



Heterogeneity in human capital accumulation in France: second-generation migrants and natives

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Objective and methods

- Empirical analysis of the differences in the determinants of the level of education...
- ... for second-generation immigrants relatively to natives, for the French case
- Based on a French survey which includes information on surveyed individuals and their parents

Main results

- *No striking differences in the determinants of education between second-generation migrants (SGM) as a whole and natives*
- *Parental transmissions of education: a major factor to explain the differences in intergenerational correlations of education*
- When we consider some specific origins for SGM:
 - *differences in the determinants for the natives...*
 - *... in significance as well as in magnitude*
 - *lower determinism through parental education for 'Southern Europe' than 'for North Africa' origin*



1. Motivations

2. Data and descriptive statistics
3. Empirical Strategy
4. Results and discussion
5. Conclusion

Motivations (1): Education and labor market outcomes of SGM

*Since the seminal work by Chiswick (1988, QJE), a large literature has developed on **education or labour market outcomes for SGM/ethnic groups***

- Achievement at test scores or educational attainment of SGM: often **equal or superior to the ones of the natives**' (e.g. Algan et al., 2010, *EJ*; Dustman, 2012, *EP*)...
- ... with heterogeneity between ethnic group or origins (e.g. Borjas, 1992, *QJE*; Gang & Zimmerman, 2000, *JHR*)
- Potentiel differences in the explaining factors of education level between **SGM and natives** (and between SGM, diff. origins!) may come from:
 - differences in **preferences or tastes in schooling, discrimination, differential investment productivity** in activities (Chiswick, 1988, *QJE*)
 - differences in **parental transmissions of education** (Bauer & Riphon, 2009, *J. Pop. Eco.*)
 - differences in **neighbourhood characteristics** (e.g. Borjas, 1995)...

Motivations (2): the French evidence for SGM (education, labour market)

→ Recent empirical evidence for France:

Meurs *et al.* (2006, *ES*): inequalities between SGM and natives in the access to employment, employment status, civil service

Lefranc (2010, *ABS*): disadvantages for SGM in terms of employment or earnings

Meurs & Pailhé (2010, *Population*): disadvantages for SGM from Maghreb on the labour market (employment, activity)

Domingues Dos Santos & Wolff (2011, *EER*): differences in the factors of educational attainment according to the country of origin for SGM

Obka (2012, *Dares analyses*): social mobility of SGM firstly explained by social origin, stable employment more difficult for SGM from Maghreb

Motivations (3): goal of the paper

This work focuses on the *differences in the determinants of education attainments for SGM relatively to migrants...*

- *for France*
- in particular, we distinguish SGM from *North Africa* and *Southern Europe*
- also, we notably consider *intergenerational transmissions of human capital*



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Data

'Training and Occupational Skills' (*Formation et Qualification Professionnelle, FQP*) 2003 survey

- Cross-section data provided by the French *INSEE*
 - 40 000 observations
 - educational and professional data on individuals and their parents
- In particular, available information include:
 - the area of birth and nationality for surveyed individuals
 - the area of birth and nationality of parents
- Definitions:
 - A **native** is defined as one individual born in France and whose both parents are French-born or born in France.
 - A **second-generation immigrant (SGM)** is one individual born in France but whom at least one parent is born abroad.

Data (suite)

- The 2003 FQP survey provides information on **group of countries of origin** (parents')
 - we may distinguish SGM from **North Africa** and from **Southern Europe**
 - other origins may be identified in the survey but represent too little observations
- Restrictions on the data sample (**truncated sample**)
 - we consider people who are **28 years old and above** to avoid bias (some surveyed individuals have unfinished schooling)
 - we consider individuals who are **not more than 55 years old** (for those who are born until 1945-1948: very specific conditions in France)
- The **final sample**:
 - 2859 SGM (North Africa:1046; Southern Europe: 1131)
 - 18575 natives

Summary Statistics

- No striking difference between SGM as a whole and natives:
 - for the completed years of schooling
 - for parental years of education (mother's, father's, most educated parent's)
- But, differences when we consider 'North Africa' and 'Southern Europe' origins:
 - higher mean years of schooling for surveyed individuals and their parents *for 'Northern Africa'*
 - lower mean years of schooling for surveyed individuals and their parents *for 'Southern Africa'*
 - similar observations are made *when the levels of diploma are considered*
- The Blue-collar origin is more represented for SGM relatively to natives, and especially for 'Southern Europe' origins

Summary Statistics (suite)

Intergenerational correlations of education (Pearson coefficients).

Intergenerational link	Second gen. mig.	Natives	North Africa	South. Europe
Parent-child	0.471 ***	0.474 ***	0.483 ***	0.376 ***
Mother-child	0.452 ***	0.446 ***	0.468 ***	0.337 ***
Father-child	0.433 ***	0.438 ***	0.436 ***	0.341 ***

Source: FQP 2003 survey. Computations from the author under STATA.

Note 1: Significance level for the coefficient: *** at 0.1%.

Note 2: years of schooling (1) refers to the achieved years of schooling (corrected for breaks or repeated years during scholarship)

- *Intergenerational correlations of education* for natives and SGM as a whole: rather close
- Once again, differences when we consider 'North Africa' and 'Southern Europe' origins:
 - higher correlations are found for SGM from 'North Africa'
 - (much) lower correlations are found for SGM from 'Southern Europe'

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Empirical strategy (1)

- Empirical model: estimation of a human capital production function:

$$EDU^C = \beta_0 + \beta_1 EDU^P + \sum_j \beta_j X_j + \varepsilon$$

- Main variables

EDU^C is the **human capital level of the individual** (numbers of schooling years corrected for possible breaks or repeated years during scholarship)

EDU^P is the **parental human capital**

X_j is a **vector of variables of other individual, familial and local characteristics** (fathers' socioprofessional category, rank in the brotherhood, divorce of parents, gender)

- **Fixed effects**: we insert dummy variables for **groups of 5/6-year birth cohorts** (large number of cohorts in the database)

Empirical strategy (2)

- The main equation is firstly estimated by OLS, by incorporating fixed effects (FE)
- In addition, we also conduct some IV estimations where parental human capital variable is endogenized
 - potential endogeneity of EDU^P (Lillard & Willis, 1994, *JRH*; Holmlund et al., 2011, *JEL*)
 - in our paper: unobservables variables linked to EDU^P may have some impact on EDU^C (exemple, neighborhood effects: Borjas, 1995, *AER*; ability: Becker and Tomes, 1986, *JLE*)
 - differences in the intergenerational transmission of education for migrants (tastes, preferences that may differ according to the ethnic group: Chiswick, 1988, *QJE*)
 - possible biased estimation of β_1 ?
- ➔ IV estimations, with *instruments that refer to the professional status of the grandfather* (information available in FQP 2003 survey)

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Results (1): Econometric estimations by OLS (FE)

Table 4. Econometric estimations by origin (OLS).

		<i>Explained variable: years of schooling(1)</i>							
		Sec. Gen. Mig. (1)	Natives (2)	N. Africa (3)	S. Europe (4)	Sec. Gen. Mig. (5)	Natives (6)	N. Africa (7)	S. Europe (8)
Father's years of schooling (1)		0.094*** 0.021	0.108*** 0.007	0.117*** 0.034	0.115*** 0.037	- -	- -	- -	- -
Mother's years of schooling (1)		0.187*** 0.021	0.172*** 0.007	0.229*** 0.032	0.144*** 0.038	- -	- -	- -	- -
Most educated parent's years of schooling (1)		- -	- -	- -	- -	0.210*** 0.020	0.205*** 0.006	0.270*** 0.033	0.188*** 0.032
Father's socioprofessional category (PCS)	Blue collar worker	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
	Shopkeeper	0.063*** 0.016	0.093*** 0.005	0.41* 0.023	0.049** 0.024	0.061*** 0.016	0.094*** 0.005	0.044* 0.023	0.047** 0.024
	Executive	0.159*** 0.019	0.202*** 0.006	0.148*** 0.028	0.143*** 0.040	0.173*** 0.018	0.214*** 0.006	0.162*** 0.028	0.147*** 0.039
	Intermediate Professions	0.089*** 0.013	0.135*** 0.005	0.074*** 0.021	0.098*** 0.024	0.091*** 0.013	0.140*** 0.005	0.074*** 0.021	0.098*** 0.024
	Employee	0.042** 0.016	0.081*** 0.005	0.030 0.023	0.081** 0.036	0.039** 0.017	0.081*** 0.005	0.028 0.023	0.081** 0.036
	Farmer	0.050** 0.025	0.072*** 0.005	0.135* 0.074	0.046 0.033	0.049** 0.025	0.074*** 0.005	0.125* 0.072	0.045 0.033
Gender		0.026*** 0.009	0.017*** 0.003	0.016 0.014	0.071*** 0.014	0.024*** 0.009	0.017*** 0.003	0.014 0.014	0.070*** 0.014
Rank in the brotherhood		-0.012*** 0.002	-0.015*** 0.001	-0.002 0.004	-0.013*** 0.003	-0.013*** 0.002	-0.016*** 0.001	-0.003 0.004	-0.014*** 0.003
Divorce of parents during scholarship		-0.052*** 0.015	-0.060*** 0.006	-0.038* 0.022	-0.051** 0.025	-0.051*** 0.015	-0.058*** 0.006	-0.040* 0.022	-0.048* 0.025
1948-1953 cohort		Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
1954-1958 cohort		0.126*** 0.019	0.080*** 0.006	0.232*** 0.049	0.110*** 0.028	0.131*** 0.019	0.084*** 0.006	0.235*** 0.050	0.114*** 0.028
1959-1963 cohort		0.145*** 0.017	0.120*** 0.005	0.228*** 0.045	0.150*** 0.026	0.153*** 0.017	0.127*** 0.005	0.236*** 0.046	0.156*** 0.026
1964-1968 cohort		0.162*** 0.017	0.146*** 0.005	0.244*** 0.044	0.162*** 0.026	0.176*** 0.017	0.157*** 0.005	0.258*** 0.045	0.174*** 0.026
1969-1975 cohort		0.225*** 0.017	0.193*** 0.005	0.326*** 0.043	0.207*** 0.027	0.243*** 0.016	0.211*** 0.005	0.346*** 0.044	0.222*** 0.026
Nb. of observations		0.29 2859	0.32 18575	0.32 1046	0.24 1131	0.29 2859	0.32 18575	0.31 1046	0.24 1131

Results (1): Econometric estimations by OLS (FE)

- *Differences in the intergenerational transmissions of education: β_1*
lower for 'Southern Europe', higher for 'Northern Africa' relatively to natives except for fathers' coefficient (rather close when SGM as a 'whole')
 - ➔ *lower determinism through parental education for 'Southern Europe' than 'North Africa' origin?*
- SGM as a whole: no striking differences relatively to natives, but *differences when comparisons natives/2 other origins*
- North Africa (other variables than parental education)
 - Gender and rank in brotherhood not significant
 - *Magnitude of most of the coefficients lower* than the natives'
 - Larger benefit for younger cohorts, but *estimated coefficients are substantially higher than 'natives'*
- Southern Europe (other variables than parental education)
 - *all inserted variables are significant*, but impact lower for most of them
 - *coefficient related to specific cohorts: a little higher* than natives'

Results (2): IV estimations

- The H_0 hypothesis of the Hausman exogeneity test is accepted in all cases except for the 'natives' sample ...
- 'Literaly', this signifies that **parental education** is **not endogenous**, at least for migrants
- Not possible to compare the obtained results for the natives and the SGM with this method!

Discussion: interpretation of the results

- Evidence of differences in magnitude and/or significance of the determinants of educational attainment according to the origin of the surveyed individuals (SGM, natives, SGM from North Africa, SGM from southern Europe)
 - About the intergenerational transmissions of human capital:
 - the computed intergenerational correlations are higher for 'North Africa' SGM and lower for 'Southern Europe' SGM relatively to natives
 - econometric estimations show that intergenerational transmissions are higher for SGM from North Africa, lower for Southern Europe
- ➔ *intergenerational transmissions are a major factor in explaining the differences in intergenerational correlations of education among the different groups (consistent with the existing empirical literature)*

Discussion : robustness checks

■ *Unobservable characteristics?*

- FE : may account for some unobservable characteristics...
- IV: refusal of endogeneity in Hausman tests *for migrants*
- ...in OLS estimations: R^2 much lower with the same set of variables for 'Southern Europe' SGM: some unobservable characteristics likely to drive human capital accumulation

■ *Estimations robust to the Berthoin Law*

- Berthoin Law (1959): raises the min. mandatory schooling age to 16 years old *for people born in 1953 and after*
- our estimations: with cohort-fixed effects
- show that **older cohorts have a benefit relatively to the younger ones** (1948-1953 in our study)

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Conclusion

- The paper *analyses the difference in the determinants in the educational attainment between SGM and natives*
 - With French data, we consider *in particular SGM from two origins, Maghreb and 'Southern Europe'*
 - No striking differences are observed in the determinants between SGM as a whole and natives
 - But *heterogeneity among the SGM migrants*
 - *parental transmission of education play a major role...*
 - *... but differences in magnitude and/or in significance of the determinants relatively to natives*
 - *likely unobservable characteristics play a role for some origins (?)*
 - *lower determinism through parental education for 'Southern Europe' than 'North Africa' origin*
- ➔ Hence, *clear evidence of heterogeneity in human capital accumulation in France*. Should it be taken into account (and how) into public policies?



Questions ?