

# Decomposing Gaps between Roma and non-Roma in Romania

## ONLINE APPENDIX

*By* CHRISTOPHER RAUH\*

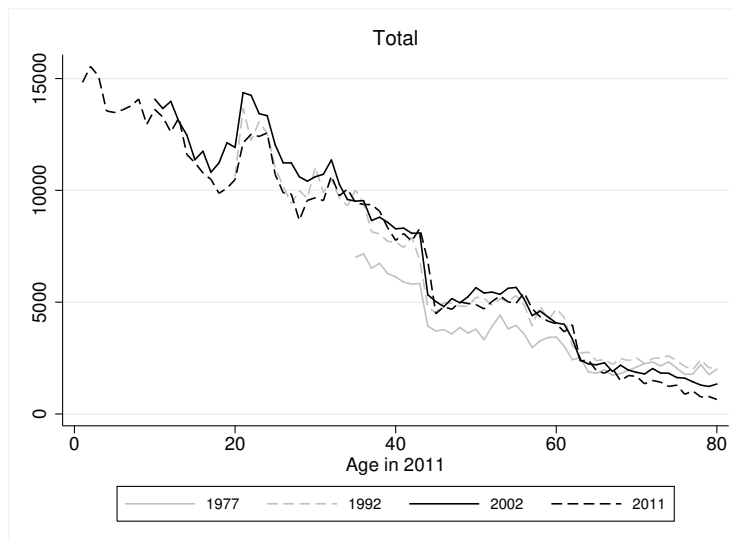
Draft: September 21, 2017

\* Université de Montréal, Department of Economics ([christopher.rauh@umontreal.ca](mailto:christopher.rauh@umontreal.ca)).

## A. Consistent self-reporting

One common concern about survey responses by Roma is a selection bias in terms of self-reporting. While the data allows little insight into whether there is systematic underreporting, it does allow us to look at whether reporting is consistent across time. In Figure A.1 I plot the aggregate weighted number of observations of Roma by their hypothetical age in 2011 for each survey. Except for the 1977 census (gray solid line), all lines track each other closely suggesting that reporting is constant across the 1992, 2002, and 2011 survey.

Figure A.1. : Aggregate number of Roma across surveys



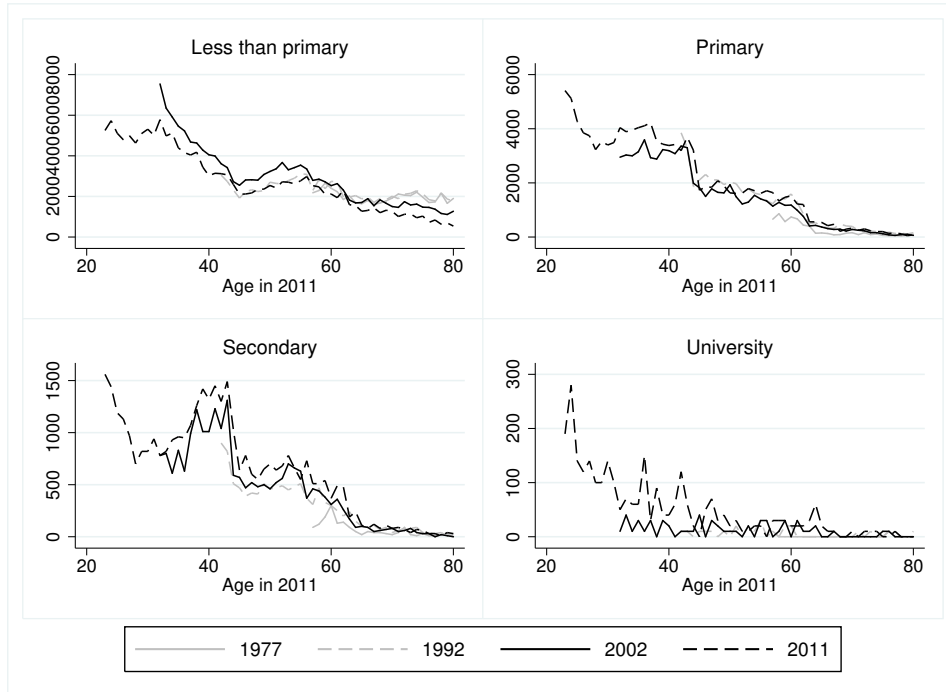
Datasource: IPUMS International.

Notes: *Age in 2011* is computed by adding the requisite number of years to their respective age in each survey (e.g. 19 years are added if the survey took place in 1992).

Another concern might be that the composition of respondents changes over time. In order to alleviate this concern, in Figure A.2 I plot the weighted number of observations of Roma by level of educational attainment by their hypothetical age in 2011 for each survey. Here I restrict the sample to respondents above the age of 22 in each survey. With the exception of those with completed university, a negligible small amount of people, the lines track each

other closely.

Figure A.2. : Aggregate number of Roma by level of education across surveys



Datasource: IPUMS International.

Notes: The samples are restricted to individuals above the age of 22. *Age in 2011* is computed by adding the requisite number of years to their respective age in each survey (e.g. 19 years are added if the survey took place in 1992).

Overall, the figures suggest that reporting has remained relatively stable across the surveys.

## B. Tables and Figures

Table B.1—: Descriptive statistics of sample by ethnicity

	1977		1992		2002		2011	
	Other	Roma	Other	Roma	Other	Roma	Other	Roma
Age	37.75	26.93	35.11	23.46	37.78	24.2	40.64	26.63
Number of children	.73	1.04	.72	1.04	.66	.98	.53	.9
Immigrant	.01	.00	.01	.00	.01	.00	.01	.00
Urban	.45	.31	.54	.41	.53	.38	.54	.36
Married	.57	.43	.56	.39	.54	.23	.57	.45
Married to Roma	.0002	.970	.0006	.929	.0010	.925	.0013	.931
<i>Labor market</i>								
Employed			.43	.21	.37	.17	.51	.30
Unemployed			.08	.27	.12	.29	.07	.22
Not in labor force			.54	.71	.58	.77	.45	.62
<i>Conditional on employment</i>								
Hours worked					41.09	34.88	39.32	36.27
Wage/salary worker			.80	.65	.71	.34	.7	.44
Unpaid worker			.02	.04	.15	.21	.12	.27
Self-employed			.18	.31	.13	.31	.18	.27
<i>Education</i>								
Less than primary	.50	.87	.29	.65	.24	.69	.16	.54
Completed primary	.26	.11	.31	.29	.28	.24	.27	.36
Completed secondary	.22	.02	.34	.06	.41	.07	.42	.09
University graduate	.03	.00	.05	.00	.07	.00	.14	.01
Literate	.95	.74	.97	.78	.98	.74	.99	.86
Observations	1917305	19716	2198981	39597	2085348	52619	1930523	61401

Datasource:

IPUMS

International.

Notes: *Married to Roma* are the share of household heads married to Roma conditional on being married.

Table B.2—: Descriptive statistics of Roma in sample by gender

	1977		1992		2002		2011	
	Male	Female	Male	Female	Male	Female	Male	Female
Age	25.94	27.93	22.63	24.28	23.6	24.8	26.07	27.2
Number of children	.99	1.08	.98	1.09	.91	1.05	.84	.95
Immigrant	.00	.00	.00	.00	.00	.00	.00	.00
Urban	.31	.3	.41	.42	.38	.39	.36	.36
Married	.42	.44	.38	.4	.23	.24	.44	.47
<i>Labor market</i>								
Employed			.28	.14	.23	.10	.37	.23
Unemployed			.29	.24	.31	.25	.21	.24
Not in labor force			.60	.82	.67	.86	.54	.69
<i>Conditional on employment</i>								
Hours worked					35.11	34.38	36.26	36.27
Wage/salary worker			.80	.65	.71	.34	.70	.44
Unpaid worker			.02	.04	.15	.21	.12	.27
Self-employed			.18	.31	.13	.31	.18	.27
<i>Education</i>								
Less than primary	.83	.90	.59	.71	.64	.73	.50	.58
Completed primary	.13	.09	.32	.26	.26	.22	.38	.34
Completed secondary	.04	.01	.08	.03	.09	.04	.12	.07
University graduate	.00	.00	.00	.00	.00	.00	.01	.01
Literate	.82	.66	.84	.72	.79	.68	.89	.83
Observations	9875	9841	19809	19788	26363	26256	31091	30310

Datasource:

IPUMS

International.

Notes: *Number of children* refers to own children in household. The discrepancy in the mean of own children living in the same household between males and females stems from the fact that many teenage mothers live with their biological family without the father of their child (e.g. in 2011 47% of children with mothers aged 18 or younger lived without their biological father).

Table B.3—: Linear regression estimating fertility rates by ethnicity

Dependent variable: Number of live births per female	
	(1)
Roma	1.141*** (0.020)
Urban	-0.496*** (0.005)
Literate	-0.230*** (0.009)
<i>Education completed</i>	
Primary	-0.323*** (0.005)
Secondary	-0.830*** (0.007)
Tertiary	-1.086*** (0.010)
County FE	Yes
Cohort FE	Yes
Sample FE	Yes
Observations	1867746
R <sup>2</sup>	0.067

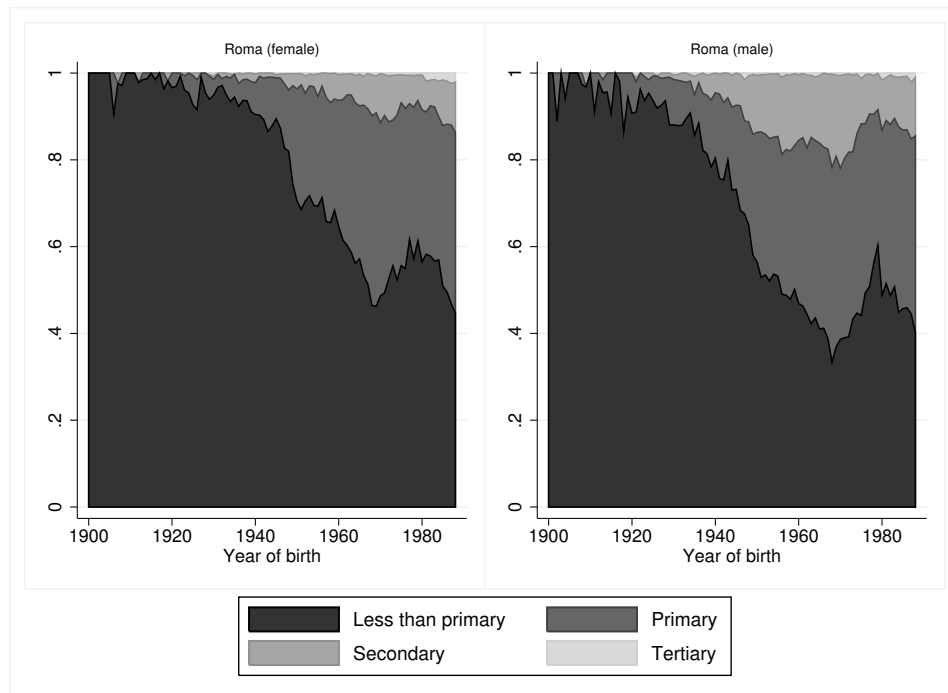
Datasource:

IPUMS

International.

Notes: Robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The estimation technique is OLS. Reported coefficients are marginal effects. The sample is restricted to females above the age 40.

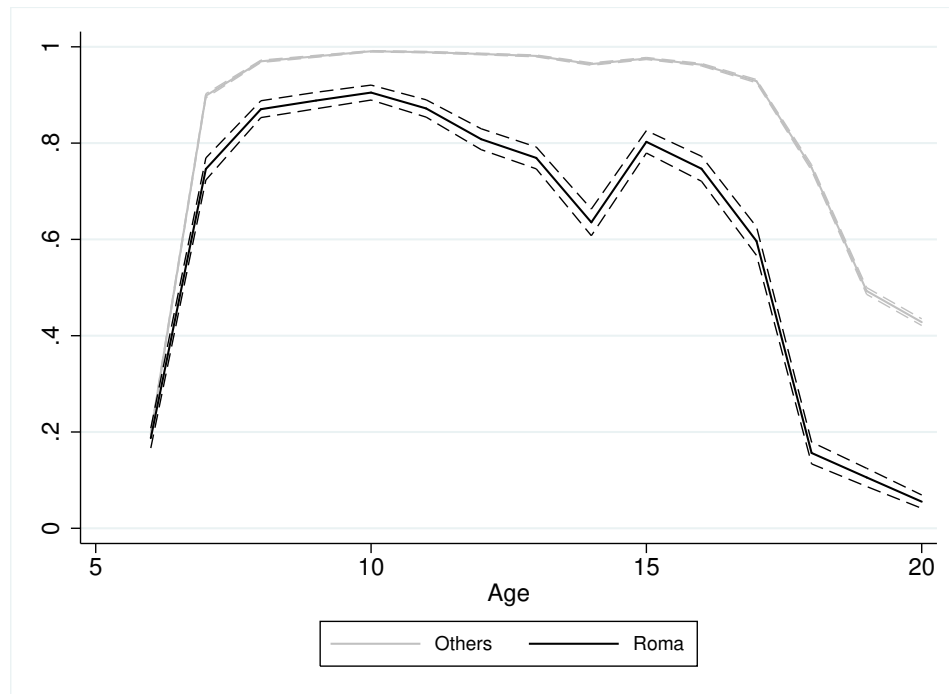
Figure B.1. : Highest level of education of male and female Roma by year of birth



Datasource: IPUMS International.

Note: Only individuals above the age of 22 are included.

Figure B.2. : School attendance by age and ethnicity in 2011

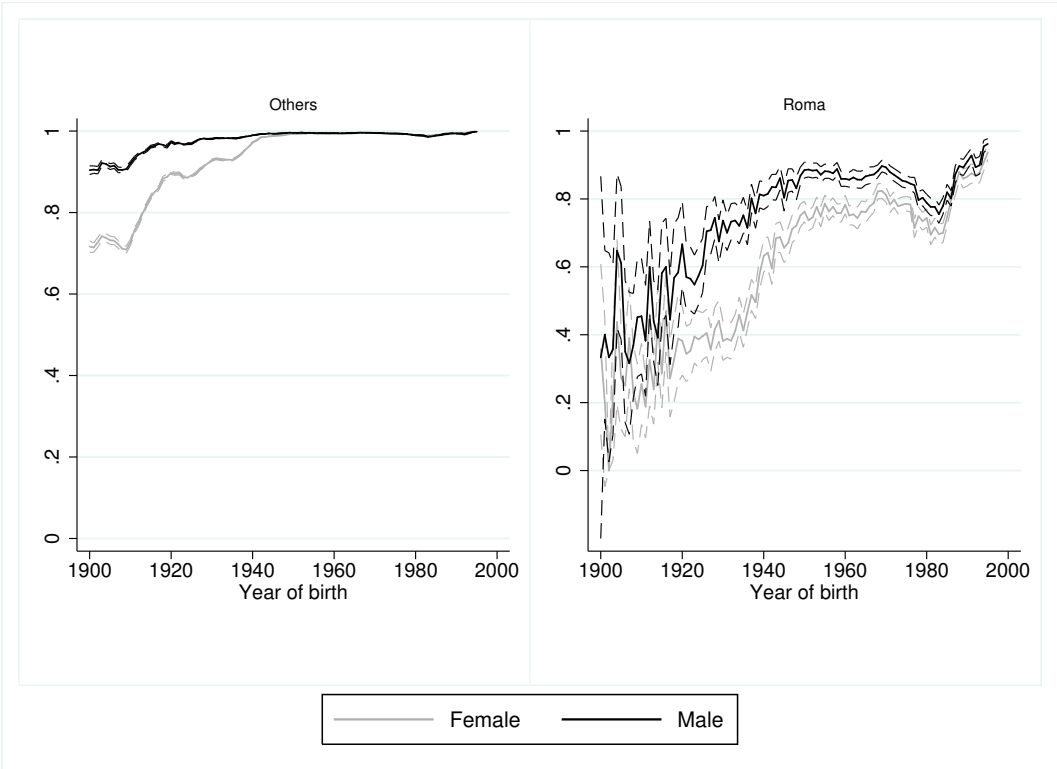


Datasource: IPUMS International.

Notes: This figure shows the share of the population attending school at ages 6-20. The dashed lines represent the 95% confidence interval.

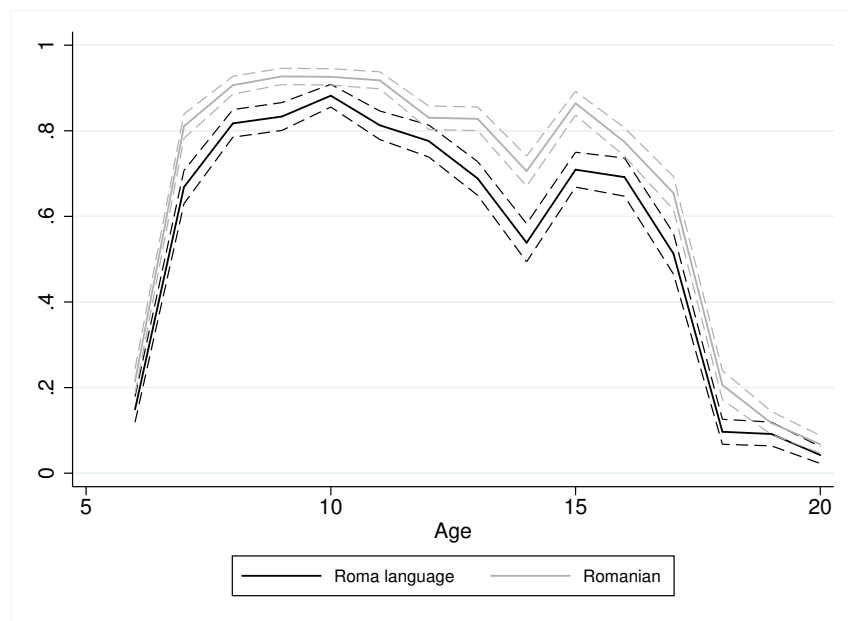


Figure B.3. : Literacy rates by year of birth, ethnicity, and gender



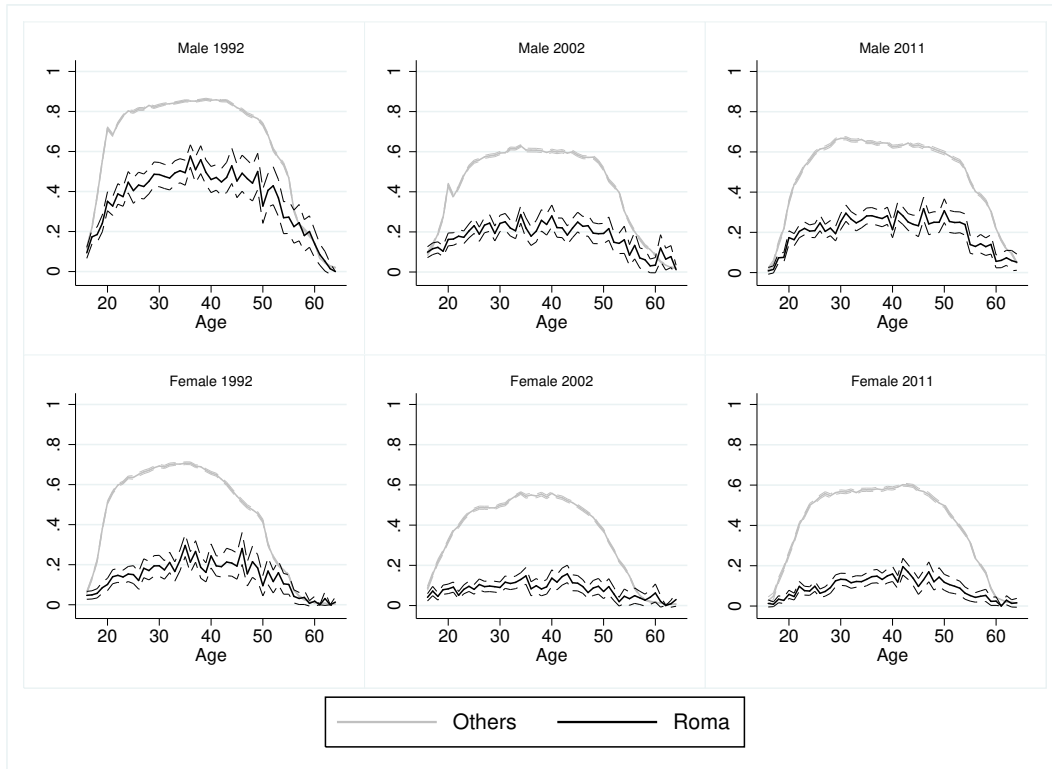
Datasource: IPUMS International.

Figure B.4. : School attendance of Roma by mother tongue in 2011



Datasource: IPUMS International.

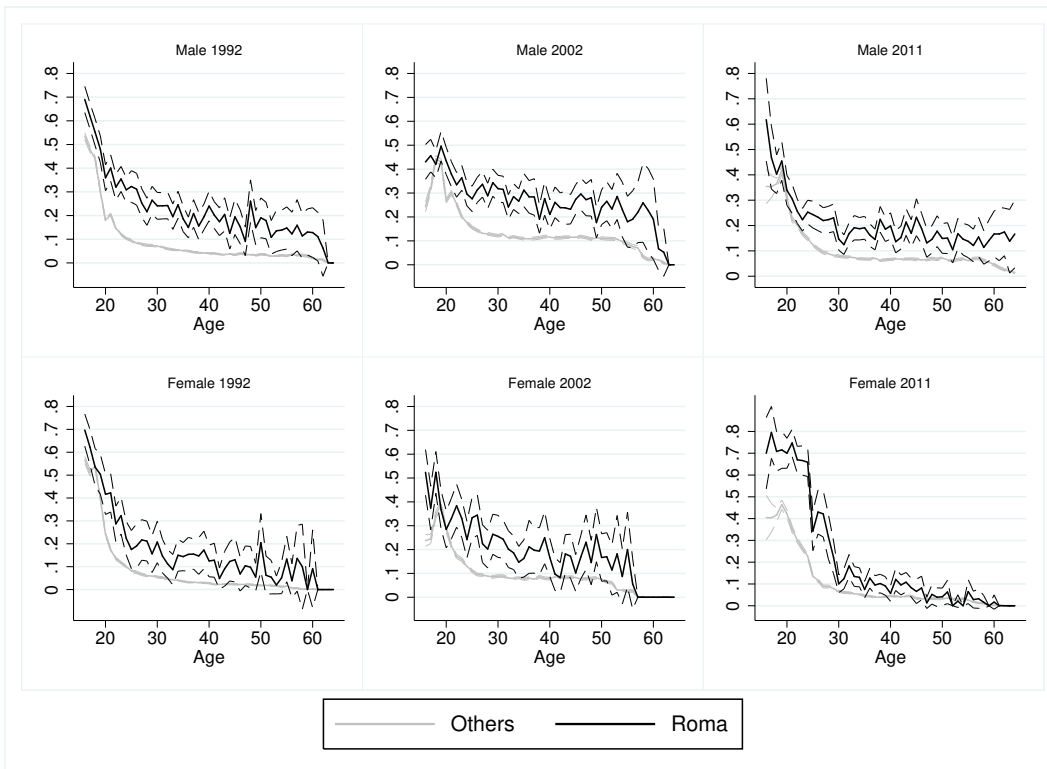
Figure B.5. : Salary/wage employment rates by age, ethnicity, gender, and year



Datasource: IPUMS International.

Notes: The dashed lines represent the 95% confidence interval. The sample includes all individuals aged 16-64 not enrolled in education.

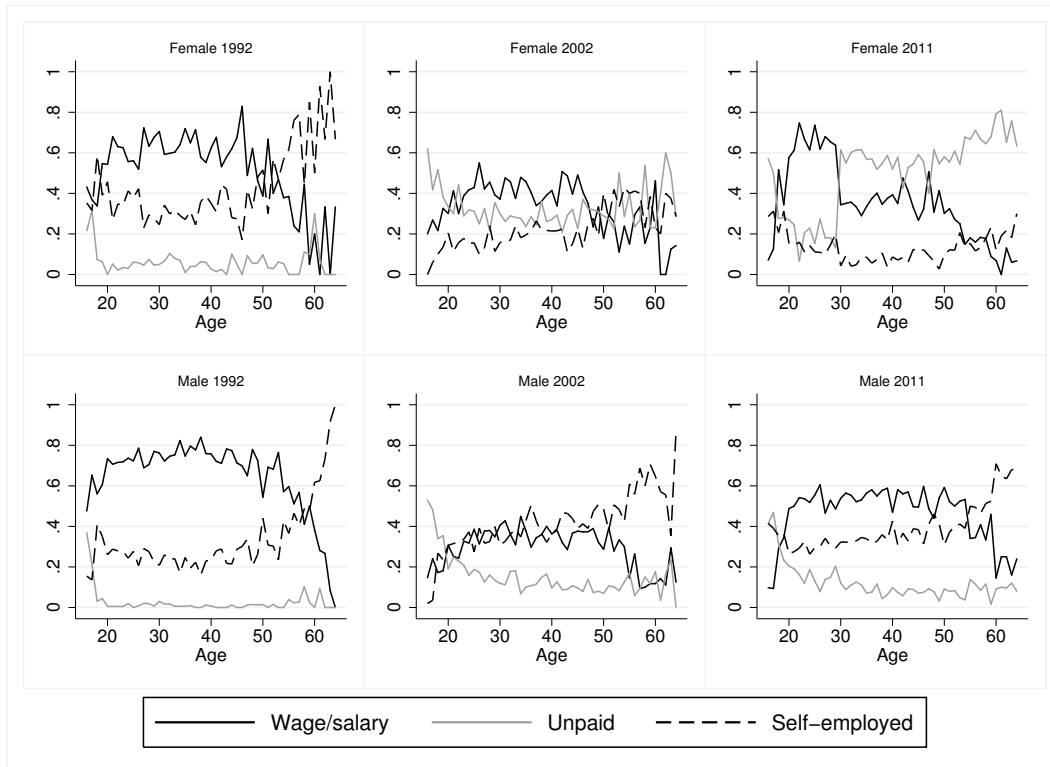
Figure B.6. : Unemployment rates by age, ethnicity, gender, and year



Datasource: IPUMS International.

Notes: The dashed lines represent the 95% confidence interval. The sample includes all individuals aged 16-64 not enrolled in education.

Figure B.7. : Type of employment by age, gender, and year of employed Roma



Datasource: IPUMS International.

Notes: The sample includes all employed Roma aged 16-64 not enrolled in education.