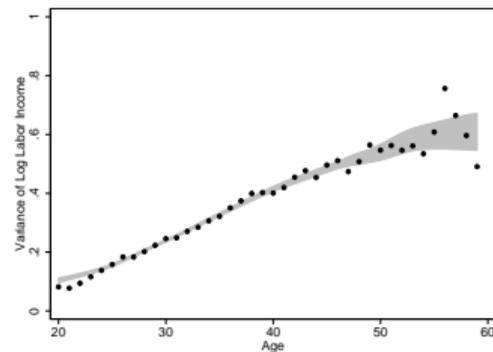
Primary



High School



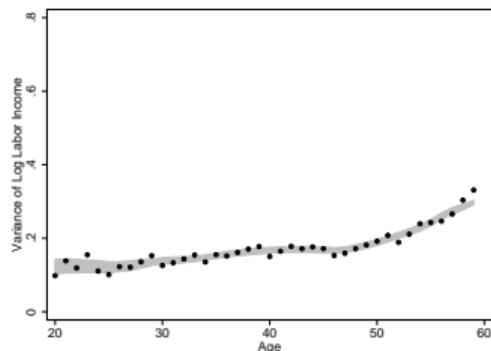
University



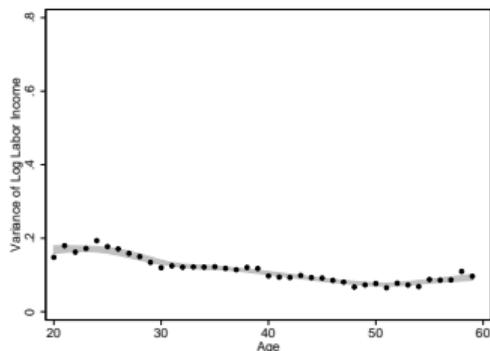
- Private sector: Variance of log income rises to 0.25 post-35 and over education
- Similar to the United States, yet differs from many other developed countries

Sector Effects: Dispersion in the Public Sector

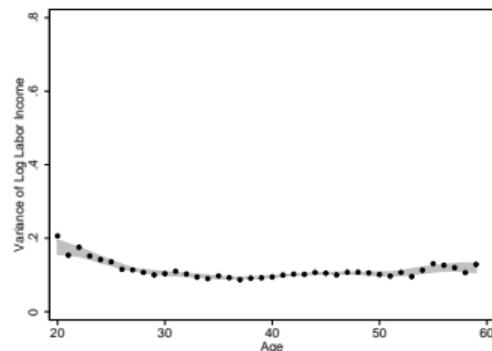
Primary



High School

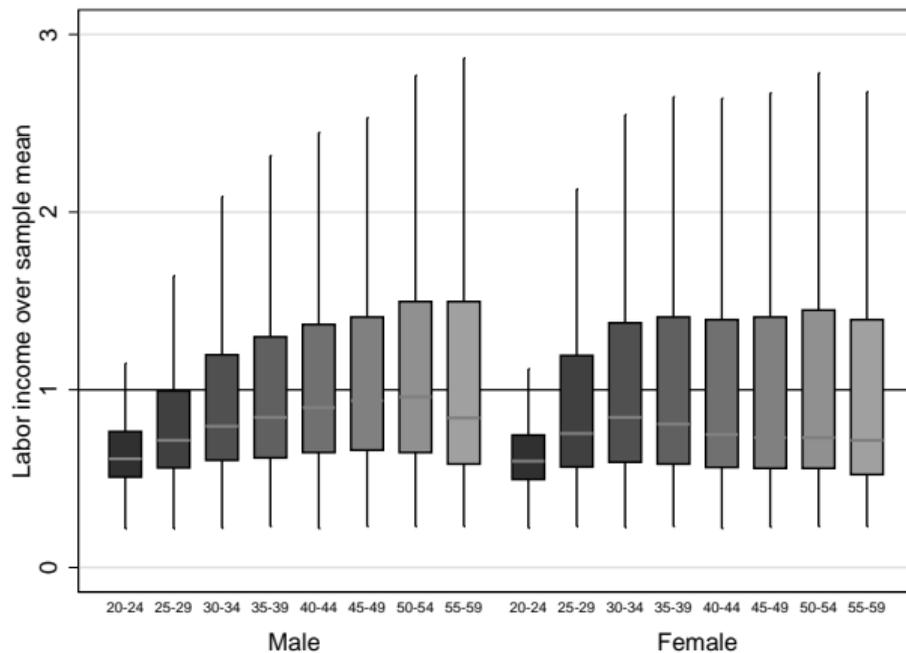


University



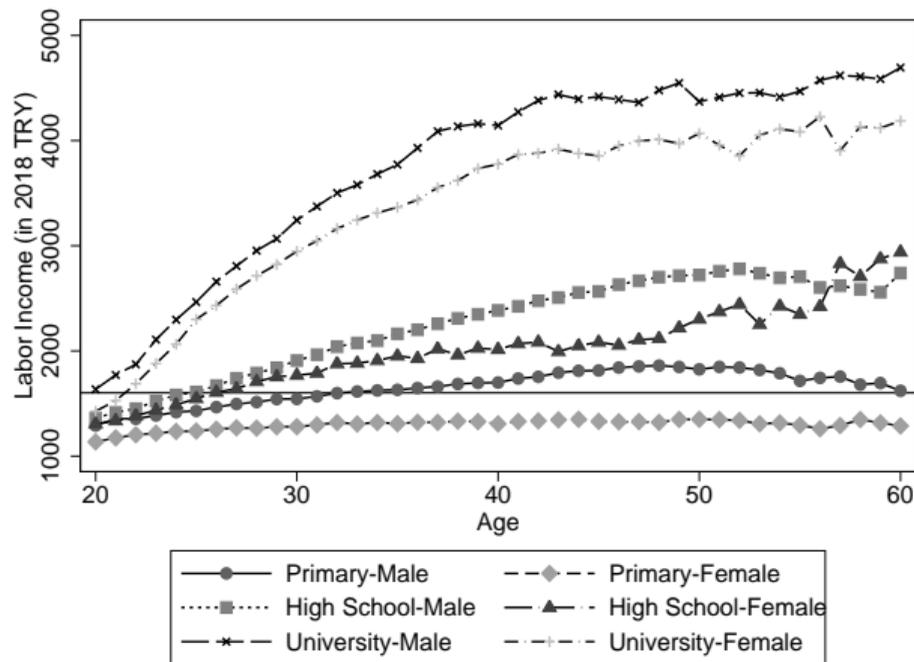
- Public sector variance remains below 0.2 across all ages
- Overall, public sector incomes are higher and less dispersed for below-university employees. Private sector offers a higher & higher dispersion trade-off for university graduates

Labor Income Profile by Gender



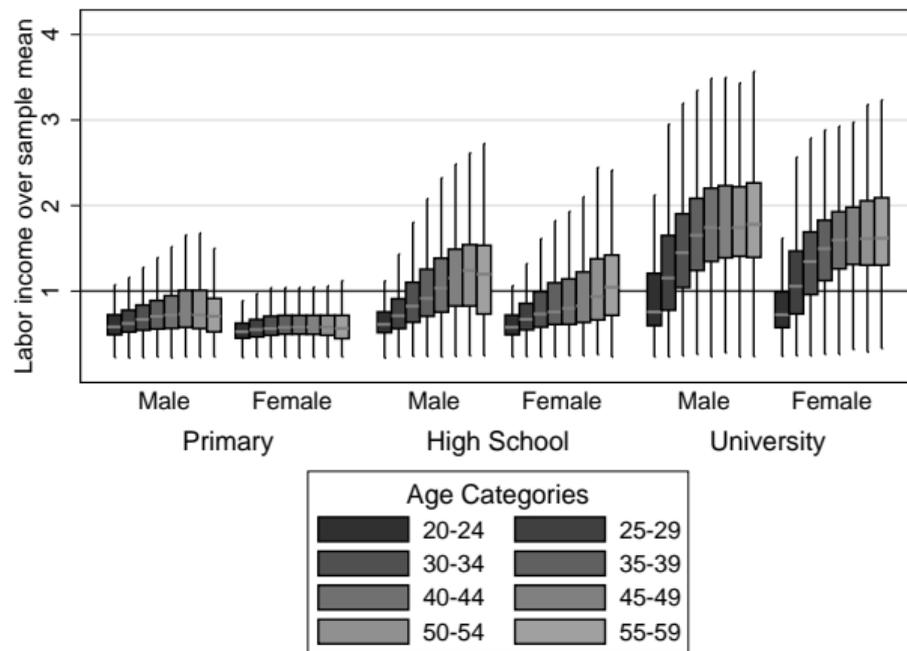
- Males earn more than females post-35
- Male trajectory displays hump-shape (with a peak at the age 50) whereas female trajectory is rather stagnant after the 30s

Average Labor Income Profile by Gender



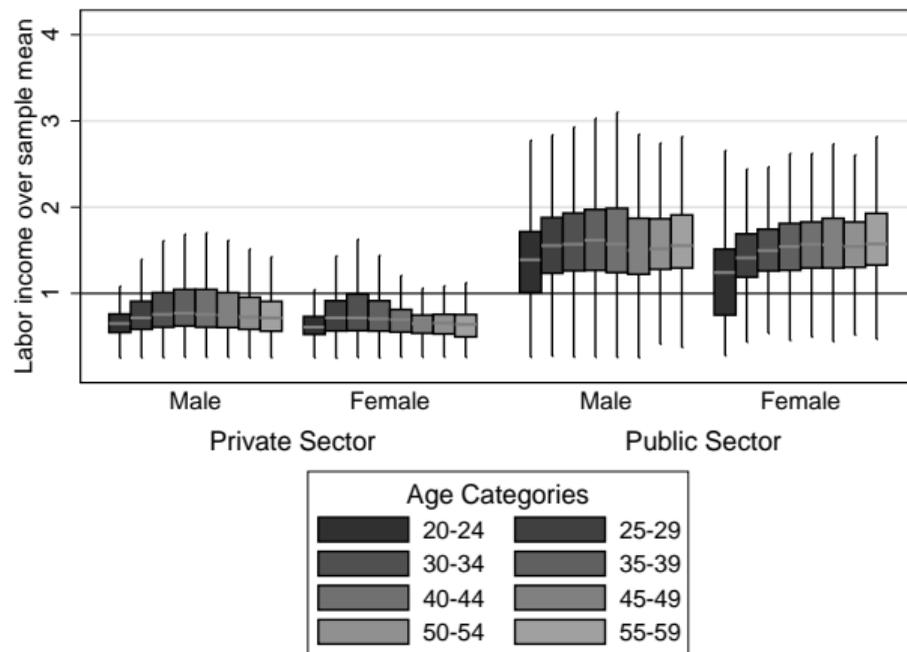
- Controlling for education, average male income is higher than average female income
- Similar lifecycle trajectories over gender for university graduates but not others

Labor Income by Gender and Education



- Dismal income prospects for low-educated females but not others
- Hump-shape for male trajectories

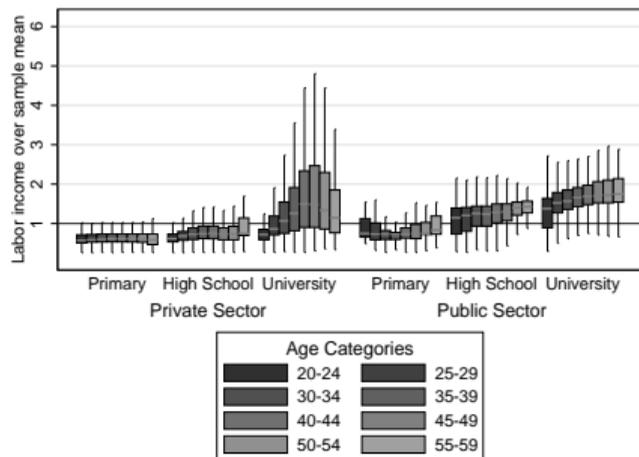
Labor Income by Gender and Sector



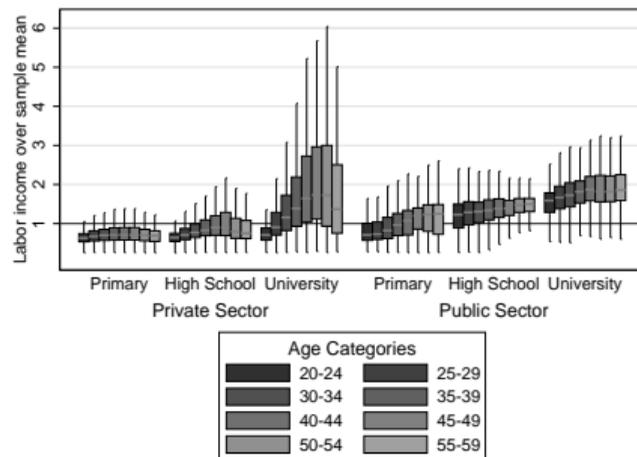
- Private sector notably worse for female incomes
- Public sector incomes are rather comparable

Labor Income Profile by Gender, Education, and Sector

Female Distribution



Male Distribution



- Low-educated females are worse off in both sectors
- Gender pay gap diminishes over education

Estimations

OLS Regression:

$$\log(y_{ijkp}) = \alpha + \sum_j^7 \beta_j \text{age}_{ij} + \sum_k^5 \gamma_k \text{edu}_{ik} + \delta \text{public sector}_i + \sum_l^5 \xi_l \text{public sector}_i \times \text{edu}_{ik} \\ + \theta \text{gender}_i + \phi \text{tenure}_i + \rho_p + \varepsilon_{ijkp}$$

$\log(y_{ijkp})$: natural logarithm of labor income of person i in period (year) p ; **age**: age categories of 5-year intervals captured by dummy variables, i.e. ages 20 to 24, 25 to 29, ..., 55 to 59; **edu**: educational attainment categories: primary school graduates or dropouts, middle school graduates, high school graduates, and university graduates; **public sector**: dummy variable which equals 1 if individual i works in the public sector; **gender**: dummy variable which equals 1 if individual i is female; **tenure**: years of job experience of individual i , and ρ : year-fixed effects

Pseudo-Panel Estimation:

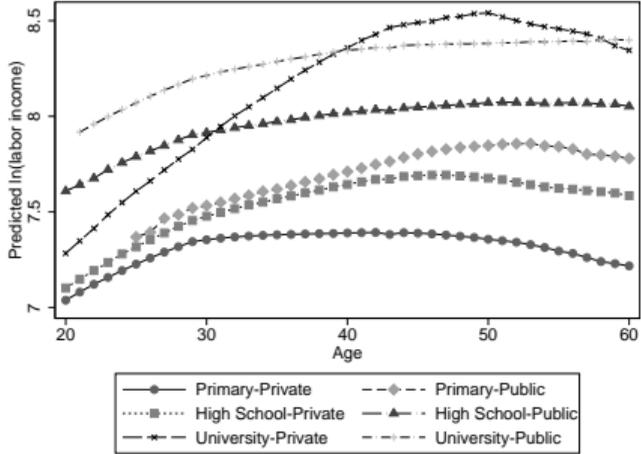
We construct 1 and 5-year span starting from 1950-1954 to 1985-1989 and then follow these cohorts in our sample period, 2004-2018. We further refine our construction of cohorts based on education, gender, and the sector of employment to capture the heterogeneities

$$\bar{y}_{ct} = \alpha + \beta_1 \overline{Age}_{ct} + \beta_2 \overline{Age}_{ct}^2 + \bar{\theta}_c + \bar{\varepsilon}_{ct}$$

c : cohorts, \bar{y}_{ct} : cohort income averages; \overline{Age}_{ct} : cohort age averages; $\bar{\theta}_c$: cohort-fixed effects

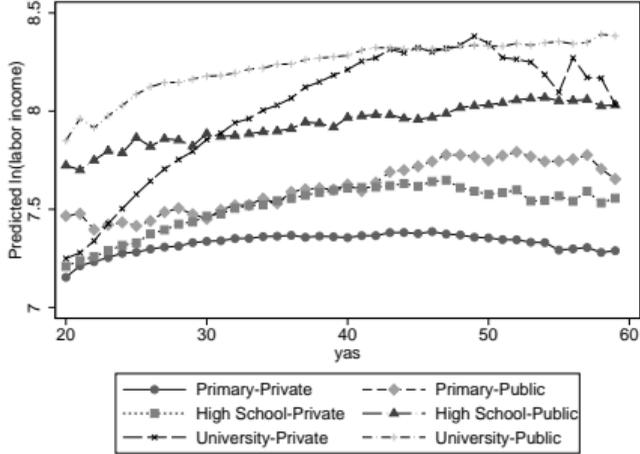
Predicted labor income with pseudo-panel and OLS estimation, education and sector groups

Pseudo-Panel



[Estimation Table >](#)

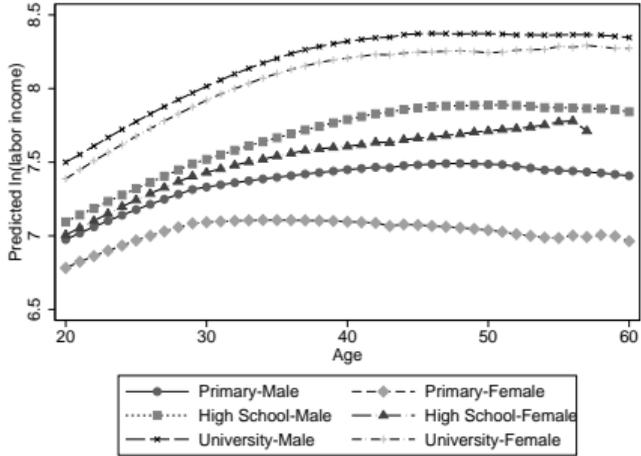
OLS



[Estimation Table >](#)

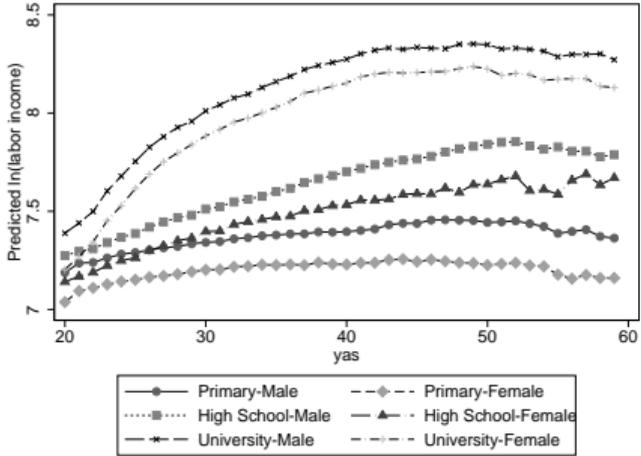
Predicted labor income with pseudo-panel and OLS estimation, education and gender groups

Pseudo-Panel



[Estimation Table >](#)

OLS



[Estimation Table >](#)

Conclusions

Summary of Results:

- *Average labor income profile* exhibits a moderate hump shape, peaking \sim age of 50
- *Education* generates a strong positive correlation with an idiosyncratic trajectory over income
- *Gender* disparities are sizable, especially among primary school graduates, and they narrow with higher education
- *Sector of employment* matters a great deal: public sector employees earn more with less dispersion; private sector university graduates face a risk vs. return trade-off

Implications:

- *Income Dynamics*: Highlights need for long-running longitudinal surveys to track lifecycle dynamics
- *Female Labor Force Participation*: Suggests interventions to reduce the gender pay gap, especially for lower-educated women. Private sector disparities also suggest a need for gender equity policies
- *Causal Inference*: Future research should identify the causal mechanisms (via firm-level data, marriage markets, human capital investment, and others) behind these disparities and evaluate potential policy interventions

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Income Inequality by Country

Table: Income Inequality by Country

	Gini Coefficient	Theil L GE(0) Index	Theil T GE(1) Index	Atkinson Index ($\epsilon = 0.5$)	Atkinson Index ($\epsilon = 1.0$)
Austria	0.274	0.142	0.140	0.066	0.132
Belgium	0.257	0.115	0.113	0.055	0.109
Bulgaria	0.353	0.232	0.225	0.106	0.207
Croatia	0.300	0.164	0.148	0.074	0.151
Cyprus	0.347	0.204	0.253	0.106	0.184
Czech Republic	0.249	0.105	0.114	0.053	0.100
Denmark	0.266	0.129	0.145	0.065	0.121
Estonia	0.350	0.217	0.204	0.099	0.195
Finland	0.254	0.109	0.114	0.054	0.104
France	0.288	0.141	0.157	0.071	0.132
Germany	0.294	0.156	0.159	0.074	0.145
Greece	0.342	0.218	0.209	0.100	0.196
Hungary	0.285	0.139	0.145	0.068	0.130
Ireland	0.303	0.163	0.162	0.077	0.150
Italy	0.317	0.194	0.178	0.087	0.177
Latvia	0.351	0.222	0.211	0.101	0.199
Lithuania	0.348	0.212	0.209	0.099	0.191
Luxembourg	0.279	0.132	0.134	0.064	0.124
Malta	0.276	0.126	0.130	0.062	0.118
Netherlands	0.255	0.113	0.119	0.056	0.107
Poland	0.306	0.164	0.162	0.078	0.152
Portugal	0.343	0.215	0.203	0.098	0.194
Romania	0.342	0.230	0.201	0.100	0.206
Slovakia	0.259	0.125	0.124	0.059	0.117
Slovenia	0.249	0.107	0.104	0.051	0.101
Spain	0.340	0.220	0.193	0.097	0.198
Sweden	0.249	0.118	0.109	0.054	0.112
United Kingdom	0.308	0.164	0.170	0.079	0.151
Turkey	0.391	0.275	0.305	0.134	0.241

† Source: [European Commission Social Situation Monitor](#) for European income inequality estimates in 2014, and authors' calculations for Turkey's inequality indices in 2014 via [TurkStat](#)'s Household Budget Survey.

Wealth Inequality by Country

Table: Wealth Gini by Country

	Gini Coefficient of Net Wealth
Spain	0.542
Australia	0.567
United Kingdom	0.571
Italy	0.599
Luxembourg	0.614
France	0.651
Germany	0.725
United States	0.776
Turkey	0.780

† Source: [Cowell et al. \(2016\)](#), [Torul and Öztunalı \(2018\)](#) and [Ceritoğlu et al. \(2023\)](#)

Motivation

Income Inequality

OLS Estimates for Labor Income (1/3)

	(1) <i>log(Labor Income)</i>	(2) <i>log(Labor Income)</i>	(3) <i>log(Labor Income)</i>
<i>Age</i>			
25-29	0.118*** (0.001)	0.117*** (0.001)	0.117*** (0.001)
30-34	0.197*** (0.001)	0.196*** (0.001)	0.190*** (0.001)
35-39	0.229*** (0.002)	0.227*** (0.002)	0.216*** (0.002)
40-44	0.232*** (0.002)	0.231*** (0.002)	0.216*** (0.003)
45-49	0.213*** (0.002)	0.212*** (0.002)	0.202*** (0.003)
50-54	0.176*** (0.002)	0.175*** (0.002)	0.166*** (0.003)
55-59	0.131*** (0.003)	0.131*** (0.003)	0.116*** (0.003)
<i>Education</i>			
Middle School	0.098*** (0.001)	0.095*** (0.001)	0.090*** (0.001)
High School	0.198*** (0.001)	0.176*** (0.001)	0.158*** (0.001)

Note: Standard errors in parentheses. * $p < .05$, ** $p < .01$, *** $p < .001$. 20-24 age category is the basis.

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OLS Estimates for Labor Income (2/3)

	(1) <i>log(Labor Income)</i>	(2) <i>log(Labor Income)</i>	(3) <i>log(Labor Income)</i>
<i>Education</i>			
University	0.569*** (0.002)	0.563*** (0.002)	0.503*** (0.002)
<i>Education-Sector Interaction</i>			
Middle School × Public		0.042*** (0.004)	0.057*** (0.007)
High School × Public		0.156*** (0.003)	0.246*** (0.006)
University × Public		0.082*** (0.004)	0.206*** (0.005)
<i>Mid Age (40-54)-Education-Sector Interaction</i>			
Mid Age × Elementary × Private			-0.022*** (0.002)
Mid Age × Elementary × Public			0.059*** (0.006)
Mid Age × Middle × Private			-0.046*** (0.003)
Mid Age × Middle × Public			0.045*** (0.006)

OLS Estimates for Labor Income (3/3)

	(1) <i>log(Labor Income)</i>	(2) <i>log(Labor Income)</i>	(3) <i>log(Labor Income)</i>
<i>Mid Age (40-54)-Education-Sector Interaction</i>			
Mid Age × High × Private			0.028*** (0.003)
Mid Age × High × Public			-0.071*** (0.004)
Mid Age × University × Private			0.323*** (0.006)
Mid Age × University × Public			-0.075*** (0.003)
Sector (Public=1)	0.294*** (0.001)	0.209*** (0.003)	0.157*** (0.005)
Gender (Female=1)	-0.140*** (0.001)	-0.141*** (0.001)	-0.139*** (0.001)
Tenure	0.012*** (0.000)	0.012*** (0.000)	0.013*** (0.000)
Year Dummies	Yes	Yes	Yes
N	785,605	785,605	785,605
R-squared	0.52	0.52	0.53
F-statistic	48,683	43,629	33,950

OLS Estimates for Labor Income Based on Education and Gender

	Male			Female		
	Primary	High School	University	Primary	High School	University
Age						
25 to 29	0.066*** (0.002)	0.097*** (0.003)	0.266*** (0.005)	0.039*** (0.004)	0.072*** (0.004)	0.253*** (0.005)
30 to 34	0.092*** (0.002)	0.156*** (0.003)	0.429*** (0.005)	0.040*** (0.004)	0.109*** (0.004)	0.381*** (0.005)
35 to 39	0.098*** (0.002)	0.183*** (0.003)	0.531*** (0.005)	0.034*** (0.004)	0.111*** (0.005)	0.447*** (0.006)
40 to 44	0.099*** (0.002)	0.197*** (0.004)	0.578*** (0.006)	0.015*** (0.004)	0.082*** (0.005)	0.478*** (0.008)
45 to 49	0.093*** (0.002)	0.169*** (0.004)	0.571*** (0.007)	-0.013*** (0.004)	0.020** (0.007)	0.457*** (0.010)
50 to 54	0.052*** (0.003)	0.111*** (0.005)	0.536*** (0.008)	-0.035*** (0.005)	0.003 (0.011)	0.449*** (0.012)
55 to 59	-0.001 (0.004)	0.059*** (0.007)	0.507*** (0.011)	-0.072*** (0.007)	0.044* (0.021)	0.416*** (0.018)
Sector(Public=1)	0.264*** (0.003)	0.341*** (0.003)	0.277*** (0.003)	0.170*** (0.005)	0.336*** (0.005)	0.303*** (0.004)
Tenure	0.011*** (0.000)	0.016*** (0.000)	0.004*** (0.000)	0.014*** (0.000)	0.021*** (0.000)	0.007*** (0.000)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
N	296,302	161,101	141,980	60,806	45,448	79,968
R-squared	0.21	0.38	0.28	0.29	0.38	0.33
F-statistic	4,140	7,779	4,035	1,445	1,829	3,294

Note: 20-24 age category is the basis.

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OLS for Labor Income Based on Education and Sector

	Private Sector			Public Sector		
	Primary	High School	University	Primary	High School	University
Age						
25 to 29	0.066*** (0.002)	0.085*** (0.002)	0.238*** (0.004)	0.004 (0.017)	0.037*** (0.010)	0.140*** (0.006)
30 to 34	0.094*** (0.002)	0.139*** (0.002)	0.406*** (0.005)	0.010 (0.015)	0.017 (0.010)	0.183*** (0.006)
35 to 39	0.100*** (0.002)	0.163*** (0.003)	0.532*** (0.006)	0.030* (0.015)	-0.015 (0.010)	0.216*** (0.006)
40 to 44	0.099*** (0.002)	0.178*** (0.003)	0.636*** (0.008)	0.011 (0.015)	-0.060*** (0.010)	0.228*** (0.007)
45 to 49	0.083*** (0.002)	0.172*** (0.004)	0.671*** (0.011)	0.012 (0.015)	-0.129*** (0.010)	0.213*** (0.007)
50 to 54	0.041*** (0.003)	0.132*** (0.007)	0.636*** (0.014)	-0.049** (0.015)	-0.175*** (0.011)	0.194*** (0.008)
55 to 59	-0.014*** (0.003)	0.109*** (0.010)	0.517*** (0.019)	-0.096*** (0.017)	-0.238*** (0.013)	0.182*** (0.010)
Gender(Female=1)	-0.189*** (0.001)	-0.106*** (0.002)	-0.103*** (0.003)	-0.144*** (0.005)	-0.138*** (0.004)	-0.119*** (0.002)
Tenure	0.007*** (0.000)	0.019*** (0.000)	0.022*** (0.000)	0.024*** (0.000)	0.019*** (0.000)	0.005*** (0.000)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
N	324,263	164,772	104,476	32,845	41,777	117,472
R-squared	0.18	0.22	0.24	0.29	0.23	0.13
F-statistic	3,552	2,416	2,076	947	602	838

Note: 20-24 age category is the basis.

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Pseudo-Panel Estimates (1/4)

	log(Labor Income)								
	(1) OLS	(2) Birth(1-year)	(3) Birth(5-year)	(4) B(1)-E	(5) B(1)-G	(6) B(1)-S	(7) B(5)-E	(8) B(5)-G	(9) B(5)-S
Age	0.0829*** (0.0005)	0.1143*** (0.0062)	0.1112 *** (0.0194)	0.0974*** (0.0053)	0.1135*** (0.0064)	0.0825*** (0.0065)	0.0974*** (0.0122)	0.1163*** (0.0154)	0.0769*** (0.0131)
Age ²	-0.0009*** (0.0000)	-0.0010*** (0.0001)	-0.0095*** (0.0002)	-0.0008*** (0.0001)	-0.0010*** (0.0001)	-0.0007*** (0.0001)	-0.0008*** (0.0001)	-0.0010*** (0.0002)	-0.0006*** (0.0001)
Constant	5.8013*** (0.0086)	4.7725*** (0.1325)	4.8795*** (0.4354)	5.2504*** (0.1106)	4.8394*** (0.1334)	5.6304*** (0.1416)	5.2318*** (0.2574)	4.7636*** (0.3257)	5.7081*** (0.2921)
Cohort Dummies	No	Yes							
N	1,049,931	548	76	1,642	1,095	722	345	230	152
R-squared	.052	.911	.913	.812	.773	.773	.843	.817	.828
F-statistics	34,772	412	51	442	293	295	88	52	83

Note: Numbers in parentheses are standard errors. * for $p < .05$, ** for $p < .01$, and *** for $p < .001$. B(1) and B(5) refer to birth cohorts created with 1-year span and 5-year span, respectively. E stands for education, G denotes gender, and S stands for sector.

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Pseudo-Panel Estimates (2/4)

	log(Labor Income)					
	(1)	(2)	(3)	(4)	(5)	(6)
	B(1)-G-E-S	B(1)-G-E-S(1)	B(1)-G-E-S(2)	B(5)-G-E-S	B(5)-G-E-S(1)	B(5)-G-E-S(2)
Age	0.0793*** (0.0041)	0.0992*** (0.0056)	0.0484*** (0.0037)	0.0767*** (0.0075)	0.0982*** (0.0115)	0.0503*** (0.0059)
Age ²	-0.0006*** (0.0001)	-0.0009*** (0.0001)	-0.0003*** (0.0000)	-0.0006*** (0.0001)	-0.0009*** (0.0002)	-0.0003*** (0.0001)
Constant	5.7299*** (0.0830)	5.1236*** (0.1038)	6.6264*** (0.0783)	5.7664*** (0.1421)	5.1639*** (0.1922)	6.4888*** (0.1298)
Cohort Dummies	Yes	Yes	Yes	Yes	Yes	Yes
N	3,430	1,909	1,521	850	438	412
R-squared	.514	.528	.556	.549	.556	.602
F-statistics	641	555	473	198	180	167

Note: Numbers in parentheses are standard errors. * for $p < .05$, ** for $p < .01$, and *** for $p < .001$. B(1) and B(5) refer to birth cohorts created with 1-year span and 5-year span, respectively. E stands for education, G denotes gender and S stands for sector. S(1) refers to private sector and S(2) refers to public sector.

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Pseudo-Panel Estimates (3/4)

	log(Labor Income)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	B(1)-G-E	B(1)-G-E(1)	B(1)-G-E(2)	B(1)-G-E(3)	B(5)-G-E	B(5)-G-E(1)	B(5)-G-E(2)	B(5)-G-E(3)
Age	0.0893*** (0.0042)	0.0696*** (0.0033)	0.0835*** (0.0050)	0.1177*** (0.0058)	0.0885*** (0.0094)	0.0692*** (0.0075)	0.0839*** (0.0112)	0.1157*** (0.0145)
Age ²	-0.0007*** (0.0000)	-0.0005*** (0.0000)	-0.0008*** (0.0001)	-0.0010*** (0.0001)	-0.0007*** (0.0001)	-0.0005*** (0.0001)	-0.0008*** (0.0001)	-0.0009*** (0.0002)
Constant	5.3637*** (0.0873)	5.3548*** (0.0663)	5.6230*** (0.1047)	5.0863*** (0.1168)	5.3516*** (0.1986)	5.3375*** (0.1588)	5.5841*** (0.2443)	5.0678*** (0.3067)
Cohort Dummies	Yes							
N	3,104	1,084	987	1,033	681	230	223	228
R-squared	.753	.836	.723	.827	.796	.893	.784	.864
F-statistics	669	1,019	219	642	145	237	45	112

Note: Numbers in parentheses are standard errors. * for $p < .05$, ** for $p < .01$, and *** for $p < .001$. B(1) and B(5) refer to birth cohorts created with 1-year span and 5-year span, respectively. E stands for education, G denotes gender and S stands for sector. E(1), E(2) and E(3) refer to primary school, high school and university graduates, respectively.

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Pseudo-Panel Estimates (4/4)

	log(Labor Income)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	B(1)-G-E	B(1)-G(1)-E	B(1)-G(2)-E	B(1)-G(1)-E(1)	B(1)-G(1)-E(2)	B(1)-G(1)-E(3)	B(1)-G(2)-E(1)	B(1)-G(2)-E(2)	B(1)-G(2)-E(3)
Age	0.0893*** (0.0042)	0.1009*** (0.0048)	0.0773*** (0.0068)	0.0883*** (0.0022)	0.0934*** (0.0046)	0.1217*** (0.0062)	0.0504*** (0.0034)	0.0804*** (0.0089)	0.1155*** (0.0102)
Age ²	-0.0007*** (0.0000)	-0.0009*** (0.0001)	-0.0006*** (0.0001)	-0.0008*** (0.0000)	-0.0008*** (0.0001)	-0.0010*** (0.0001)	-0.0003*** (0.0000)	-0.0008*** (0.0001)	-0.0010*** (0.0001)
Constant	5.3637*** (0.0873)	5.1824*** (0.1002)	5.5361*** (0.1377)	5.1703*** (0.0464)	5.3763*** (0.0976)	4.9856*** (0.1286)	5.5430*** (0.0599)	5.7348*** (0.1630)	5.1498*** (0.1944)
Cohort Dummies	Yes								
N	3,104	1,641	1,463	548	546	547	536	441	486
R-squared	.753	.828	.679	.918	.858	.856	.791	.608	.800
F-statistics	669	597	234	1,808	380	518	1,260	89	249

Note: Numbers in parentheses are standard errors. * for $p < .05$, ** for $p < .01$, and *** for $p < .001$. B(1) refers to birth cohorts created with 1-year span. E stands for education and G denotes gender. G(1) refers to male and G(2) refers to female. E(1), E(2) and E(3) refer to primary school, high school and university graduates, respectively.

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Descriptive Statistics

Table: Distributional Statistics

Full Sample (2004-2018)												
	Primary School			High School			University			All Categories		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Observations	450,589	89,375	539,964	234,463	66,026	300,489	183,110	102,113	285,223	856,830	248,770	1,105,600
Private Sector (2009-2018)												
	Primary School			High School			University			All Categories		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Observations	267,653	57,870	325,523	127,149	37,812	164,961	64,692	40,003	104,695	459,494	135,685	595,179
Public Sector (2009-2018)												
	Primary School			High School			University			All Categories		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Observations	30,053	3,094	33,147	34,325	7,668	41,993	77,843	40,077	117,920	142,221	50,839	193,060

Table: Distributional Frequencies

	Gender		Education			All
	Male	Female	Primary	High School	University	
Private	77%	23%	54%	27%	17%	76%
Public	74%	26%	17%	22%	61%	24%
Full-Sample	76%	24%	46%	26%	28%	100%

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