Linear trends in intergenerational transmission of the social position in Italy during the XX century

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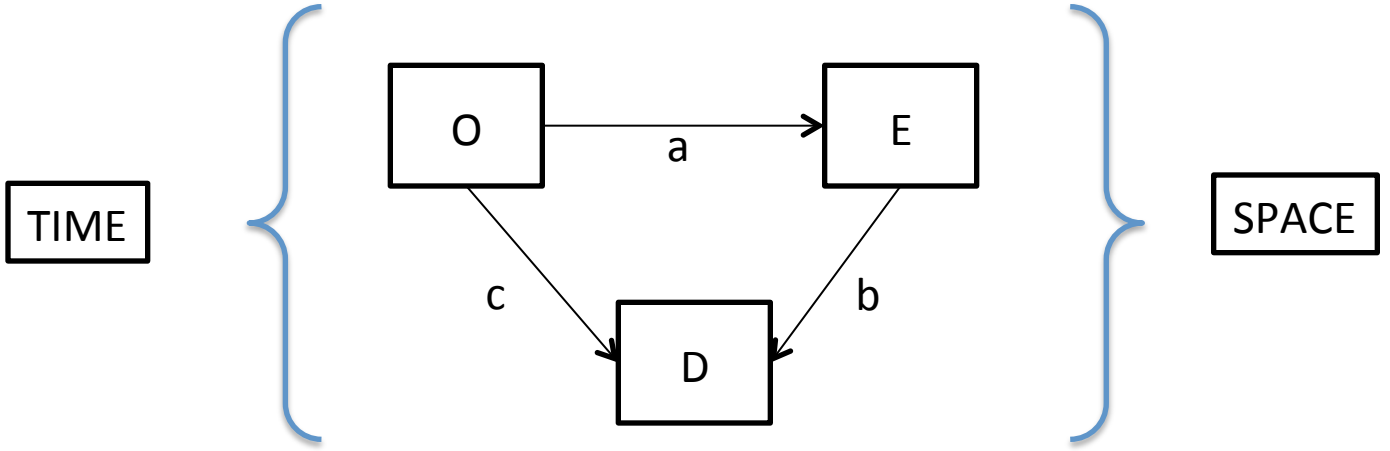
Presentation structure

- Topic
- Existing evidence
- Research questions
- Data and variables
- Models and Results
- Conclusions

Topic

The presentation focuses on the analysis of the long-term trends in the Italian intergenerational social mobility following the OED triangle decomposition (Erikson & Jonsson, 1998).

1. O-E relationship (*IEOut*) [a]
2. E–D |O relationship (net return to education) [b]
3. O-D|E relationship (*net O-D immobility*) [c]
4. O-D relationship (overall transmission of the social position) [a+b*c]



Existing evidence – Time

1. O-E
   - Decreasing IEOut due to the effect of educational expansion process (Ballarino, Scherer 2013) decreasing school selectivity and increasing parental employment security (Ballarino et al. 2008)

2. E–D |O
   - Increasing inequalities in return to education, due to the inflation of educational credentials (Ballarino, Scherer 2013)

3. O-D|E
   - No change over time (Ballarino, Barone, Panichella 2014)

4. O-D
   - Modest but significant decrease over time (Pisati, Schizzerotto 2004).

Existing evidence – Space

Despite the substantive economical heterogeneity Italian geographical differentiation has not met the interest of many social stratification scholars.

1. O-E
   - Persisting inequalities in the South while decreasing inequalities in the North (Ballarino, Panichella, Triventi 2014)
2. E–D |O
   - No difference between North and South (Cobalti, Schizzerotto 1994)
3. O-D |E
   - No difference between North and South (Cobalti, Schizzerotto 1994)
4. O-D
   - No difference between North and South (Cobalti, Schizzerotto 1994)

Research questions

1. Are there significant historical changes in the 4 relationships within the OED triangle during the XX century for Italy?

2. Are any differences between women and men?

3. Does the 'methodological nationalism' *(Ballarino, Barone Panichella 2014)* assumption stand for Italy?

Data and methods in social stratification research

- In social mobility studies theory and methods are entwined: any substantive issue has a methodological counterpart.
- The choices concerning the data used, the operationalization and selection of relevant variables, the statistical techniques, all have a potential impact on results.

"*The rather unclear picture of the trend in inequality in Italy and Ireland may be due to the small sample size in these two cases*" (Breen et al. 2004, p. 1513)

- Data specifically suited for social mobility and stratification analysis are scarce in Italy, however a good number of surveys is available since the Sixties, which very few studies used.

ISMF overview

- An extended database for Italy has already been built and used by Meraviglia and Ganzeboom (2008) as part of the ISMF
  - The ISMF (International Stratification and Mobility File) is a collection of harmonized sample survey data with information on social stratification and social mobility, in particular respondent's and parents' social status (education, occupation)
  - The data set is created and maintained by Harry B.G. Ganzeboom at *VU University Amsterdam*, in collaboration with Donald J. Treiman and Elizabeth Stephenson (University of California-Los Angeles)
- In the case of Italy, the harmonized surveys dates from 1963 to 2012 covering individuals born from 1885 to 1986 (≥ 26 y-old).
- Overall, ISMF for Italy includes today 39 harmonized datasets and circa 500.000 individual cases.

Data

Dataset	Producer
Social mobility in Italy Survey 1963	Lopreato
Italian mass election survey 1968	Barnes
Italian mass election survey 1972	Barnes and Sani
Political Action Project 1975	Barges and Kaase
National Social Mobility Survey 1985	Barbagli et al.
Social Inequality (ISSP) 1987	Issp
ITANES - National Election Survey 1990	Istituto Cattaneo
Social inequality II (ISSP) 1992	Issp
Italian Longitudinal Household Survey (ILFI) 1997	Schizzerotto
International Adult Literacy Survey (IALS) 1998	Statistics Canada and OECD
Multiscopo Istat 1998	Istat
ITANES - National Election Survey 2001	Istituto Cattaneo
ITANES - National Election Survey 2002	Istituto Cattaneo
Multiscopo Istat 2003	Istat
European Social Survey (ESS) 2003	Ess
ITANES - National Election Survey 2004	Istituto Cattaneo
National Barometer (ONO) II 2005	Ricolfi
Survey on Occupational Prestige in Italy 2005	Meraviglia
Isfol Plus 2006	Isfol - Istat
European Social Survey (ESS) 2006	Ess
ITANES - National Election Survey 2006	Istituto Cattaneo
Religion III (ISSP) 2008	Issp
Isfol Plus 2008	Isfol - Istat
European Values Study (EVS) 2008	Evs
Social Inequality III (ISSP) 2009	Issp
Multiscopo Istat 2009	Istat
Isfol Plus 2010	Isfol - Istat
Health I (ISSP) 2011	Issp
PIAAC 2012	OECD

- 29 datasets in the analysis
- Pooled sample size ≅ 300.000 cases

- Selection criteria:
  - women and men
  - age between 26 and 64

- Cases are weighted in order to correct for sample selection

- 8 studies (in red) with more than *4000* cases

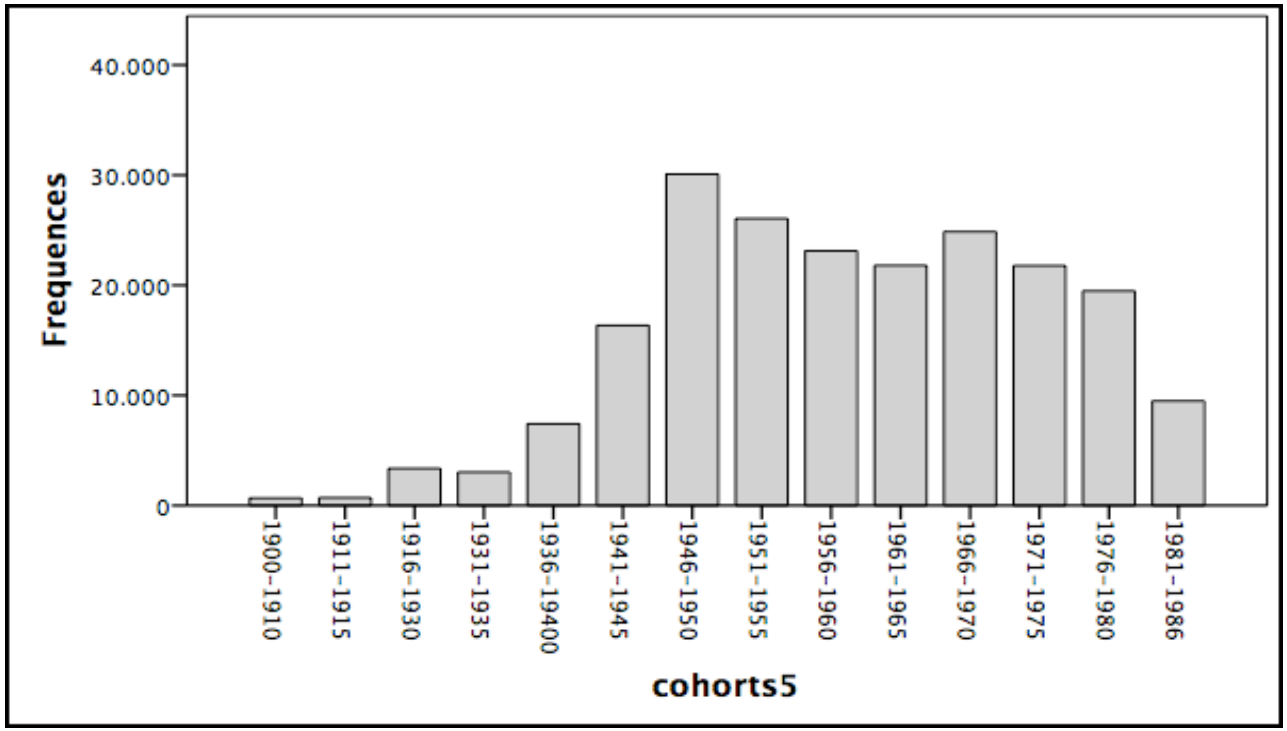
- Total pooled weighted sample after case selection: *214.870 cases*

Origin, Destination and Education

- Origin and Destination are measured as socio-economic status via ISCO-88 code.
  - ISCO-88 (R/M/F) have been translated into ISEI scores and corrected with self-employment status, number of supervised workers / number of employees.
  - Dominance procedure has been used to account for both mothers' and fathers' information
- Education is measured as years of education

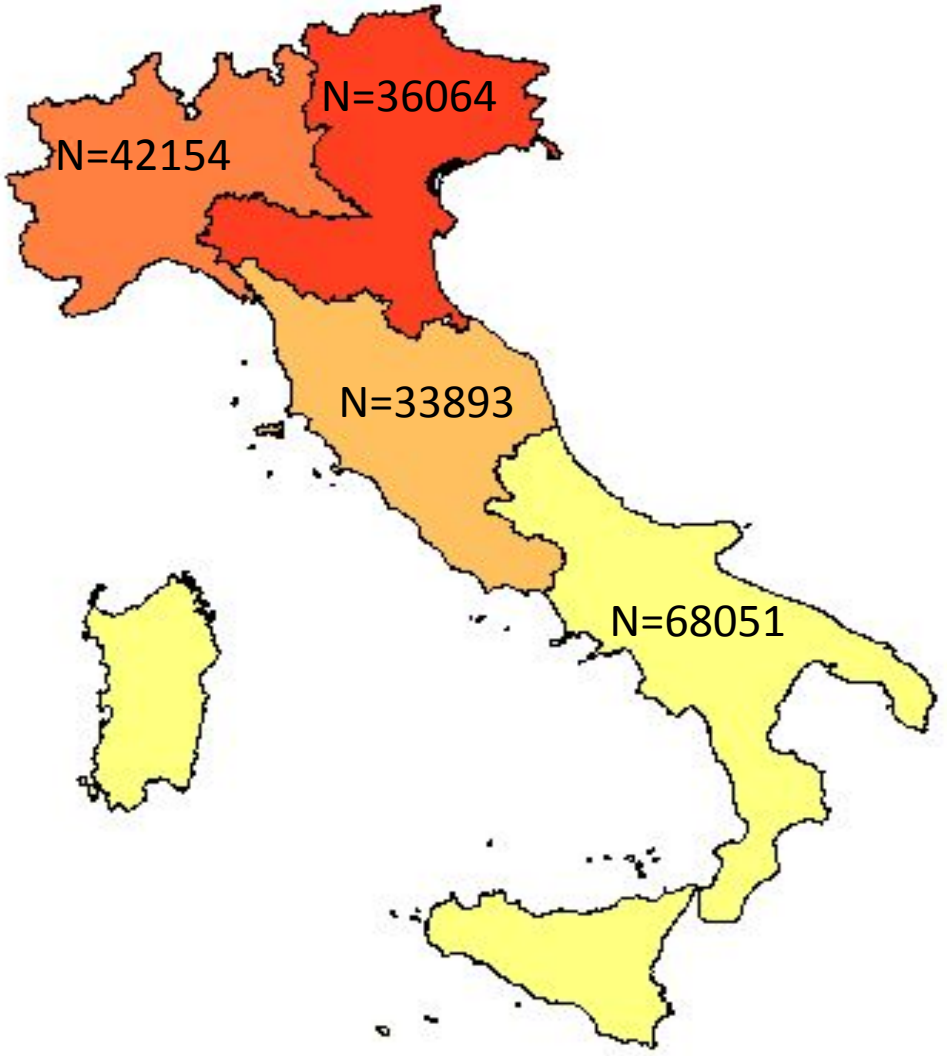
Time

- Time is measured as:
  - Birth cohorts 5-years wide (14 dummies) – cohorts model
  - Birth year, centered on 1955 - linear trends model



Space

Region	area4
Piemonte	North-west
Valle d'Aosta	North-west
Liguria	North-west
Lombardia	North-west
Trentino Alto Adige	North-East
Veneto	North-East
Friuli Venezia Giulia	North-East
Emilia Romagna	North-East
Toscana	Central
Umbria	Central
Marche	Central
Lazio	Central
Sardegna	South and Islands
Abruzzo	South and Islands
Molise	South and Islands
Campania	South and Islands
Puglia	South and Islands
Basilicata	South and Islands
Calabria	South and Islands
Sicilia	South and Islands



Control variables

- Gender: male (104083 cases) and female (104061 cases)

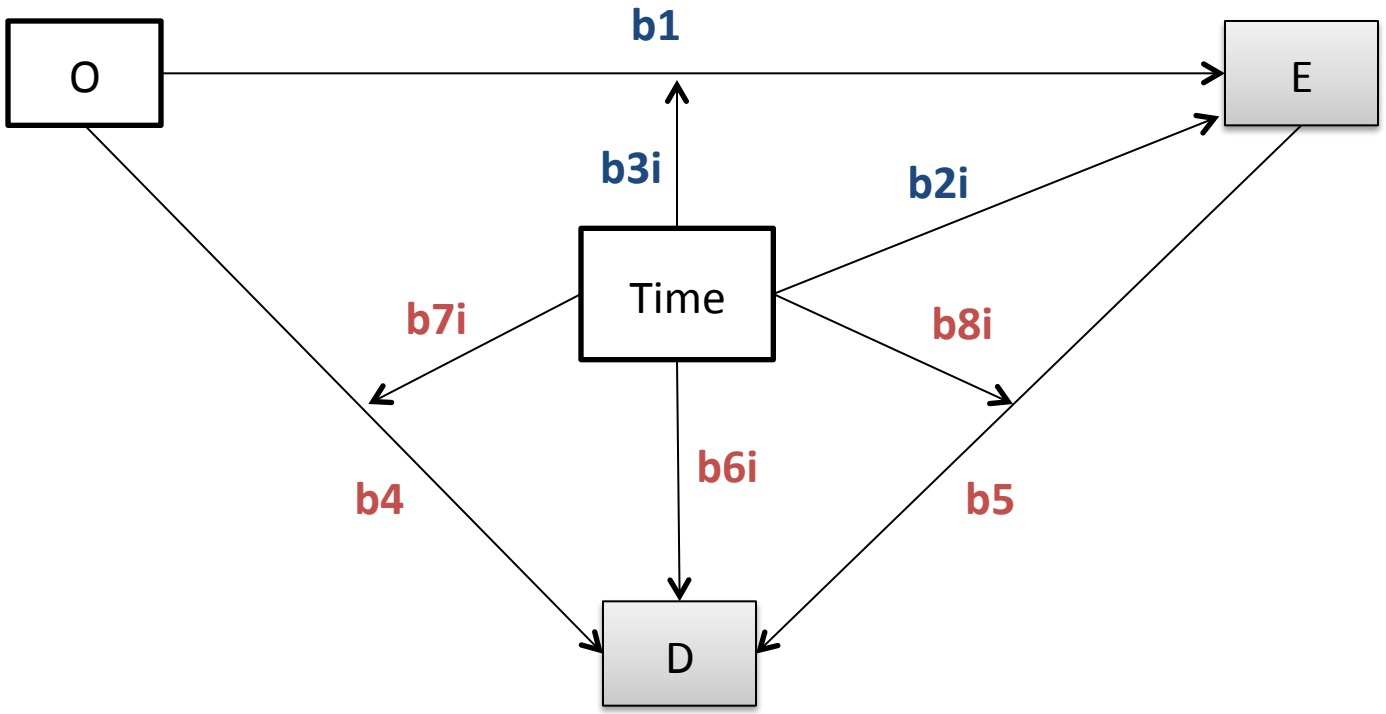
- Career is measured as:
  - The number of years that the respondent has been in the labour market

career [0-35] = age – 6 – educyr

- For taking into account the size of the 8 ‘Big studies’ (more than 2% of the total weighted cases), dummy variables are used

Cohorts model

Path diagram



Effect matrix

Effect / Cause	FMISEI	EDU	TIME	TIME * FMISEI	TIME * EDU
EDU	b1	-	b2i	b3i	-
ISEI	b4	b5	b6i	b7i	b8i

Regression equations – cohorts model

- $EDUCYR = b_{0e} + b_1*fmisei + b_{2i}*cohorts5 + b_{3i}*fmisei*cohorts5 + b_{10i}*bigstudies + b_{11i}*bigstudies*fmisei$

- $ISEI = b_{0o} + b_4*fmisei + b_5*educyr + b_{6i}*cohorts5 + b_{7i}*fmisei*cohorts5 + b_{8i}*educyr*cohorts5 + b_{20i}*bigstudies + b_{21i}*bigstudies*fmisei + b_{22i}*bigstudies*educyr + b_{23}*esp + b_{24i}*esp*cohorts5$

Education cohorts model

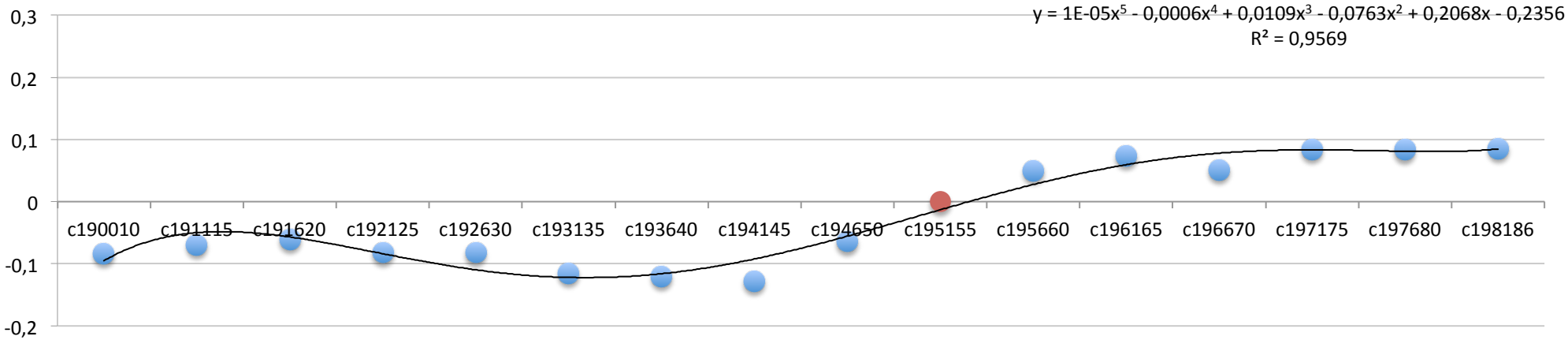
- Weighted OLS regression
- Reference category:
  c195155, fmisei_c195155
- R2 adjusted
  - Men 0,266
  - Women 0,356
- standardized coefficients

Occupation cohorts model

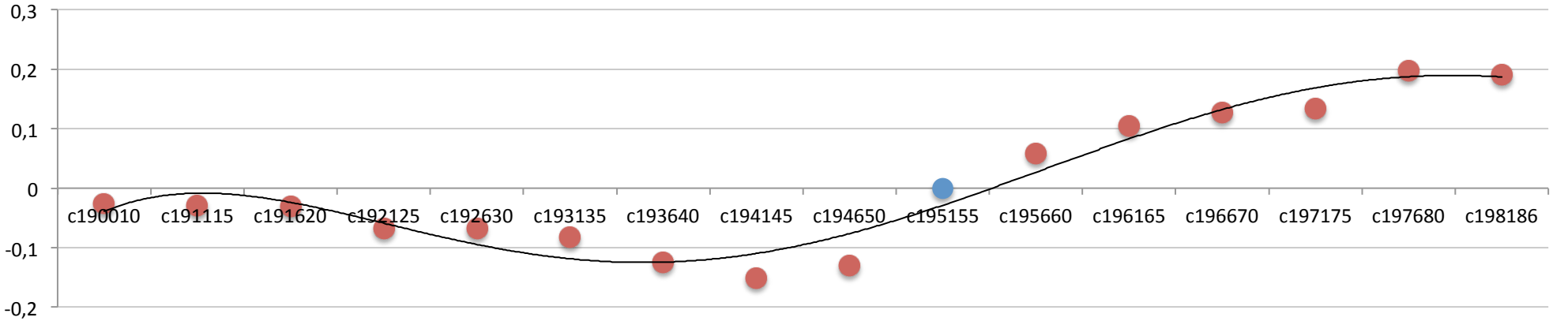
- Weighted OLS regression
- Reference category:
  c195155, fmisei_c195155, educyr_c195155,
- R2 adjusted
  - Men 0,392
  - Women 0,375
- standardized coefficients

Trends in Education

Net time change in years of education (men)

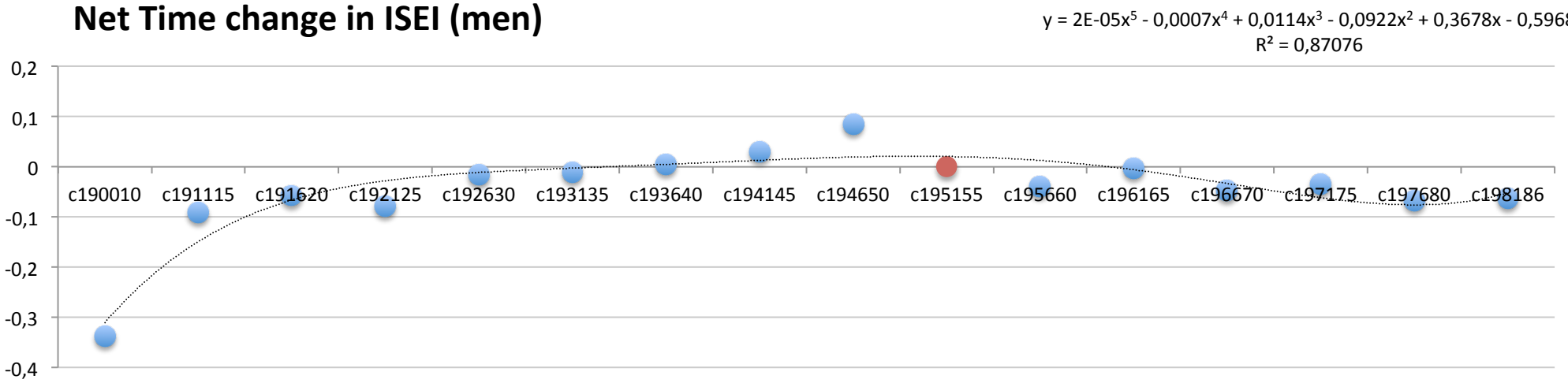


Net time change in years of education (women)

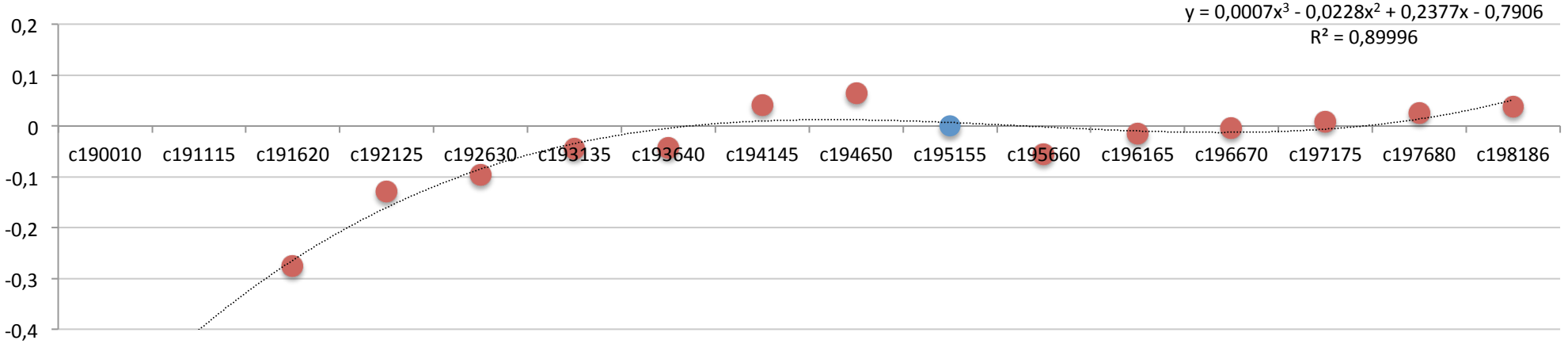


Trends in Occupation

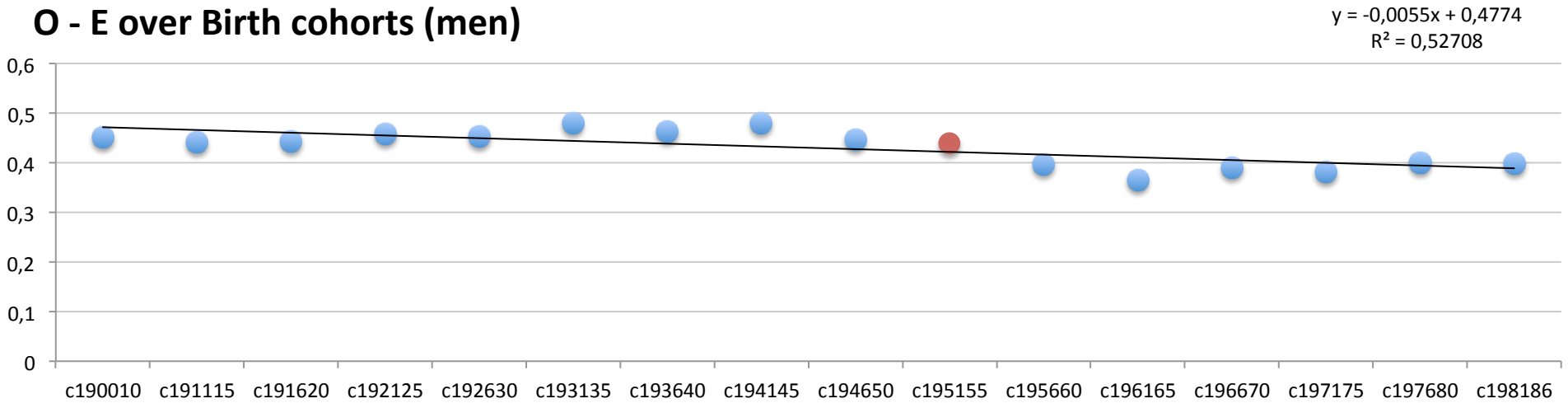
Net Time change in ISEI (men)

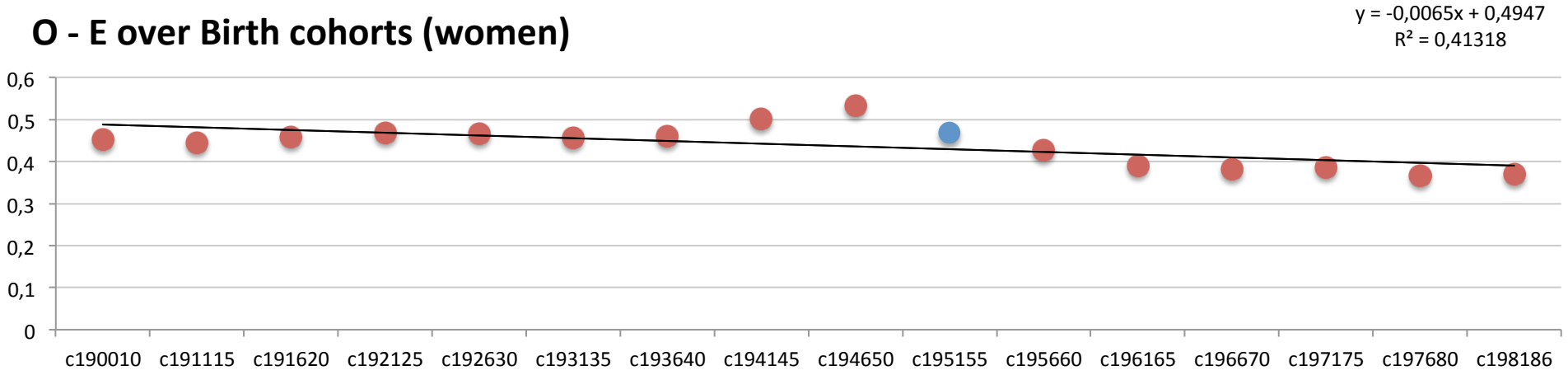


Net Time change in ISEI (women)

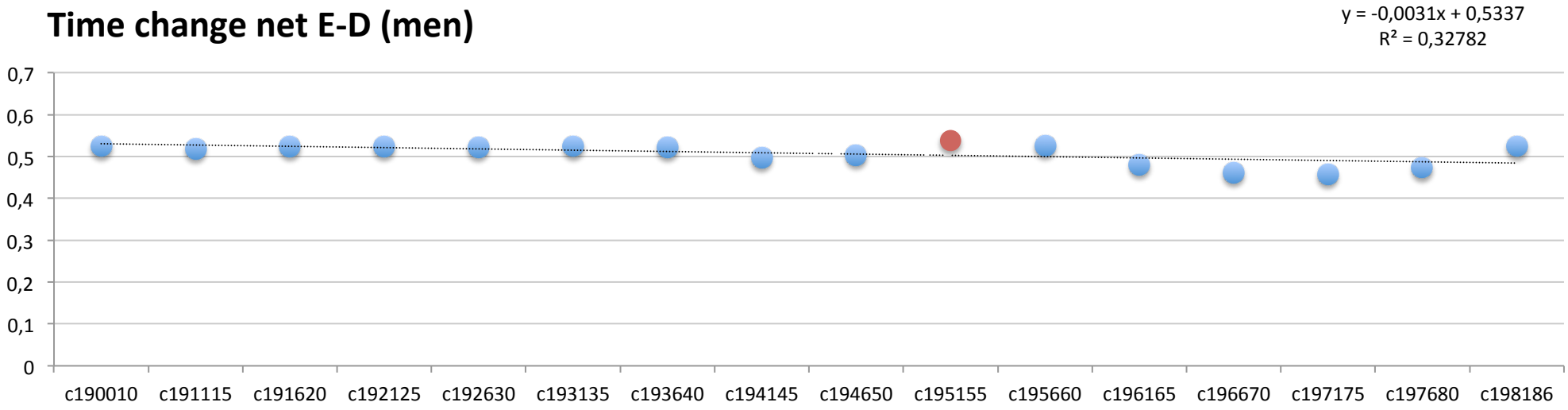


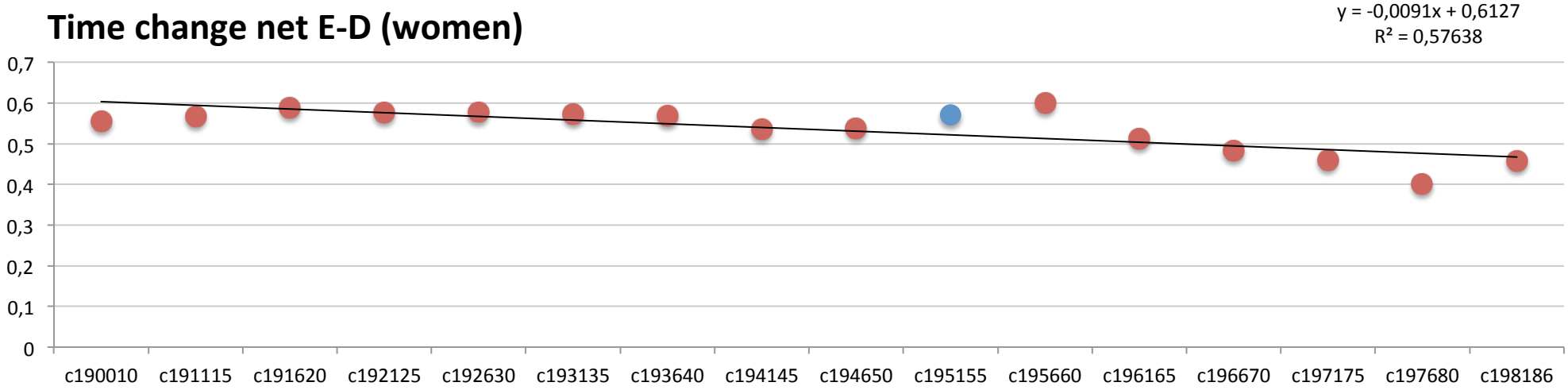
Trends in IEO



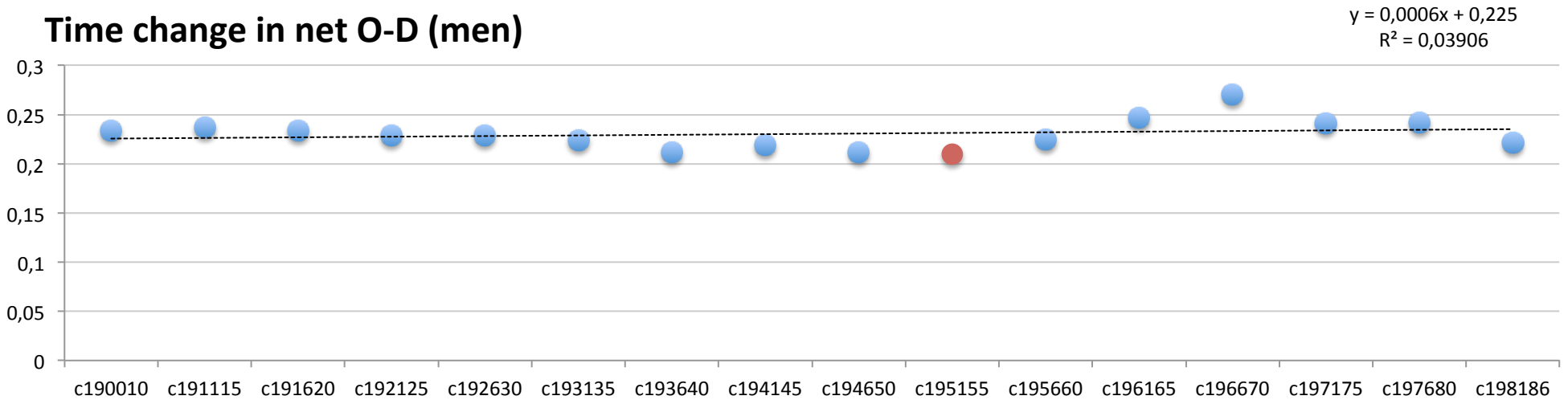


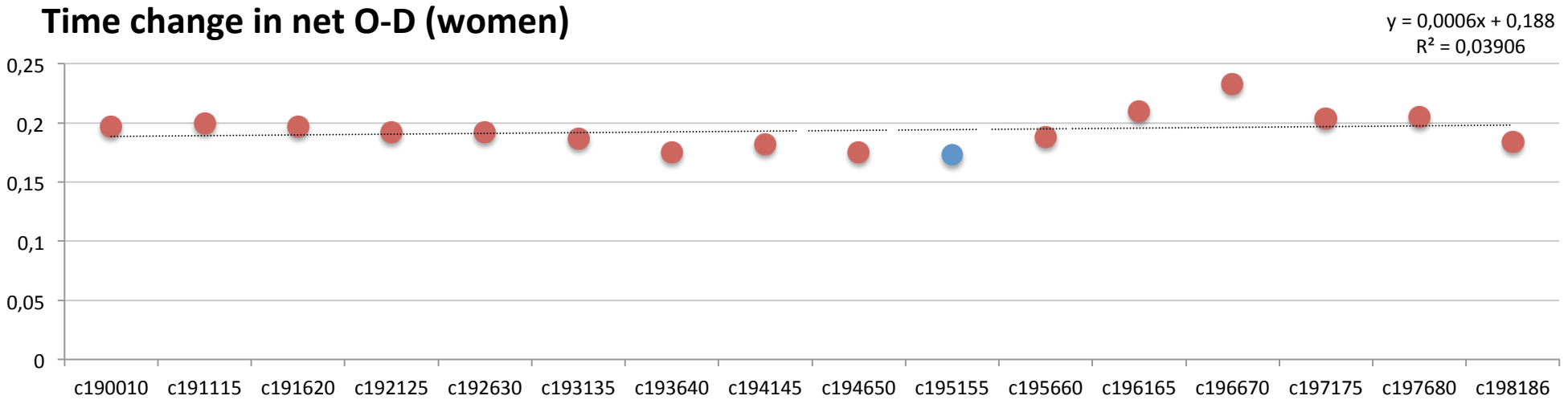
Trends in returns-to-education



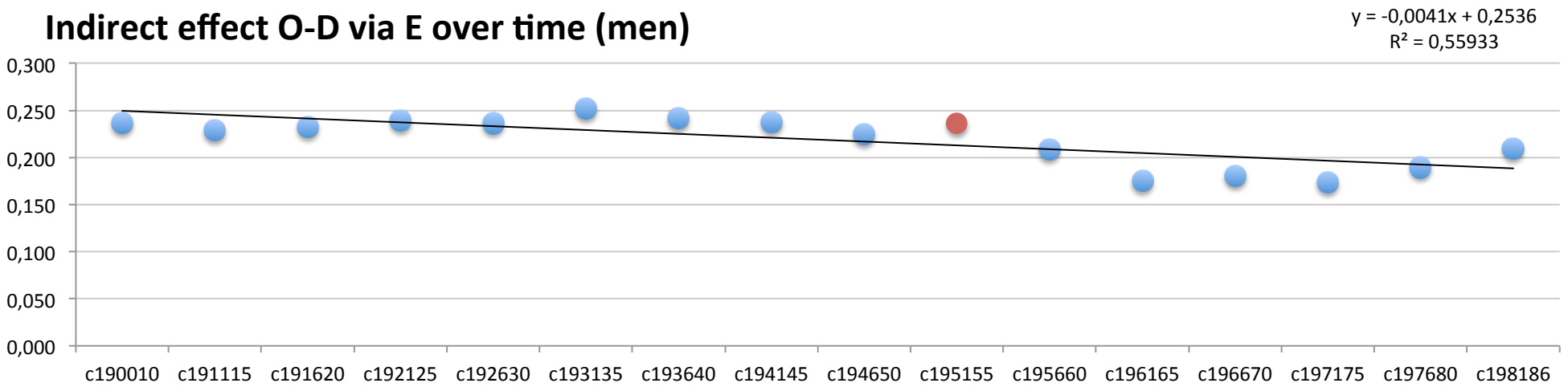


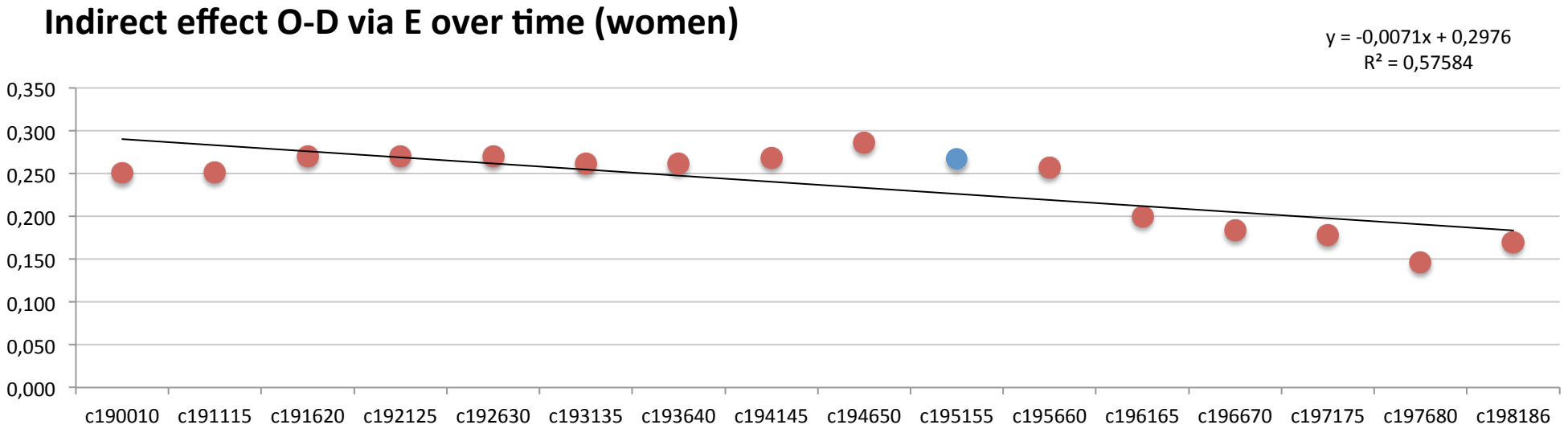
Trends of net O-D relation



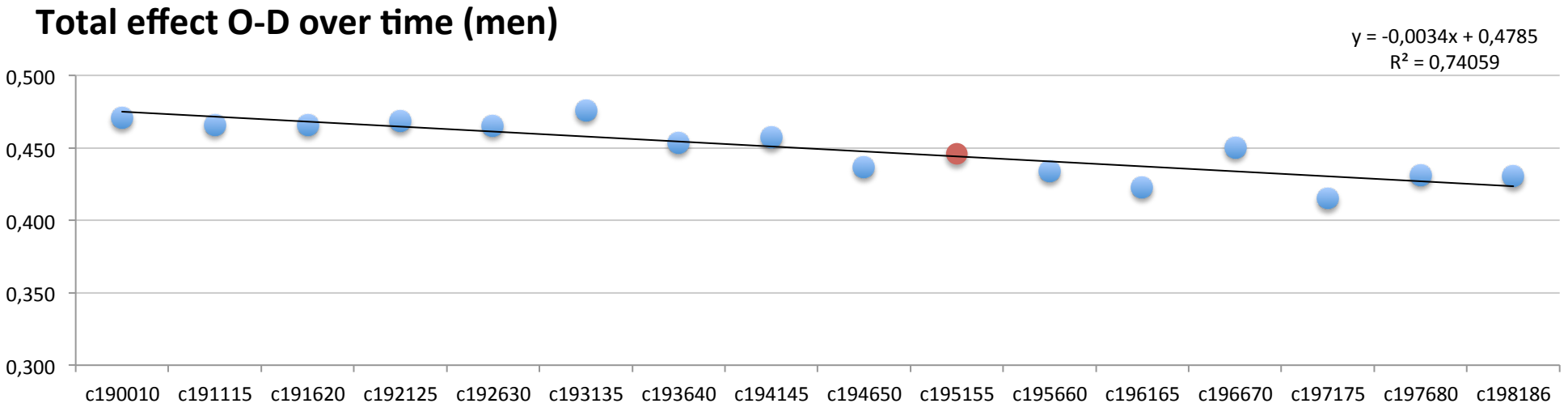


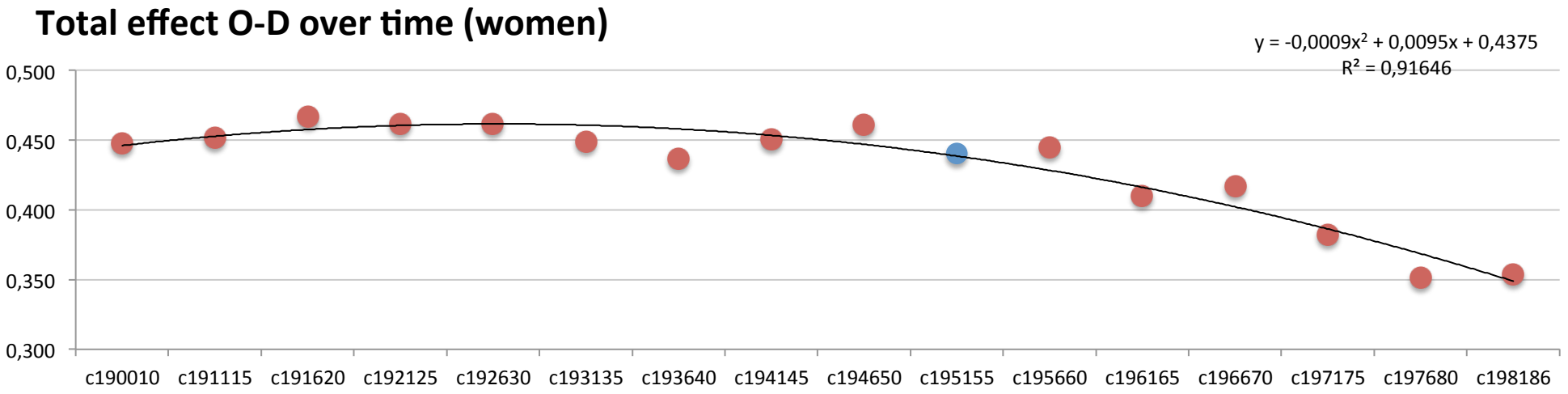
O-D indirect via E effect over time



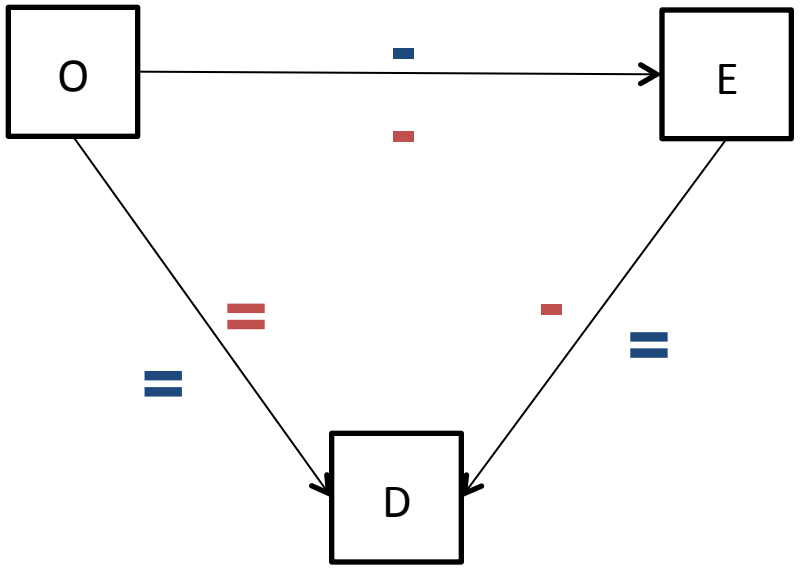


O-D total effect over time





Trends 1900-1986



Time-trends	Men	Women
Direct OE	decline	decline
Direct ED	no change	decline
Direct OD	no change	no change
Indirect OD via E	decline	decline
Total OD	decline	decline

Men in blue and women in red

Linear trends O-E regression equation

$$EDUCYR = b_{0e} + b_1*fmisei + b_2*birth\_c + b_3*fmisei*birth\_c$$

$$+$$

$$b_4*\underline{female} + b_5*\ fmisei*female\ + b_6*\ birth\_c*female + b_7*fmisei*birth\_c*female$$

$$+$$

$$b_{8i}*\underline{area4} + b_{9i}*area4*female + b_{10i}*area4*fmisei + b_{11i}*area4*birth + b_{12i}*area4*fmisei*female\ + b_{13i}*area4*fmisei*birth\_c + b_{14i}*area4*fmisei*birth\_c*female$$

$$+$$

$$b_{15i}*bigstudies + b_{16i}*bigstudies*fmisei$$

Linear trends OED regression equation

$$ISEI = b_{0e} + b_1*fmisei + b_2*birth\_c + b_3*fmisei*birth\_c + b_4*educyr + b_5*educyr*birth\_c$$

+

$$b_6*\underline{female} + b_7*\ fmisei*female\ + b_8*\ birth\_c*female + \ b_9*educyr*female + b_{10}*fmisei*birth\_c*female + b_{11}*educyr*birth\_c*female$$

+

$$b_{12i}*\underline{area4} + b_{13i}*area4*female + b_{14i}*area4*fmisei + b_{15i}*area4*birth + b_{16i}*area4*educyr + b_{17i}*area4*educyr*female + b_{18i}*area4*fmisei*female\ + b_{19i}*area4*fmisei*birth\_c + b_{20i}*area4*fmisei*birth\_c*female + b_{21i}*area4*educyr*birth\_c + b_{22i}*area4*educyr*birth\_c*female$$

+

$$b_{23i}*bigstudies + b_{24i}*bigstudies*fmisei + b_{25*}esp + b_{26}*esp*fmisei + b_{27}*esp*educyr$$

Linear Trends O-E

R2 education model = 0,313	O-E (1955)		O-E Linear Trends (1900-1986)	
Standardized coefficients	Male	Female	Male	Female
North West	0,428	0,428	-0,143	-0,143
North East	0,400	0,400	-0,143	-0,143
Center	0,428	0,458	-0,186	-0,186
South	0,392	0,453	-0,167	-0,208

Linear Trends E-D|O

R2 occupation model = 0,392	E-D|O (1955)		E-D|O Linear Trends (1900-1986)	
Standardized coefficients	Male	Female	Male	Female
North West	0,481	0,481	-0,060	-0,163
North East	0,481	0,481	-0,086	-0,189
Center	0,453	0,453	-0,060	-0,163
South	0,564	0,564	-0,060	-0,163

Linear Trends O-D|E

R2 occupation model = 0,392	O-D|E (1955)		O-D|E Linear Trends (1900-1986)	
Standardized coefficients	Male	Female	Male	Female
North West	0,248	0,197	0,040	0,040
North East	0,248	0,197	0,014	0,014
Center	0,248	0,197	0,040	0,040
South	0,290	0,239	0,040	0,040

Linear Trends
O-D indirect effect via education

	Indirect O-D via E (1955)		Indirect O-D via E Trends (1900-1986)	
	Male	Female	Male	Female
North West	0,208	0,210	-0,177	-0,254
North East	0,208	0,210	-0,151	-0,228
Center	0,208	0,210	-0,177	-0,288
South	0,220	0,222	-0,230	-0,307

Linear Trends O-D Total effect

	Total O-D (1955)		Total O-D TRENDS (1900-1986)	
	Male	Female	Male	Female
North West	0,456	0,407	-0,137	-0,214
North East	0,456	0,407	-0,137	-0,214
Center	0,456	0,407	-0,137	-0,248
South	0,510	0,461	-0,190	-0,267

Conclusions

1. O-E trends
   - Declining inequalities for both women and men
   - Larger decline for central and south areas
2. E–D |O trends
   - Declining for women but stable for men
   - No macro-regional specificity
3. O-D|E trends
   - No change either for women or men
   - No macro-regional specificity
4. O-D trends
   - Declining trend, more pronounced for women
   - Larger decline for the South

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Thank you for your attention

For any further suggestions or comments,
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