Online Appendix for Intergenerational Income Mobility in Turkey

NIZAM MELIKŞAH DEMIRTAŞ* *Arizona State University*

ORHAN TORUL† *Boğaziçi University*

May 2023

A - Additional Results

In this appendix, we present additional results to provide a more comprehensive illustration of intergenerational mobility patterns in Turkey. We begin by discussing the limitations of previous studies and explaining why their samples are not representative of the Turkish population. Next, we introduce alternative income definitions and present our estimates of intergenerational mobility using these definitions. Finally, we conduct additional robustness checks and present other supplementary results.

A.1 - Previous Studies on Intergenerational Income Mobility in Turkey

As stated in the main text, previous studies on intergenerational mobility in Turkey (Mercan, 2012; Mercan and Barlin, 2016; Duman, 2021) rely on the *SILC* panel dataset for their estimations. The primary motivation for this is to avoid errors-in-variables bias by averaging multiple years of observations, as discussed in Section 3.1. However, this dataset only contains information about children who live with their parents. Consequently, the sample used in these studies is not representative; thus, their results are unreliable.

Table A.1 presents descriptive statistics for the sample of working individuals and a subset of individuals living with their parents in both the *SILC* 2010 cross-section and the pooled *SILC* dataset. Notably, children living with their parents are younger on average and have different educational attainment compositions compared to the complete sample. Additionally, their income measures are lower and less dispersed than those of the complete sample. These differences cannot be solely attributed to age composition: even when observations are weighted to match the complete-sample age distribution, earnings of children living with their parents remain significantly lower, as shown in Figure A.1.

*Address: Arizona State University, Department of Economics, PO Box 879801 Tempe, AZ 85287-9801, USA.
E-Mail: ndemirta@asu.edu

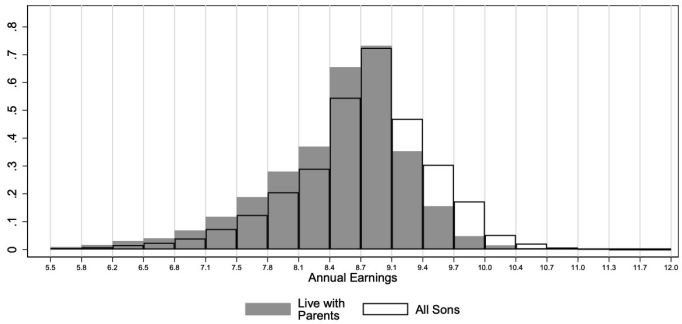
†Corresponding Author. Address: Boğaziçi University, Department of Economics, 34342 Bebek, Istanbul, Turkey.
E-Mail: orhan.torul@boun.edu.tr

Table A.1: Descriptive Statistics (*SILC* Cross-Sections)

	SILC 2010				SILC Pooled 2005-2017			
	Full-Time Workers		Live with Parents		Full-Time Workers		Living with Parents	
Male								
Age	39.16	(8.91)	33.85	(7.93)	38.992	(10.542)	31.620	(9.026)
Secondary Education or Lower	0.62		0.61		0.571		0.562	
High-School Graduate	0.22		0.26		0.218		0.253	
University Graduate	0.17		0.14		0.211		0.185	
log(Earnings)	8.70	(0.85)	8.47	(0.78)	8.756	(0.848)	8.517	(0.780)
log(Household Income)	8.89	(0.68)	8.77	(0.62)	8.962	(0.667)	8.842	(0.599)
Number of Observations	**9583**		**2009**		**157,212**		**39,277**	
Female								
Age	37.43	(8.34)	32.50	(6.60)	36.181	(9.840)	28.814	(7.792)
Secondary Education or Lower	0.47		0.27		0.426		0.256	
High-School Graduate	0.18		0.27		0.188		0.286	
University Graduate	0.35		0.45		0.386		0.457	
log(Earnings)	8.49	(1.09)	8.65	(0.87)	8.595	(1.013)	8.608	(0.831)
log(Household Income)	9.24	(0.73)	9.16	(0.56)	9.274	(0.694)	9.119	(0.591)
Number of Observations	**2120**		**379**		**40,840**		**9,668**	
Total								
Age	38.85	(8.83)	33.64	(7.75)	38.412	(10.463)	31.066	(8.867)
Secondary Education or Lower	0.59		0.55		0.541		0.502	
High-School Graduate	0.21		0.26		0.212		0.259	
University Graduate	0.20		0.19		0.247		0.239	
log(Earnings)	8.67	(0.90)	8.50	(0.80)	8.723	(0.887)	8.535	(0.791)
log(Household Income)	8.96	(0.70)	8.83	(0.62)	9.026	(0.685)	8.896	(0.607)
Number of Observations	**11703**		**2388**		**198,052**		**48,945**	

Notes: Standard deviations are reported in parentheses alongside mean values. The values in each column represent the sample shares. The second and fourth columns are subsamples of their respective preceding columns.

Figure A.1: Earnings Histogram of Males



Notes: The frequency of earnings for children living with their parents is overlaid with the earnings of all individuals aged 20 to 36 who report positive income.

In previous studies (Mercan, 2012; Mercan and Barlin, 2016; Duman, 2021), the authors use the *SILC* panel dataset, which tracks individuals for up to four years. Table A.2 presents descriptive statistics for this dataset. Similar to the cross-sectional data used in our study, we observe demographic differences between the full sample and the subsample of individuals living with their parents. Additionally, the panel dataset experiences significant attrition, which could further bias estimates in previous studies (as shown in column 3 of Table A.2).

Finally, we attempt to balance the sample of children living with their parents by leveraging the available information in the survey. We first estimate the effects of various characteristics (such as age, education, gen-

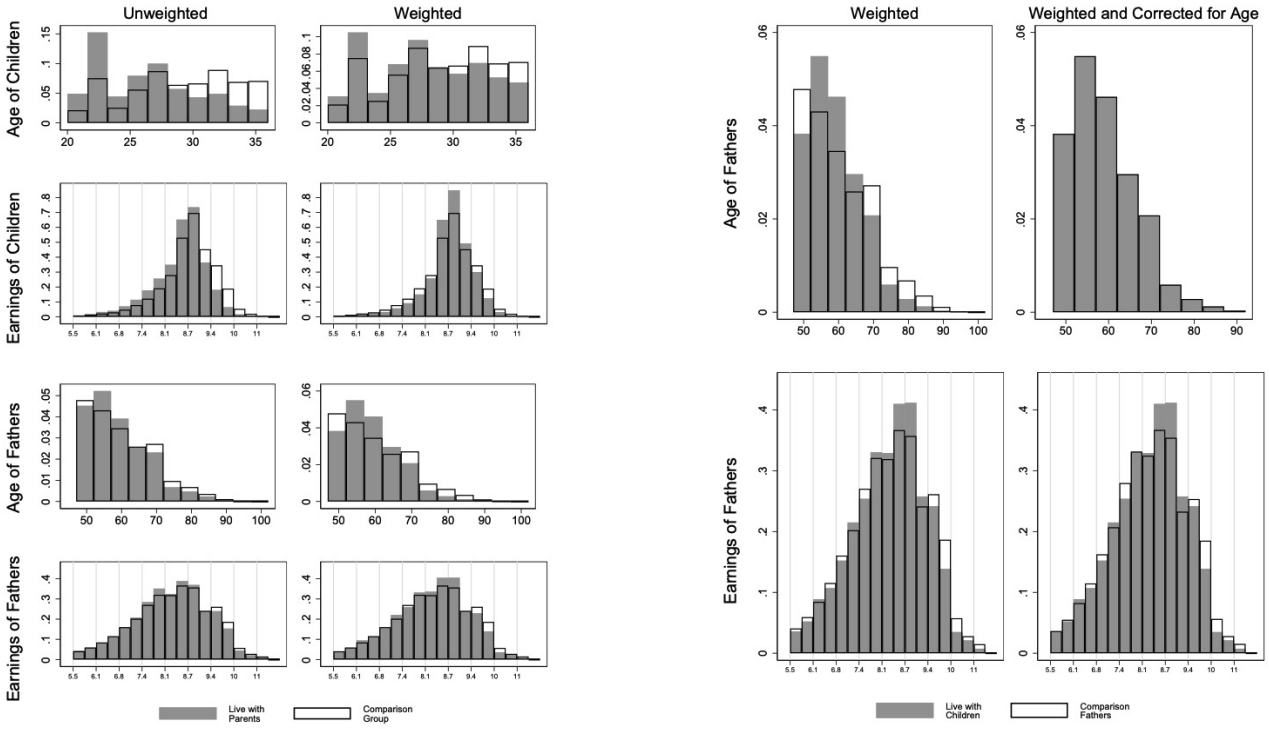
Table A.2: Descriptive Statistics (*SILC* Pooled Panel 2005-2017)

	Full Sample		Full-Time Workers		Observed 4 Years		Living with Parents	
Male								
Age	40.34	(17.662)	38.56	(10.697)	41.03	(9.940)	27.36	(5.184)
Secondary Education or Lower	0.58		0.58		0.6		0.51	
High-School Graduate	0.22		0.23		0.22		0.30	
University Graduate	0.19		0.18		0.16		0.17	
log(Earnings)	8.78	(1.098)	8.8	(0.829)	8.82	(0.823)	8.56	(0.738)
Non-zero Earners	0.67							
Number of Observations	**90862**		**46,358**		**23,754**		**8,395**	
Female								
Age	41.19	(18.435)	35.95	(10.006)	37.62	(9.691)	26.50	(5.259)
Secondary Education or Lower	0.76		0.43		0.48		0.24	
High-School Graduate	0.14		0.21		0.2		0.31	
University Graduate	0.09		0.35		0.3		0.43	
log(Earnings)	8.04	(1.428)	8.66	(0.954)	8.63	(0.977)	8.66	(0.770)
Non-zero Earners	0.21							
Number of Observations	**95,374**		**11,853**		**6,027**		**2,445**	
Total								
Age	40.64	(18.071)	38.03	(10.612)	40.34	(9.985)	27.17	(5.213)
Secondary Education or Lower	0.71		0.55		0.58		0.45	
High-School Graduate	0.17		0.22		0.22		0.31	
University Graduate	0.11		0.21		0.19		0.23	
log(Earnings)	8.39	(1.208)	8.77	(0.857)	8.78	(0.860)	8.58	(0.746)
Non-zero Earners	0.43							
Number of Observations	**186,236**		**58,211**		**29,781**		**10,840**	

Notes: Standard deviations are reported in parentheses alongside mean values. The values in each column represent the sample shares. The last two columns are subsamples of the entire sample. The sample shown in the last column includes children living with either parent.

der, marital status, and health condition) on the likelihood of living with parents. We then weight individuals using inverse probability weighting following Nevo (2003), as shown in the left panel of Figure A.2. Notably, the age distribution of fathers is skewed in this case. However, even when we adjust the weights to match the age distribution of fathers, the earnings distribution of fathers still differs from that of the complete sample, as depicted in the right panel of Figure A.2. This exercise demonstrates that the sample of children living with their parents inherently differs from the sample of full-time working individuals in several unobservable dimensions to the econometrician. As a result, estimates using this specific sample are likely to be biased in an unpredictable direction.

Figure A.2: Robustness Experiment via Probability Weighting



(a) **(b)**

Notes: The left panel compares the unweighted and *inverse probability-weighted* distributions of children's and fathers' ages and earnings by overlaying the densities of those living in the same household and synthetic comparison groups. The right panel compares only weighted distributions and distributions weighted and corrected for age.

A.2 - Intergenerational Elasticity Estimates using Alternative Income Measures

In this section, we replicate our estimations from the main text using alternative income measures and present them alongside our primary estimates. In addition to individual *annual earnings*, we provide estimates based on *non-entrepreneurial income*, *individual income after transfers*, and *hourly wage*. We also present our estimates based on *non-equivalized household income*.

Non-entrepreneurial income is defined as labor earnings from the main job, excluding self-employment income. Individual income after transfers is calculated as the unweighted sum of labor income, self-employment income, unemployment, old age, education, health-related benefits, and retirement grants minus voluntary retirement premiums paid. We will refer to this as *income* hereafter.

We then construct the hourly wage rate variable following the *RED* guidelines. It is calculated as follows:

$$w_{i,t} = \frac{ae_{i,t}}{ah_{i,t}} \tag{1}$$

where $ae_{i,t}$ denotes *annual earnings*, and $ah_{i,t}$ denotes *annual hours worked*, which is calculated as weekly

hours worked times the number of weeks worked throughout the year.[1] We present our results using alternative income measures in Table A.3- A.8:

Table A.3: *TS2SLS* Estimates using Alternative Individual Income Measures

Pairs	Number of Obs.	Earnings	Income	Non-Entrepreneurial Income	Hourly Wage
Father-Son	[7809]	0.51 (0.018)	0.61 (0.021)	0.40 (0.017) [5673]	0.49 (0.019)
Father-Daughter	[1743]	1.00 (0.042)	1.09 (0.048)	0.72 (0.038) [1451]	0.88 (0.040)
Mother-Son	[3101]	0.35 (0.025)	0.52 (0.039)	0.29 (0.026) [2037]	0.31 (0.025)
Mother-Daughter	[670]	0.80 (0.042)	0.99 (0.055)	0.61 (0.042) [509]	0.72 (0.042)

Notes: This table supplements the results presented in Table 2 from the main text. The sample includes only full-time workers. Sample sizes are smaller in column 3 as it excludes individuals with only self-employment income. Bootstrap standard errors are reported in parentheses, and sample sizes are denoted in brackets.

Table A.4: *TS2SLS* Estimates of Intergenerational Elasticity of Non-equivalized Household Income

Pairs	**Parent & Child Household Income**		**Parents' Personal Earnings**	
	Full Sample	Only Full-Time Working Children	Full Sample	Only Full-Time Working Children
Father-Son	0.79 (0.023) [10170]	0.81 (0.024) [7809]	0.47 (0.014) [10170]	0.49 (0.015) [7809]
Father-Daughter	0.80 (0.022) [10426]	0.99 (0.041) [1743]	0.49 (0.014) [10426]	0.69 (0.028) [1743]
Mother-Son	1.08 (0.044) [4109]	1.08 (0.050) [3101]	0.34 (0.018) [4109]	0.36 (0.019) [3101]
Mother-Daughter	1.10 (0.043) [4350]	1.18 (0.061) [670]	0.35 (0.018) [4350]	0.50 (0.029) [670]

Notes: This table supplements the results presented in Table 4 from the main text. Columns (3) and (4) display the elasticity of children's household income with respect to their parents' individual earnings. Bootstrap standard errors are reported in parentheses, and sample sizes are denoted in brackets.

[1] *SILC* provides information on weekly hours worked and the number of months employed. However, 7.5% of individuals who reported working at least 30 weekly hours did not provide information on the number of months employed. Therefore, we imputed twelve months for these individuals.

Table A.5: *TS2SLS* Estimates of Intergenerational Elasticity of Equivalized Household Income - Excluding Co-Residing Parent-Child Pairs

Pairs	**Parent & Child Household Income**		**Parents' Personal Earnings**	
	Full Sample	Only Full-Time Working Children	Full Sample	Only Full-Time Working Children
Father-Son	0.76 (0.022) [7705]	0.77 (0.022) [6112]	0.56 (0.017) [7705]	0.57 (0.018) [6112]
Father-Daughter	0.83 (0.019) [9379]	1.05 (0.038) [1423]	0.62 (0.015) [9379]	0.86 (0.031) [1423]
Mother-Son	0.95 (0.040) [2964]	0.95 (0.044) [2316]	0.38 (0.022) [2964]	0.40 (0.023) [2316]
Mother-Daughter	1.05 (0.038) [3993]	1.18 (0.054) [578]	0.43 (0.021) [3993]	0.62 (0.032) [578]

Notes: This table supplements the results presented in Table 4 from the main text. Columns (3) and (4) display the elasticity of children's household income with respect to their parents' individual earnings. Bootstrap standard errors are reported in parentheses, and sample sizes are denoted in brackets.

Table A.6: *TS2SLS* Estimates for Different Child Income Definitions

Pairs	Reported Child Income					Age Corrected Child Income, Age<35					Reported Child Income, Age<35			
	Number of Obs.	Earnings	Income	Labor Income	Hourly Wage	Number of Obs.	Earnings	Income	Labor Income	Hourly Wage	Earnings	Income	Labor Income	Hourly Wage
Father-Son	[7642]	0.522 (0.020)	0.614 (0.023)	0.395 (0.018) [5558]	0.497 (0.021)	[3040]	0.563 (0.029)	0.66 (0.034)	0.441 (0.026) [2517]	0.503 (0.030)	0.499 (0.029)	0.601 (0.034) [2517]	0.393 (0.026)	0.453 (0.030)
Father-Daughter	[1613]	0.961 (0.045)	1.035 (0.049)	0.701 (0.040) [1341]	0.867 (0.042)	[740]	0.913 (0.067)	0.955 (0.071)	0.692 (0.060) [684]	0.828 (0.060)	0.806 (0.066)	0.839 (0.070) [684]	0.609 (0.059)	0.746 (0.060)
Mother-Son	[3028]	0.0.334 (0.024)	0.511 (0.039)	0.277 (0.025) [2001]	0.279 (0.025)	[1023]	0.376 (0.032)	0.508 (0.049)	0.31 (0.031) [820]	0.328 (0.033)	0.339 (0.032)	0.461 (0.049) [820]	0.277 (0.032)	0.298 (0.033)
Mother-Daughter	[629]	0.698 (0.048)	0.888 (0.063)	0.518 (0.045) [475]	0.629 (0.047)	[235]	0.693 (0.059)	0.805 (0.072)	0.568 (0.058) [217]	0.639 (0.055)	0.617 (0.059)	0.704 (0.071) [217]	0.507 (0.058)	0.578 (0.055)

Notes: In the regressions using reported income, age controls are included. Standard errors are calculated using the bootstrap method and are presented in parentheses. Smaller sample sizes are presented under the standard errors for regressions based on labor income.

Table A.7: *TS2SLS* Estimates for Different Income Criteria (Alternative Income Measures)

Pairs	Includes Part-Time, Annual Earnings>244 Liras					Everyone with Non-zero Income			
	Number of Obs.	Earnings	Income	Labor Income	Hourly Wage	Earnings	Income	Labor Income	Hourly Wage
Father-Son	[7992]	0.52 (0.018)	0.61 (0.021)	0.40 (0.017) [5772]	0.50 (0.019)	0.52 (0.018) [8634]	0.60 (0.021) [9520]	0.40 (0.017) [6297]	0.51 (0.019) [8016]
Father-Daughter	[1950]	1.04 (0.042)	1.11 (0.047)	0.76 (0.038) [1581]	0.89 (0.038)	1.23 (0.048) [2649]	1.11 (0.046) [3499]	0.96 (0.043) [2127]	0.96 (0.041) [2041]
Mother-Son	[3195]	0.37 (0.026)	0.55 (0.040)	0.31 (0.027) [2080]	0.33 (0.026)	0.37 (0.027) [3452]	0.57 (0.039) [3795]	0.31 (0.027) [2284]	0.33 (0.026) [3209]
Mother-Daughter	[763]	0.83 (0.043)	0.99 (0.055)	0.63 (0.044) [561]	0.75 (0.041)	0.91 (0.053) [1056]	1.07 (0.059) [1388]	0.78 (0.049) [782]	0.79 (0.047) [823]

Notes: This table supplements the results presented in Table 7 from the main text. The sample sizes for the second set of regressions differ because some individuals with positive income do not report earnings, labor earnings, or worked hours. Standard errors are calculated using the bootstrap method and are presented in parentheses. Smaller sample sizes are presented under the standard errors for regressions based on labor income.

Table A.8: *TS2SLS* Estimates using Predicted Individual Incomes for Both Generations

Pairs	Number of Obs.	Earnings	Income	Non-Entrepreneurial Income	Hourly Wage
Father-Son	[7642]	0.48 (0.009)	0.45 (0.010)	0.42 (0.009)	0.47 (0.010)
Father-Daughter	[1613]	0.88 (0.026)	0.88 (0.027)	0.74 (0.027)	0.80 (0.027)
Mother-Son	[3028]	0.28 (0.013)	0.37 (0.016)	0.28 (0.015)	0.25 (0.014)
Mother-Daughter	[629]	0.69 (0.024)	0.79 (0.025)	0.65 (0.025)	0.65 (0.026)

Notes: This table supplements the results presented in Table 9 from the main text. Bootstrap standard errors are in parentheses. The sample sizes are the same as before.

A.3 - Robustness Checks and Other Results

We present the results of our several robustness experiments and additional findings in Table A.9- A.16:

Table A.9: First-Stage Estimation Results

	Earnings		Income		Non-Entrepreneurial Income		Hourly Wage		Household Income	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Highest Educational Attainment										
Literate & without diploma	0.165***	0.129***	0.218***	0.157***	0.182***	0.170***	0.128***	0.100***	0.121***	0.227***
	(0.017)	(0.028)	(0.016)	(0.028)	(0.021)	(0.034)	(0.019)	(0.026)	(0.012)	(0.010)
Primary school	0.304***	0.183***	0.441***	0.197***	0.262***	0.226***	0.235***	0.162***	0.392***	0.341***
	(0.015)	(0.019)	(0.013)	(0.020)	(0.018)	(0.023)	(0.016)	(0.018)	(0.010)	(0.007)
Secondary school	0.460***	0.458***	0.578***	0.511***	0.443***	0.512***	0.384***	0.358***	0.538***	0.570***
	(0.015)	(0.024)	(0.014)	(0.024)	(0.019)	(0.026)	(0.017)	(0.023)	(0.010)	(0.011)
High school	0.527***	0.543***	0.632***	0.582***	0.501***	0.592***	0.472***	0.488***	0.629***	0.633***
	(0.016)	(0.022)	(0.014)	(0.022)	(0.019)	(0.025)	(0.017)	(0.021)	(0.011)	(0.011)
Vocational or technical high school	0.616***	0.613***	0.703***	0.636***	0.572***	0.654***	0.574***	0.591***	0.699***	0.680***
	(0.016)	(0.022)	(0.014)	(0.022)	(0.019)	(0.025)	(0.017)	(0.022)	(0.011)	(0.011)
University or higher education	0.872***	0.857***	0.878***	0.847***	0.796***	0.871***	0.902***	0.884***	0.943***	0.893***
	(0.016)	(0.022)	(0.014)	(0.022)	(0.019)	(0.025)	(0.017)	(0.021)	(0.011)	(0.011)
Occupational Code (ISCO-88)										
Legislators, senior officials and managers	0.408***	0.721***	0.801***	0.977***	0.645***	0.990***	0.163***	0.411***	0.690***	0.723***
	(0.009)	(0.025)	(0.008)	(0.022)	(0.012)	(0.026)	(0.010)	(0.026)	(0.007)	(0.017)
Professionals	0.623***	0.744***	0.691***	0.784***	0.665***	0.786***	0.572***	0.589***	0.619***	0.571***
	(0.009)	(0.017)	(0.008)	(0.017)	(0.009)	(0.017)	(0.010)	(0.016)	(0.007)	(0.011)
Technicians and associate professionals	0.415***	0.575***	0.481***	0.593***	0.454***	0.591***	0.320***	0.364***	0.438***	0.419***
	(0.009)	(0.018)	(0.008)	(0.017)	(0.008)	(0.018)	(0.009)	(0.017)	(0.007)	(0.012)
Clerks	0.375***	0.446***	0.338***	0.444***	0.346***	0.450***	0.331***	0.213***	0.312***	0.349***
	(0.008)	(0.016)	(0.007)	(0.016)	(0.008)	(0.016)	(0.009)	(0.015)	(0.007)	(0.011)
Service & sale workers	0.156***	0.165***	0.302***	0.212***	0.215***	0.196***	-0.0671***	-0.153***	0.248***	0.115***
	(0.006)	(0.013)	(0.006)	(0.013)	(0.006)	(0.013)	(0.007)	(0.012)	(0.005)	(0.007)
Skilled agricultural workers	-0.487***	-0.934***	0.0866***	-0.277***	-0.762***	-1.130***	-0.651***	-1.179***	-0.0364***	-0.115***
	(0.008)	(0.018)	(0.007)	(0.020)	(0.013)	(0.035)	(0.008)	(0.018)	(0.005)	(0.007)
Craft workers	0.150***	0.0579*	0.234***	0.183***	0.207***	0.206***	0.0652***	-0.106***	0.171***	0.0394***
	(0.006)	(0.023)	(0.006)	(0.021)	(0.006)	(0.023)	(0.007)	(0.022)	(0.005)	(0.010)
Plant and machine operators	0.254***	0.473***	0.313***	0.475***	0.290***	0.468***	0.136***	0.263***	0.236***	0.237***
	(0.006)	(0.018)	(0.006)	(0.017)	(0.006)	(0.018)	(0.007)	(0.017)	(0.005)	(0.011)
Constant	8.147***	7.804***	8.146***	7.858***	8.234***	7.816***	0.478***	0.357***	8.103***	8.373***
	(0.017)	(0.027)	(0.015)	(0.027)	(0.020)	(0.029)	(0.018)	(0.025)	(0.011)	(0.012)
Age Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Obs.	153,695	38,161	153,695	38,161	114,207	33,228	153,695	38,161	171,606	75,970
R-squared	0.362	0.509	0.331	0.424	0.400	0.463	0.346	0.547	0.364	0.457
F-statistic	2403.9	1103.4	2226.4	825.0	1991.9	784.1	2373.3	1283.4	2645.8	1875.7

Notes: Robust standard errors are in parantheses. * for $p < .05$, ** for $p < .01$, and *** for $p < .001$. The 20-24 age category is the basis.

Table A.10: Intergenerational Elasticity Estimates by Different First-Stage Sample Years using *SILC*

Pairs	Father-Son			Father-Daughter			Mother-Son			Mother-Daughter		
Year of 1st Stage Sample	Earnings	Income	Non-Entrepreneurial Income	Earnings	Income	Non-Entrepreneurial Income	Earnings	Income	Non-Entrepreneurial Income	Earnings	Income	Non-Entrepreneurial Income
2005	0.455	0.565	0.380	0.902	1.034	0.685	0.376	0.524	0.268	0.827	0.995	0.553
2006	0.464	0.596	0.375	0.930	1.076	0.682	0.371	0.530	0.270	0.790	0.955	0.549
2007	0.476	0.571	0.343	0.931	1.042	0.629	0.324	0.457	0.252	0.746	0.901	0.532
2008	0.460	0.552	0.357	0.898	1.027	0.652	0.327	0.449	0.272	0.738	0.878	0.553
2009	0.488	0.565	0.345	0.923	1.019	0.626	0.347	0.472	0.279	0.764	0.886	0.560
2010	0.530	0.646	0.354	0.994	1.106	0.650	0.377	0.554	0.321	0.830	0.982	0.641
2011	0.520	0.595	0.399	0.978	1.038	0.701	0.359	0.519	0.302	0.794	0.941	0.609
2012	0.509	0.603	0.406	0.964	1.055	0.715	0.361	0.534	0.282	0.817	0.996	0.595
2013	0.524	0.638	0.433	0.999	1.111	0.758	0.345	0.492	0.290	0.781	0.927	0.599
2014	0.541	0.623	0.454	1.028	1.096	0.786	0.355	0.486	0.342	0.823	0.969	0.695
2015	0.538	0.632	0.429	1.033	1.091	0.759	0.369	0.594	0.302	0.892	1.115	0.648
2016	0.511	0.621	0.442	1.015	1.111	0.787	0.311	0.500	0.320	0.792	1.015	0.683
2017	0.488	0.580	0.444	0.977	1.059	0.793	0.321	0.529	0.308	0.817	1.087	0.673

Table A.11: Intergenerational Elasticity Estimates by Different First-Stage Sample Years using *HBS*

Pairs	Father-Son			Father-Daughter			Mother-Son			Mother-Daughter		
Year of 1st Stage Sample	Earnings	Income	Non-Entrepreneurial Income	Earnings	Income	Non-Entrepreneurial Income	Earnings	Income	Non-Entrepreneurial Income	Earnings	Income	Non-Entrepreneurial Income
2002	0.541	0.608	0.516	1.019	1.046	0.863	0.356	0.580	0.205	0.765	1.015	0.445
2003	0.547	0.635	0.371	1.027	1.066	0.675	0.413	0.526	0.379	0.844	0.964	0.699
2004	0.485	0.575	0.308	0.961	1.033	0.585	0.355	0.527	0.448	0.770	0.929	0.881
2005	0.512	0.609	0.450	1.012	1.082	0.800	0.368	0.489	0.424	0.824	0.967	0.800
2006	0.477	0.605	0.433	0.962	1.105	0.776	0.357	0.535	0.303	0.803	0.969	0.606
2007	0.464	0.559	0.430	0.931	1.031	0.762	0.324	0.465	0.279	0.743	0.890	0.588
2008	0.427	0.547	0.325	0.887	1.028	0.612	0.354	0.484	0.248	0.759	0.880	0.512
2009	0.440	0.583	0.325	0.871	1.055	0.604	0.330	0.448	0.278	0.752	0.868	0.559
2010	0.471	0.556	0.316	0.919	1.007	0.584	0.367	0.547	0.222	0.780	0.934	0.462
2011	0.489	0.563	0.364	0.943	0.999	0.660	0.339	0.503	0.219	0.768	0.928	0.478
2012	0.474	0.559	0.326	0.927	1.026	0.603	0.310	0.425	0.220	0.707	0.830	0.471
2013	0.492	0.611	0.315	0.963	1.087	0.585	0.326	0.476	0.257	0.754	0.939	0.541
2014	0.529	0.656	0.323	1.027	1.143	0.607	0.321	0.440	0.234	0.759	0.902	0.507

Notes: The Household Budget Survey (*HBS*) published annually by *TurkStat* since 2002 is a nationally representative cross-sectional dataset. While the survey primarily focuses on household expenditure, it also contains information on individual incomes relevant to our analysis. Although the questions related to earnings are mostly similar to those in *SILC*, the variables were constructed by the authors to most accurately match their *SILC* counterparts. This table is not included in the main text because it was not possible to compare the sampling method with *SILC* due to frequent methodology changes in HBS. For instance, after 2015, the group of "illiterates" was omitted from the education variable, making it impossible to use these cross-sections as "illiterates" constitute a significant group in the parents' generation.

Table A.12: *OLS* Estimates for Non-Entrepreneurial Income Based on Education and Gender

	Aktuğ et al. (2021)						*SILC* Cross-Sectional					
	Male			Female			Male			Female		
	Primary	High School	University	Primary	High School	University	Primary	High School	University	Primary	High School	University
Age												
25 to 29	0.066***	0.097***	0.266***	0.039***	0.072***	0.253***	0.245***	0.402***	0.561***	0.0115	0.322***	0.559***
	(0.002)	(0.003)	(0.005)	(0.004)	(0.004)	(0.005)	(0.011)	(0.015)	(0.019)	(0.033)	(0.024)	(0.020)
30 to 34	0.092***	0.156***	0.429***	0.040***	0.109***	0.381***	0.326***	0.560***	0.843***	-0.0700*	0.347***	0.769***
	(0.002)	(0.003)	(0.005)	(0.004)	(0.004)	(0.005)	(0.011)	(0.015)	(0.019)	(0.030)	(0.026)	(0.020)
35 to 39	0.098***	0.183***	0.531***	0.034***	0.111***	0.447***	0.342***	0.667***	0.969***	-0.000254	0.324***	0.887***
	(0.002)	(0.003)	(0.005)	(0.004)	(0.005)	(0.006)	(0.011)	(0.015)	(0.019)	(0.028)	(0.029)	(0.021)
40 to 44	0.099***	0.197***	0.578***	0.015***	0.082***	0.478***	0.394***	0.771***	1.086***	-0.0838**	0.388***	1.007***
	(0.002)	(0.004)	(0.006)	(0.004)	(0.005)	(0.008)	(0.011)	(0.017)	(0.019)	(0.028)	(0.031)	(0.022)
45 to 49	0.093***	0.169***	0.571***	-0.013***	0.020**	0.457***	0.329***	0.819***	1.091***	-0.0724*	0.339***	1.020***
	(0.002)	(0.004)	(0.007)	(0.004)	(0.007)	(0.010)	(0.012)	(0.017)	(0.020)	(0.029)	(0.040)	(0.025)
50 to 54	0.052***	0.111***	0.536***	-0.035***	0.003	0.449***	0.181***	0.753***	1.072***	-0.217***	0.270***	0.900***
	(0.003)	(0.005)	(0.008)	(0.005)	(0.011)	(0.012)	(0.014)	(0.021)	(0.022)	(0.034)	(0.058)	(0.033)
55 to 59	-0.001	0.059***	0.507***	-0.072***	0.044*	0.416***	-0.0278	0.589***	1.007***	-0.267***	0.460***	0.892***
	(0.004)	(0.007)	(0.011)	(0.007)	(0.021)	(0.018)	(0.020)	(0.035)	(0.030)	(0.042)	(0.115)	(0.055)
60 to 64							-0.180***	0.652***	1.002***	-0.329***	0.352	0.741***
							(0.030)	(0.056)	(0.044)	(0.057)	(0.223)	(0.118)
Sector(Public=1)	0.264***	0.341***	0.277***	0.170***	0.336***	0.303***						
	(0.003)	(0.003)	(0.003)	(0.005)	(0.005)	(0.004)						
Tenure	0.011***	0.016***	0.004***	0.014***	0.021***	0.007***						
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)						
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Obs.	296,302	161,101	141,980	60,806	45,448	79,968	61,785	27,368	29,690	14,850	7,361	16,250
R-squared	0.21	0.38	0.28	0.29	0.38	0.33	0.0604	0.135	0.200	0.0500	0.0408	0.189
F-statistic	4,140	7,779	4,035	1,445	1,829	3,294	193.0	180.0	293.8	38.31	15.74	153.7

Notes: Robust standard errors are in parentheses. * for $p < .05$, ** for $p < .01$, and *** for $p < .001$. The 20-24 age category is the basis.

Table A.13: Intergenerational Non-Entrepreneurial Income Elasticity Estimates using Aktuğ et al. (2021) for Age-Correction

Pairs	Corrected for Age (Aktuğ et al., 2021)	Corrected for Age (*SILC*)
Father-Son	0.39	0.40
	(0.018)	(0.017)
Father-Daughter	0.73	0.72
	(0.040)	(0.038)
Mother-Son	0.28	0.29
	(0.026)	(0.025)
Mother-Daughter	0.60	0.61
	(0.046)	(0.042)

Notes: Standard errors are calculated using the bootstrap method and are presented in parentheses.

Table A.14: Estimated Rank-Rank Slopes (Ranking Sons and Daughters Separately)

	Father's Rank		Mother's Rank	
Sons	0.415		0.391	
	(.009)		(.016)	
	[10170]	0.416	[4109]	0.385
		(.006)		(.011)
Daughters	0.417	[20596]	0.380	[8459]
	(.008)		(.015)	
	[10426]		[4350]	

Notes: Standard errors are calculated using the bootstrap method and are presented in parentheses. The sample sizes are indicated in brackets. Sons and daughters are ranked separately, as are fathers and mothers.

Table A.15: *TS2SLS* Estimates using age 30-34 for Age-Correction

Pairs	Number of Obs.	Earnings	Income	Non-Entrepreneurial Income	Hourly Wage
Father-Son	[7809]	0.47	0.57	0.37	0.46
		(0.017)	(0.020)	(0.016)	(0.018)
				[5673]	
Father-Daughter	[1743]	0.96	1.04	0.70	0.85
		(0.042)	(0.047)	(0.038)	(0.039)
				[1451]	
Mother-Son	[3101]	0.32	0.49	0.27	0.29
		(0.024)	(0.039)	(0.025)	(0.024)
				[2037]	
Mother-Daughter	[670]	0.78	0.94	0.59	0.69
		(0.041)	(0.054)	(0.043)	(0.040)
				[509]	

Notes: Standard errors are calculated using the bootstrap method and are presented in parentheses. The sample sizes are indicated in brackets.

Table A.16: Methodology used in *IGE* Estimation by Country

Country	Study	Estimate	Instruments to Predict Fathers' Income	Birth Cohort of Sons
Sweden	Björklund and Jäntti (1997)	0.28	*Higher than compulsory education* (**D**) *Occupation* (EG), *Living in Stockholm* (**D**)	*1952-1961*
Japan	Lefranc et al. (2014)	0.33	*Education*, *Occupation* (EGP), *Firm Size* (**D**), *Residential Area*	*1935-1975*
France	Lefranc and Trannoy (2005)	0.41	*Education*, *Occupation* (EG)	*1953-1963*
Italy	Piraino (2007)	0.44	*Education*, *Sector of Employment*, *Work Status*, *Residential Area* (**D**)	*1955-1974*
Turkey	**This study**	**0.51** **0.53** **0.54**	*Education*, *Occupation* (ISCO-88)	*1951-1985* *1976-1980* *1971-1975*
United States	Björklund and Jäntti (1997)	0.52	*Education*, *Occupation*	*1951-1959*
United Kingdom	Dearden et al. (1997)	0.58	*Education*, *Occupation* (EG)	*1958*
Chile	Nunez and Miranda (2010)	0.63	*Education*, *Work Status*	*1966-1975*
Brazil	Dunn (2007)	0.85	*Education*	*1962-1971*
Ecuador	Grawe (2004)	1.13	*Education*	*1955-1981*

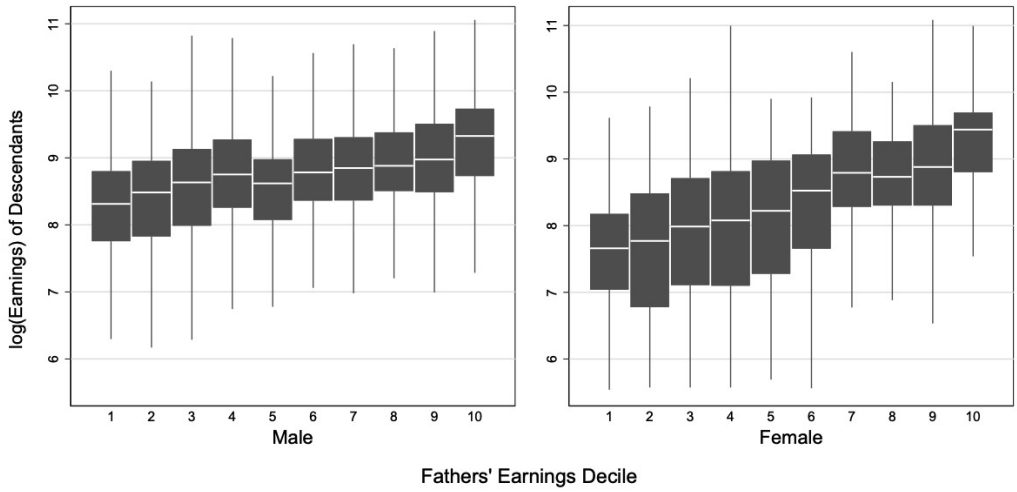
Notes: All estimates are derived from samples of father-son pairs. Dummy variables are denoted by (**D**). In most studies, occupation information is coded according to Erikson and Goldthorpe (1992) (EG) or Erikson et al. (1979) (EGP), also known as *social status*.

B - Intergenerational Mobility and Gender

As discussed in the main text, our estimates of intergenerational earnings elasticity for daughters are significantly larger than those for sons.[2] This result is in contrast to previous findings from other countries (Chadwick and Solon, 2002; Dahl and Deleire, 2008; Chetty et al., 2014). However, when we focus on *household income* instead of *individual earnings*, the gap between *IGE* estimates for sons and daughters disappears. We argue that two main factors contribute to this discrepancy: First, the Turkish female labor force is highly selective, and therefore focusing only on working females can bias earnings elasticity estimates upwards. Second, household incomes are less volatile than individual earnings for females but more volatile for males. In this section, we will discuss our results for both genders in greater detail and explore their relationship with education and assortative mating.

Figure B.1 shows that the growth in earnings of daughters compared to their fathers' earnings rank is greater than that of sons. Specifically, male descendants of fathers in the bottom earnings decile earn 79% more than their female counterparts. However, this difference decreases for descendants of fathers from higher income deciles: it is only 20% for the 9th decile and almost zero for the top earnings decile. Similarly, we see a greater increase in earnings for females compared to males as education level increases: among full-time workers, males with a secondary school education or less earn 48% more than their female counterparts. This ratio is 21% for high school graduates and 13% for university graduates. [3] Additionally, Table B.1 shows that fathers' earnings have a larger impact on their daughters' likelihood of graduating from university compared to their sons. [4] We argue that the significant parental influence on daughters' educational outcomes and the higher relative returns to female education together account for the higher intergenerational elasticity estimates for daughters.

Figure B.1: Earnings of Males and Females over Father's Earnings Distribution



Notes: In the box plot, the top of the box represents the third quartile, while the bottom of the box represents the first quartile. The line inside the box indicates the median value. The whiskers extend to the lowest and highest observations within 1.5 times the interquartile range below and above the first and third quartiles, respectively.

[2] Table A.3 shows that a similar pattern emerges when using alternative measures of individual income.

[3] See also Aktuğ et al. (2021), which examines the gender pay gap across education levels throughout the life cycle.

[4] This pattern is consistent with previous findings by Öztunalı and Torul (2022) and Tansel et al. (2019), which show greater intergenerational persistence in education for daughters compared to sons.

Table B.1: Effect of Father's Earnings on Children's Educational Outcomes: Conditional Logit Coefficients

	Female		Male	
	$\log(P_{high}/P_{sec})$	$\log(P_{uni}/P_{sec})$	$\log(P_{high}/P_{sec})$	$\log(P_{uni}/P_{sec})$
Intercept	-23.05	-32.60	-14.06	-21.60
	(0.668)	(0.866)	(0.477)	(0.588)
log Earnings of Fathers	2.52	3.58	1.56	2.40
	(0.077)	(0.099)	(0.056)	(0.068)
Number of Obs.	10,426		10,170	
Pseudo R^2	0.1920		0.0997	

Notes: P_{sec}, P_{high} and P_{uni} represent the probabilities of attaining an education level of secondary school or lower, high school graduation, and university graduation, respectively. These coefficients are estimated using a multinomial logit model. Standard errors are shown in parentheses.

We next decompose our intergenerational elasticity estimates by education following Hertz (2008) (Appendix D). This analysis provides a tractable framework for examining how parental influence through educational attainment differs by gender. Additionally, the impact of labor force composition on *IGE* estimates becomes more evident in this exposition. Table B.2 shows both between-group and within-group components of our *IGE* estimates for different educational attainment groups. Our within-group *IGE* estimates are similar for both genders, except for descendants with a secondary school education or less. However, this group has a limited impact on overall *IGE* levels due to its small share among full-time working daughters, as shown in row (A). The difference between *IGE* estimates for sons and daughters is largely due to the contribution of between-group effects alone, as shown in row (B). [5] It is important to note that while the contribution of the lowest education group is due to the low average earnings of daughters in this group, the contribution of university graduates is due to their larger share among daughters compared to sons. In other words, fathers' advantages are strongly passed on to the next generation of working daughters either through differences in earnings *levels* between the lowest education group and the rest or by increasing the *likelihood* of achieving the highest level of education.

Table B.2: Decomposition of Intergenerational Earnings Elasticity by Educational Attainment

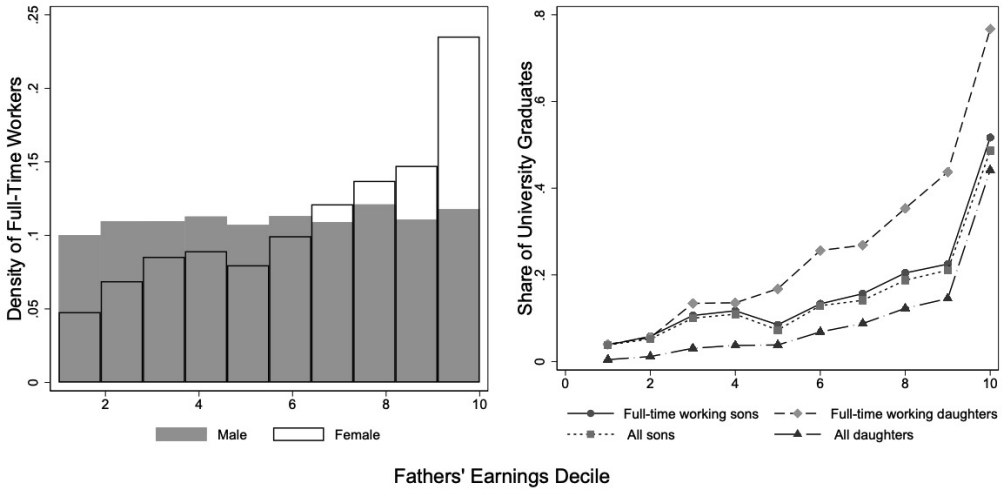
		Male			**Female**		
		Secondary or Lower	High School	University	Secondary or Lower	High School	University
	Shares	0.609	0.223	0.168	0.467	0.178	0.355
	Mean log Earnings of Children	8.51	8.97	9.58	7.83	8.72	9.47
	Mean log Earnings of Fathers	8.16	8.49	8.68	8.20	8.66	8.88
	Pooled *IGE*		**0.515**			**0.997**	
	Within-group *IGE*	0.280	0.139	0.135	0.412	0.207	0.143
A	Contribution of within-group *IGE*	0.120	0.026 $\sum$ =0.173	0.027	0.115	0.017 $\sum$ =0.173	0.041
	Between-group effects	0.189	0.126	1.176	0.804	0.097	1.214
B	Contribution of between-group effects	0.115	0.028 $\sum$ =0.341	0.198	0.376	0.017 $\sum$ =0.824	0.431
	Group-specific persistence: **A**+**B**	0.236	0.054 $\sum$ =0.515	0.225	0.491	0.034 $\sum$ =0.997	0.472

Notes: Children's earnings are adjusted to represent their earnings at ages 35-39. Fathers' earnings are predicted using equation 12, based on information about their education and occupation. The contributions of between-group and within-group effects are calculated by weighting them according to group size.

[5] Between-group effects refer to the impact of fathers' earnings on their children's educational outcomes and how this is reflected in *IGE* through differences in the average earnings of children's educational groups.

We argue that the significant impact of parents on their daughters' economic outcomes operates through the education channel. However, the high proportion of university graduates among working women suggests that the distinct nature of the Turkish female labor force should be taken into account when interpreting mobility results. Specifically, Turkey has the lowest female labor force participation rate among *OECD* countries, recently fluctuating around only 30% (Aktuğ et al., 2021). Since our analysis is limited to full-time working women, we systematically observe women with higher earnings prospects. From an intergenerational perspective, the self-selection of women into the labor force manifests itself as an increase in both the labor force participation rate and the proportion of university graduates among women across parental income ranks. As shown in the left panel of Figure B.2, working women are more likely to have fathers with higher earnings. In contrast, men's employment prospects do not vary with their fathers' earnings. The right panel of Figure B.2 shows significant differences between the educational attainment of working women and their counterparts in the full sample. The gap between the proportion of university graduates among working women and their counterparts in the full sample widens across father's earnings deciles, providing further evidence that we are observing a select group of women in the Turkish labor force. Therefore, as we focus only on working women in our calculations, the variation in daughters' educational attainment associated with parental characteristics is amplified.

Figure B.2: Labor Force Participation and the Share of University Graduates by Gender



Notes: In the left panel, histograms of employed individuals for both genders are overlaid. Each bin represents a decile of predicted father earnings. In the right panel, the proportion of university graduates in each father's earnings decile is shown separately for both genders, for both the sample of employed adults and the full sample. Full-time workers are defined as those who work at least 30 hours per week and earn at least half of the monthly minimum wage in the reference year. The full sample only includes individuals who have reported information about their parents.

We present intergenerational household income elasticity estimates in Table B.3, an expanded version of Table 4 in the main text.[6] We have already discussed the differences between our estimates in columns 1 and 2 in relation to female self-selection in the main text. However, even among working individuals, the differences in household income elasticity estimates between sons and daughters are relatively small compared to those observed for earnings. This holds true even when we regress descendants' household incomes on their parents' individual earnings, as shown in column 4. Therefore, persistence in earnings does not fully reflect

[6]Household incomes may not be directly comparable between children who live with their parents and those who do not. See Table A.5 for estimates that exclude individuals living with their parents.

the persistence of household economic conditions, particularly for women.[7]

Table B.3: *TS2SLS* Estimates of Intergenerational Elasticity of Household Income

Pairs	**Parent & Child Household Income**		**Parents' Personal Earnings**	
	Full Sample	Only Full-Time Working Children	Full Sample	Only Full-Time Working Children
Father-Son	0.77 (0.018) [10170]	0.79 (0.020) [7809]	0.57 (0.014) [10170]	0.59 (0.015) [7809]
Father-Daughter	0.82 (0.018) [10426]	0.99 (0.034) [1743]	0.62 (0.014) [10426]	0.82 (0.028) [1743]
Mother-Son	0.98 (0.032) [4109]	0.99 (0.035) [3101]	0.41 (0.018) [4109]	0.43 (0.019) [3101]
Mother-Daughter	1.03 (0.033) [4350]	1.12 (0.046) [670]	0.44 (0.019) [4350]	0.60 (0.028) [670]

Notes: Column 3 and 4 display the elasticity of children's household income with respect to parents' individual earnings. We use equivalized household income via the modified *OECD* equivalence scale. The bootstrap standard errors are in parentheses. The numbers in brackets denote sample sizes.

We also observe that in contrast to mothers' predicted *earnings*, *household income* predicted using mothers' characteristics has a stronger impact on their children's household income than fathers' characteristics. While mothers' characteristics do not generate significant variation in their own income, they account for a larger portion of the variation in parental household income that is correlated with their children's. This can be explained by *assortative mating*, where mothers' characteristics convey additional information about fathers' earnings, which make up an even larger share of household income in the parents' generation. [8] We provide evidence for assortative mating through elasticity estimates and correlations between spouses in Table B.4.

Table B.4: Earnings and Income Elasticities/Correlations between Married Couples

Generation	**Children**				**Parents**			
Dependent Variable	*Earnings*		*Income*		*Earnings*		*Income*	
	Elasticity	Correlation	Elasticity	Correlation	Elasticity	Correlation	Elasticity	Correlation
Female	0.75 (0.037)	0.558	0.77 (0.040)	0.568	0.80 (0.022)	0.616	0.69 (0.026)	0.639
Male	0.41 (0.018)		0.42 (0.018)		0.47 (0.011)		0.59 (0.015)	
Number of Obs.	[1274]				[7774]			

Notes: The first column indicates the gender of the income measure of the individual used as the dependent variable in elasticity estimations. The sample size for descendants is significantly smaller due to the low number of employed females. Sample sizes are denoted in brackets. Bootstrap standard errors for the parents' generation are shown in parentheses.

[7] Note that this is not a result of differences in the dispersion of earnings and household income. Rather, we observe a similar pattern when considering intergenerational correlations, which are scale-invariant measures.

[8] Fathers' predicted earnings are on average 103% higher than mothers', while this difference is only 21% for their children. This significant difference can be attributed to the low education levels of mothers in the sample, with 57% being illiterate and less than 5% having a high school diploma or higher education. Additionally, the gender pay gap is likely larger in the parents' generation. Tamkoç and Torul (2020) document a consistent decline in gender premium over time.

To further our analysis, we also conduct a regression of individual earnings on the predicted earnings of their parents-in-law. The resulting elasticity estimates, presented in Table B.5, show that spouses' earnings are as elastic as their children's own earnings. That is, the children of higher-earning parents not only have better-earning prospects but also tend to marry partners with higher-earning prospects. This suggests that parental characteristics further impact their offspring's well-being through marital sorting.

Table B.5: Earnings Elasticities with respect to Parents-in-Law

	Father-in-Law Earnings	Mother-in-Law Earnings
Female	0.89 (0.049) [1202]	0.55 (0.020) [466]
Male	0.62 (0.056) [6371]	0.38 (0.027) [2654]

Notes: Bootstrap standard errors are shown in parentheses. Sample sizes are denoted in brackets. The dependent variable is the spouse's earnings. The sample only includes married children.

C - Regional Patterns in Intergenerational Mobility

In this section, we present additional empirical findings on regional patterns of intergenerational mobility. As noted in the main text, the available data has limitations that prevent us from drawing definitive conclusions. We discuss these limitations in greater detail below. Nevertheless, as the first study to consistently examine intergenerational income mobility in Turkey, we provide our results for future reference.

We investigate the geographical variation of mobility in Turkey following the methodology by Chetty et al. (2014). Along with rank-rank slopes, Chetty et al. (2014) introduce a measure called "*absolute upward mobility*," which calculates the expected rank of children from families *below the median* in the national distribution: $E[R_c|R_p < 50]$. While this measure is related to the rank-rank slope at the national level, it provides valuable insights when comparing poorer families across subgroups.[9] We also employ this measure to provide a clearer picture of regional mobility patterns.

Before we present our findings, we find it important to note that we have divided our sample based on the place of residence of the children in their adulthood. Previous studies have typically focused on the regions where children were raised. However, our data does not include this information. As such, this limitation should be considered when interpreting our results. Specifically, an individual's place of residence could be a consequence of their experienced mobility or immobility rather than a determining factor.

We present our estimates of rank-rank slopes and absolute upward mobility for children living in both urban and rural areas in Table C.1. Our results indicate that a son's position in the national distribution is more strongly influenced by his mother's rank if he resides in an urban area. Additionally, our absolute upward mobility estimates reveal that children from families with below-median household income rank on average ten percentile points higher in the distribution if they live in an urban area rather than a rural one.[10]

Table C.1: Rank-Mobility across Rural and Urban Residences

		Rural		**Urban**	
Rank-Rank Slope		Father's Rank	Mother's Rank	Father's Rank	Mother's Rank
Sons		0.35	0.29	0.36	0.37
		(.017)	(.025)	(.011)	(.020)
		[3352]	[2095]	[6818]	[2014]
Daughters		0.33	0.28	0.39	0.38
		(.017)	(.025)	(.011)	(.019)
		[3432]	[2135]	[6994]	[2215]
Absolute Upward Mobility	$E[R_c\|R_p < 50]$				
Sons		35.50	34.11	46.70	43.97
		(.47)	(.69)	(.47)	(.89)
Daughters		32.65	31.01	43.07	39.64
		(.44)	(.66)	(.44)	(.81)

Notes: Standard errors calculated using the bootstrap method are shown in parentheses. Sample sizes are indicated in square brackets. The terms "urban" and "rural" refer to the place of residence of the children at the time the survey was conducted.

We next investigate regional patterns in Turkey's intergenerational mobility. To ensure adequate sample sizes, we group NUTS (Nomenclature of Territorial Units for Statistics) Level-1 regions into five broader geographical units: *East*, *West*, *North*, *South*, and *Central*.[11] We present our rank-rank slope and absolute upward

[9] Noe that the expected value of *absolute upward mobility* equals $\hat{\alpha} + 25\hat{\beta}^{RR}$.

[10] This result could be expected because living in an urban area may be a result of upward mobility, as discussed previously.

[11] Our grouping follows the methodology by Akgündüz et al. (2023), where the *West* includes NUTS-1 regions 1-4, the *Central* includes NUTS-1 regions 5 and 7, the *South* includes NUTS-1 region 6, the *North* contains NUTS-1 regions 8-9, and the *East* includes NUTS-1 regions 9-12.

mobility estimates in Table C.2. Our slope estimates are around 0.35 for all regions, with some variation but no clear pattern. In contrast, our estimates for absolute upward mobility increase with the region's per capita national income. Our results suggest that children from families with below-median income rank on average fifteen percentile points higher if they live in the *West* rather than the *East*.

Table C.2: Rank-Mobility across Regions

	East		**West**		**North**		**South**		**Central**	
Rank-Rank Slope	Father's Rank	Mother's Rank	Father's Rank	Mother's Rank	Father's Rank	Mother's Rank	Father's Rank	Mother's Rank	Father's Rank	Mother's Rank
Sons	0.36	0.40	0.38	0.32	0.30	0.23	0.34	0.25	0.35	0.38
	(.019)	(.050)	(.013)	(.024)	(.026)	(.039)	(.027)	(.058)	(.025)	(.045)
	[2299]	[975]	[4233]	[1605]	[1159]	[727]	[1063]	[417]	[1416]	[385]
Daughters	0.34	0.23	0.39	0.35	0.33	0.26	0.36	0.36	0.43	0.37
	(.019)	(.048)	(.013)	(.024)	(.024)	(.038)	(.025)	(.049)	(.023)	(.045)
	[2321]	[961]	[4222]	[1659]	[1222]	[790]	[1183]	[496]	[1478]	[444]
Absolute Upward Mobility										
Sons	32.10	29.11	47.95	43.47	43.44	43.05	41.93	40.59	46.67	43.13
	(.53)	(.84)	(.57)	(1.05)	(1.03)	(1.15)	(1.03)	(2.20)	(1.01)	(1.88)
Daughters	29.00	27.18	45.22	39.33	39.01	39.03	39.13	33.14	41.03	36.94
	(.52)	(.85)	(.57)	(1.03)	(.84)	(.96)	(.95)	(2.04)	(.98)	(1.77)

Notes: Standard errors calculated using the bootstrap method are shown in parentheses. Sample sizes are indicated in square brackets.

D - Group-Specific Decomposition of *IGE*

In this section, we provide the details of the decomposition used for the calculations in Table D.1. We follow the approach used in the original paper (Hertz, 2008), which demonstrates that intergenerational elasticity estimated in a pooled regression can be expressed as follows:

$$\hat{\beta} = \sum_i \hat{\pi}_i \left(\hat{\beta}_i \frac{\hat{\sigma}^2_{yp,i}}{\hat{\sigma}^2_{yp}} + \frac{(\overline{y}_{p,i} - \overline{y}_p)(\overline{y}_{c,i} - \overline{y}_c)}{\hat{\sigma}^2_{yp}} \right) \tag{2}$$

where each group is indexed by $i = 1, \ldots, I$; the share of the parent-child pair that belongs to group i in the total sample is denoted by $\hat{\pi}_i$, the relevant income measure for parents and children are denoted by y_p and y_c with sample means $\overline{y_p}$ and $\overline{y_c}$, and with variances $\hat{\sigma}^2_{yp}$ and $\hat{\sigma}^2_{yp}$, and the within-group estimate of intergenerational elasticity is denoted by $\hat{\beta}_i$.

Equation (2) represents the pooled *IGE* as a weighted sum of within-group elasticities and between-group effects. The first term represents the contribution of within-group elasticity and can be interpreted as the variance-adjusted *IGE*. The second term represents group i's variance-weighted contribution to the between-group covariance. Therefore, group i's contribution can be decomposed into group-share weighted within-group and between-group effects.

We group parent-child pairs based on the children's educational attainment levels in Table B.2. For illustrative purposes, we also perform a similar decomposition exercise by grouping parent-child pairs according to the children's place of residence. Our estimates and the corresponding formal expressions for each measure are reported in Table D.1. Unlike our previous decomposition, a larger contribution comes from within-group elasticities. This is because dividing our sample into fewer groups results in a smaller between-group effect. The between-group effect increases if the group's mean is higher or lower than the sample means for both generations.

Table D.1: Decomposition of Intergenerational Household Income Elasticity by Rural and Urban Residences

		Male		**Female**	
		Rural	Urban	Rural	Urban
Shares	$\hat{\pi}_i$	0.33	0.67	0.33	0.67
Mean log Earnings of Children	$\overline{y}_{c,i}$	8.59	9.01	8.51	8.95
Mean log Earnings of Fathers	$\overline{y}_{c,i}$	8.39	8.60	8.39	8.59
Pooled *IGE*	$\hat{\beta}$	**0.774**		**0.822**	
Within-Group *IGE*	$\hat{\beta}_i$	0.697	0.686	0.687	0.751
Contribution of Within-Group *IGE*	$\hat{\pi}_i \hat{\beta}_i \frac{\hat{\sigma}^2_{yp,i}}{\hat{\sigma}^2_{yp}}$	0.153	0.491	0.155	0.534
		$\sum$ =0.644		$\sum$ =0.689	
Between-Group effects	$\frac{(\overline{y}_{p,i}-\overline{y}_p)(\overline{y}_{c,i}-\overline{y}_c)}{\hat{\sigma}^2_{yp}}$	0.264	0.064	0.270	0.065
Contribution of Between-Group effects	$\hat{\pi}_i \frac{(\overline{y}_{p,i}-\overline{y}_p)(\overline{y}_{c,i}-\overline{y}_c)}{\hat{\sigma}^2_{yp}}$	0.087	0.043	0.089	0.044
		$\sum$ =0.130		$\sum$ =0.132	
Group-Specific Persistence	$\hat{\pi}_i \left(\hat{\beta}_i \frac{\hat{\sigma}^2_{yp,i}}{\hat{\sigma}^2_{yp}} + \frac{(\overline{y}_{p,i}-\overline{y}_p)(\overline{y}_{c,i}-\overline{y}_c)}{\hat{\sigma}^2_{yp}} \right)$	0.240	0.534	0.244	0.578
		$\sum$ =0.774		$\sum$ =0.822	

References

Akgündüz, Y. E., Bağır, Y. K., Cılasun, S. M., and Kırdar, M. G. (2023). Consequences of a massive refugee influx on firm performance and market structure. *Journal of Development Economics*, 162:103081.

Aktuğ, E., Kuzubaş, T. U., and Torul, O. (2021). Heterogeneity in labor income profiles: evidence from turkey. *Empirical Economics*, 60(5):2557–2587.

Björklund, A. and Jäntti, M. (1997). Intergenerational income mobility in sweden compared to the united states. *The American Economic Review*, 87(5):1009–1018.

Chadwick, L. and Solon, G. (2002). Intergenerational income mobility among daughters. *American Economic Review*, 92(1):335–344.

Chetty, R., Hendren, N., Kline, P., and Saez, E. (2014). Where is the land of opportunity? the geography of intergenerational mobility in the united states. *The Quarterly Journal of Economics*, 129(4):1553–1623.

Dahl, M. and Deleire, T. (2008). The association between children's earnings and fathers ' lifetime earnings: Estimates using administrative data. Discussion Paper 1342-08, Institute for Research on Poverty.

Dearden, L., Machin, S., and Reed, H. (1997). Intergenerational mobility in britain. *The Economic Journal*, 107(440):47–66.

Duman, E. (2021). Intergenerational income mobility in turkey. *Optimum Ekonomi ve Yönetim Bilimleri Dergisi*, 8(2):223 – 238.

Dunn, C. E. (2007). The intergenerational transmission of lifetime earnings: Evidence from brazil. *The B.E. Journal of Economic Analysis & Policy*, 7.

Erikson, R. and Goldthorpe, J. (1992). *The constant flux : a study of class mobility in industrial societies*. Clarendon Press; Oxford University Press.

Erikson, R., Goldthorpe, J. H., and Portocarero, L. (1979). Intergenerational class mobility in three western european societies: England, france and sweden. *The British Journal of Sociology*, 30(4):415–441.

Grawe, N. D. (2004). *Intergenerational mobility for whom? The experience of high- and low-earning sons in international perspective*, pages 58–89. Cambridge University Press.

Hertz, T. (2008). A group-specific measure of intergenerational persistence. *Economics Letters*, 100(3):415–417.

Lefranc and Trannoy (2005). Intergenerational earnings mobility in france: Is france more mobile than the us? *Annales d'Économie et de Statistique*, page 57.

Lefranc, A., Ojima, F., and Yoshida, T. (2014). Intergenerational earnings mobility in japan among sons and daughters: levels and trends. *Journal of Population Economics*, 27:91–134.

Mercan, M. (2012). Intergenerational income mobility in turkey. *İktisat İşletme ve Finans*, 27(318):83–94.

Mercan, M. and Barlin, H. (2016). Intergenerational income elasticity in turkey. *International Journal of Research in Business and Social Science*, 5(3):30–37.

Nevo, A. (2003). Using weights to adjust for sample selection when auxiliary information is available. *Journal of Business & Economic Statistics*, 21(1):43–52.

Nunez, J. I. and Miranda, L. (2010). Intergenerational income mobility in a less-developed, high-inequality context: The case of chile. *The B.E. Journal of Economic Analysis & Policy*, 10(1).

Öztunalı, O. and Torul, O. (2022). The evolution of intergenerational educational mobility in turkey. *Emerging Markets Finance and Trade*, 58(14):4033–4049.

Piraino, P. (2007). Comparable estimates of intergenerational income mobility in italy. *The B.E. Journal of Economic Analysis & Policy*, 7(2).

Tamkoç, M. N. and Torul, O. (2020). Cross-sectional facts for macroeconomists: Wage, income and consumption inequality in turkey. *The Journal of Economic Inequality*, 18(2):239–259.

Tansel, A., Dalgıç, B., and Güven, A. (2019). Wage Inequality and Wage Mobility in Turkey. *Social Indicators Research*, 142:107–129.