Immigrant Earnings Assimilation in France: Evidence from a Pseudo-Cohort Approach

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Abstract

This paper provides the first attempt to evaluate the so-called *Immigrant Assimilation Hypothesis* for the case of France. This hypothesis predicts, within the Human Capital theoretical setting, the relative convergence of immigrants' wages towards those of natives. The empirical challenge is then to measure how fast immigrants' earnings catch up those of natives and thus to infer about the economic assimilation process of immigrants in France. Coupling the second national specific survey on immigrants, TeO (2008), with its forerunner, MGIS (1992), the pseudo-panel approach adopted in this paper nets out the *cohort bias* and the *period bias*, both significantly acting in cross-sectional regressions across all national country groups. Indeed, the basic fallacy with cross-sectional estimate is that it draws inferences from a single snapshot of the population and implicitly combines the age-earning profile of different arrival cohorts. Our results precisely reveal that the highly-educated recent arrival cohorts from Sub-Saharan and North Africa records higher earnings convergence rate compared to their less-educated earlier cohorts, but the latter witnessed lower earnings disadvantage at entry and better labor market conditions, *ceteris paribus*. Thus the earnings crossover either occurs late in time or even never. Conversely, Turkish and South-East Asian successive cohorts of arrival improved their earnings position via a reduction in the entry earnings gap. Finally, the group of Portugal is by far the less skilled group but the most successful group: all successive cohorts manage to reach earnings parity and, better still, overtake native earnings over the course of residence.

1 Introduction

It is a very common practice in the empirical labor economics literature to infer the degree of immigrant integration by investigating whether immigrants manage to reach earnings parity with their native counterparts. Namely, the so-called "Immigrant Assimilation Hypothesis", IAH, (Beenstock *et al.* 2010:7) predicts, within the human capital theoretical setting (Mincer 1958, 1974; Becker, 1964), the convergence of immigrants wages towards those of natives with similar characteristics over the course of residence. Originally, the idea behind such a measure of immigrants' integration is powerfully intuitive (Chiswick 1978, 1979). At arrival, migrants often lack host country's specific skills and their pre-migration skills cannot be fully valued so that they experience an *initial earnings deficiency* relative to natives (negative "*entry* or *arrival-effect*"). The economic assimilation consists then, for the migrants, in acquiring host-country specific skills that would enable them, at a certain point in time, to earn as much as natives with comparable experience and educational background (positive "*assimilation* or *catch-up effect*").

Within this theoretical framework, for a whole slew of studies the empirical challenge was, and is still, to estimate the duration before the catching-up occurrence ("*overtaking age*" or "*earnings crossover point*"). The shorter the duration, the easier the receiving country's labor market "internalize" the migrant worker inflows, and the better the immigrant population is "assimilated". One might easily guess the economic and social benefits of such a labor market functioning. Indeed, the discrimination argument would be less persuasive for explaining the possible immigrant-native earnings gap since every migrant would potentially have the chance to attain native earnings level, as far as one's immigrant human capital fits labor market needs. As a matter of policy, the immigrant-native earnings parity, that is payment in proportion of anyone's "productivity", would generally ensure equity and efficiency.

If both the theoretical relevancy of the IAH and the empirical biases have been largely debated for most highly-immigrated countries and over years[1], the special case of France is totally absent across the panel case studies. Yet, and paradoxically, France can pride itself on having a "long history of immigration"[2] (Daguet and Thave 1996:1) and, this being, on migration policy experiences. In 2000, for instance, France ranked fourth among the receiving large-scale immigration countries and was among the lowest-low

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[1]The reader is referred to, among others, Chiswick (1978), Borjas (1989) and Hu (2000) for the case of the U.S; Adeymir and Skuterud (2005), Baker and Benjamin (1994) and Hum and Simpson (2000) for Canada; Beenstock *et al.* (2010) and Friedberg (2000) for Israel; Beggs and Chapman (1988), Chiswick and Miller (1985) and Macdonald and Worswick (1999) for Australia; Chiswick (1980), Dustmann *et al.* (2003) and Ken and Lindley (2009) for the UK; Barth *et al.* (2004), Longva and Raaum (2003) and Hayfron (1998) for Norway; Ekberg (1994) and Hammarstedt and Shukur (2006) for Sweden; Dustmann (1993), Fertig and Schurer (2007) and Gundel and Peters (2007) for Germany.

[2]Among other well-know historico-demographic features, France had already started being an immigration country from the mid-19th century (See Blanc-Chaléard (2001) and Tribalat (1999)

emigration rates countries[3]. Relevantly enough, the demographer François Héran "*deplored the singular discretion of French economists in public debate on immigration, in total contrast with what occurs abroad, particularly in the U.S*" (2010:15), adding that for France "*the difficult task rests upon geographers, historians, sociologists, politics' shoulders*". Along with the "*recent and hesitant progresses of the official statistics*" (François Héran 2010:15), the data availability considerations might "explain" in some extent the lateness of the French economic research in using the analytic framework offered by "the Economics of Immigration" literature.

Precisely, this paper provides the first attempt in the case of France to adress the immigrant-native earnings convergence issues: Do immigrants close the earnings gap over years after arrival ? How fast immigrants' earnings catch up those of natives? How heterogeneous are the country-specific earnings patterns ? Given the time-dependent characteristic of the process under study, a cross-sectional inference may be subject to biases as Borjas (1985) orginally and relevantly pointed out. Indeed, the basic fallacy with the "assimilationist" interpretation of earnings cross-sectional regressions is that it draws inferences from a single snapshot of the population and implicitly combines the age-earning profile of different arrival cohorts. The relevancy of cross-sectional estimates relies then on that "stationary assumption" (Borjas 1985:467) and, if not fulfilled, the sign of the cross-sectional bias is undetermined, depending on the unobserved immigrant cohorts' heterogeneity distribution. To puzzle out this identification issue, we make use of the "Synthetic-Cohort-Methodology", SCM, (Borjas 1985; Baker and Benjamin 1994; Lalonde and Topel, 1992) by coupling the recent availability of the second national specific survey on immigrants in France (TeO, 2008) with its forerunner MGIS (1992)[4].

Our analysis proceeds as follows. Section two brievly outlines the theory causing the empirical model formulation and presents the SCM. Section three contains our main results and conclusions.

2 Measuring the Economic Assimilation

2.1 Theory

Fundamentally, the core theory behind the immigrant assimilation hypothesis consists in readapting the human capital framework (Mincer, 1958, 1974; Becker, 1964) to the specific case of the immigrant population.

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[3]Source : United Nations, 2009, Trends in international migrant stock : the 2008 Revision, 2009, www.un.org/esa/population, in Gilles Pison (2010), " le nombre et la part des immigrés dans la population : comparaison internationales ", Population et Société Numéro 472. In 2000, around 6.3 millions of foreign born entered in France (ranked 4th), around 11% (compared to 13% for the U.S , respct. 5% in the mid-20th century) of the population were immigrants (ranked 10th). Another striking figure: in 1999 around 23% of the population in France have at least one immigrant parent or immigrant grand-parent (Tribalat, 2004:51) and the proportion reaches one third if we track back to great-grandparents (Gérard Noiriel 2002 :11).

[4]The two survey TeO, *TrajEctoires et Origines*, and MGIS, *Mobilité Géographique et Insertion Sociale* were carried out by Ined and Insee.

Both schooling and experience mainly determines individual earnings, with the precision that immigrants' pre-migration skills wouldn't get the same payoff as of post-migration skills or as of similar native skills. Indeed, on the basis of the skill transferability argument (Friedberg 2000), labor market experience acquired abroad by immigrants does not necessarily match perfectly host country labor market's needs and their certificates are not always recognized by employers. Also, recent immigrants do not necessarily master the host country's language, they have less knowledge regarding the social and cultural specificities of the receiving country and are relatively disadvantaged regarding job opportunities. Thus, for comparable demographic characteristics and measured skill levels, immigrants' earnings might be inferior to natives ones in the first years of residence. As a matter of interpretation, this initial earnings disadvantage, usually referred as the "entry-effect" in the literature, can be seen as being part of migration costs; the act of migration depreciates somehow the returns to the human capital obtained abroad.

Though immigrants might "legitmitalely" be discriminated on the basis of the human capital portability argument, they do accumulate formally or informally general experience and specific skills as time passes in the host country. This may reduces the productive dissimilarities between immigrants and natives so that the initial earnings deficiency narrows. Typically, over the course of residence, immigrants acquire the host country's language that enable them to readapt more easily their pre-migration skills and to make them more valuable in their new labor market environment. They get new certificates, they acquire general and on-the-job training experiences and get more information of the labor market functioning. A sustained specific human capital accumulation might push up immigrant earnings level toward natives' ones and ultimately vanishes the initial earning gap ("assimilation effect"). As a matter of economic interpretation again, the pace at which immigrants' earnings converge to natives' level can be seen as a the speed at which immigrant recover their pre-migration skills or, in other words, the speed at which their pre-migration skills become fully valuable. At the same time, immigrants not only readapt their skills but also acquire new specific skills. Finally, both the *entry-effect* and the *earnings convergence rate* jointly govern the dynamic of the immigrant economic assimilation.

2.2   Modelization and methods

Formally, the main support for testing the IAH consists in using the Mincerian earnings function augmented by the duration of residence variable. Allowing the country-specific human capital to have different return for immigrant i, it has been derived (Chiswick 1978: 903-904):

$$\ln w_i \;\; = \;\; X_i\beta + \alpha_1 ysm_i + \alpha_1 ysm_i^2 + \varepsilon_i \tag{1}$$

where $\ln w_i$ is the log earnings, X_i, a vector of socioeconomic characteristics (among

which is the marital status, region of residence, educational attainment and potential labor market experience), ysm_i measures the number of years since migration, and ε_i is a mean zero residual with $\mathbb{E}(\varepsilon|X, ysm) = 0$. As total labor market experience is include in the X_i vector characteristics, the parameters (α_1, α_2) captures the differential return to labor market experience acquired in France rather than abroad.

If we define the dummy variable Im as equal one for immigrants ($j = i$) and zero for natives ($j = n$), it is convenient to consider the pooled earnings equation (equation 2) to derive the empirical "earnings convergence equation" (equation 3):

$$\ln w_j \quad = \quad X_j\beta + \lambda_0 Im_j + \lambda_1 (Im_j)(ysm_j) + \lambda_2 (Im_j)(ysm_j^2) + \nu j \qquad (2)$$

$$\frac{\Delta \ln w_i}{\Delta Im} \quad \approx \quad \lambda_0 + \lambda_1 ysm_i + \lambda_2 ysm_i^2 \qquad (3)$$

Most cross-sectional inferences of the IAH draw conclusions on estimates of the parameters $(\lambda_0, \lambda_1, \lambda_2)$. Indeed, it is easily seen that λ_0 captures the *entry-effect* ($\lambda_0 < 0$), that is the conditional average earnings differential between immigrants and natives at time of arrival (i.e at $ysm = 0$ in equation 3), λ_1 as the *assimilation rate* (if one ignores the quadratic form) and ysm^* as the overtaking point (derived by equalizing equation 3 to zero). However, two main drawbacks cast doubt upon cross-sectional estimates of these parameters of interest.

The first points out the inherent truncation of the *ysm* variable distribution in a cross-sectional sample. Indeed, only those remaining in France are sampled and thus the return migrants are lost observations. Return migration entails great loss of information as far as the "non-survivors" migrants are not randomly selected and precisely if this selection process is intimately related to the economic assimilation process under study (Dustmann 2003). For illustration purposes, if we suppose that the most successful immigrants are less likely to return to their country of origin, then the earlier cohorts found in cross-sectional sample might have been positively self-selected, while "the recent cohorts would include a more representative selection of the immigrant pool" (Borjas 1985:467), biasing upwardly the λ_1 parameter. The reverse may be tenable too[5]. The return migration and re-emigration issues would not matter that much if the proportion of emigration among immigrants were marginal or at least comparable to native emigration propensity. However, the 2008 "International Migration Outlook" OECD report shows that "return migration is a major component of migration flows" (2008:203) and that "European countries are less successful in retaining immigrants"

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[5]Among the annual series of the "International Migration Outlook", the 2008 report devoted to return migration (2008, Chapter III: 161-222) reveals that, over a broad set of OECD countries and over the life-cycle, highly skilled migrants generally exhibit a "re-emigration rate above the average", (p177) "though there is a higher propensity to return among the least educated migrants and also among those with higher education" (p203).

(2008:163). Seeing the whole picture, "20% to 50% of immigrants leave within five years after their arrival, either to return home or to move on to a third country" (2008:163). However, for numbers of case studies, the answers to whether returning migrants are positively self-selected or not rarely reach unanimity (Coulon and Piracha 2005) and for the special case of France little can be done to "gauge the flow" given the data available.

The second drawback relies on the appealing dynamic interpretation that one might give to the parameters, and to λ_1 especially. Indeed, the implicit "stationary assumption" (Garvey 1997:294) behind cross-sectional inference of equation 2, insures that, given the observed characteristics included in X, a recent arrival immigrant who earns λ_1*100% less than a t-years immigrant will reach the same earnings position as did the latter after t years of residence. However, it is likely that the successive immigrant cohorts arrived in France over the last decades do not evolve on the same experience-earnings profile and did not undergo the same initial earnings deficiency. If so, then cohort-effects may bias upwardly or downwardly the parameters λ_0 and λ_1 [6].

Laking panel data precisely, it is convenient to use two data cross-sections in order to disentangle the *real assimilation effect* from the *cohort-effect*[7].
Let us first consider two individual cross-sectional data sets: the first being of the year 1992 and the second of 2008 (we then have a 16-year window). For convenience purposes, we partition the immigrant group into five cohorts according to the year of arrival in France. For the year 1992, we definie the dummy variables as: D_{75} for arrivals in 1968-1975, D_{83} for arrivals in 1976-1983 and D_{91} for arrivals in 1984-1991. As for the year 2008, we additionally have two more cohort: D_{99} for arrivals in 1992-1999 and D_{07} for arrivals in 2000-2007. As one might have noticed, the two cross-sectional data sets share the same cohort groups, except for D_{99}, D_{07}, which are exclusive to year 2008. Finally, to ensure the age composition between the two data, we restrict the 1992 sample to indivudals aged 20-50 and to 36-66 for the 2008 sample[8].
Given that, the cross-section models for the year 1992 and 2008 on the immigrant sample are[9]:

$$\ln w_{92} = X\gamma_{92} + \alpha_{75}D_{75} + \alpha_{83}D_{83} + \alpha_{91}D_{91} + \varepsilon_{92} \qquad (4)$$

$$\ln w_{08} = X\gamma_{08} + \beta_{75}D_{75} + \beta_{83}D_{83} + \beta_{91}D_{91} + \beta_{99}D_{99} + \beta_{07}D_{07} + \varepsilon_{08} \qquad (5)$$

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[6]It is noteworthy to point out, as the astute reader might have already realized, that the "survivor bias" and the "cohort bias" are nothing more than an endogeneity issue of the *ysm* variable. If the first is a tricky challenge to solve it for reasons already mentionned above, the second is solvable as far as one have several (repeated) observations across time.

[7]The "pseudo-panel approach" adopted in this paper closely follows Borjas's method (1985)

[8]As the age distribution is not the same across immigrant national groups, the age restriction adopted across the national group is not excatly the same. However, the variation are minors to raise any problems

[9]The dummy variables are used in place of the *ysm* continuous variable to allow the identification of the different cohorts. The models do not include the constant.

Denoting $\bar{X}_c$, the mean socioeconomic characteristics of immigrant cohort c in 2008 (with $c = 75, 83, 91, 99, 07$), the OLS on (4) and (5) yields the two predicted log earnings (with $\hat{\ln w} = \hat{y}$):

$$\hat{y}_{92,c} = \bar{X}_c\hat{\gamma}_{92} + \hat{\alpha}_c \qquad (6)$$
$$\hat{y}_{08,c} = \bar{X}_c\hat{\gamma}_{08} + \hat{\beta}_c \qquad (7)$$

Similarly, the predicted (log) earnings for cohort $c + 16$ in 2008 is[10]:

$$\hat{y}_{08,c+16} = \bar{X}_c\hat{\gamma}_{08} + \hat{\beta}_{c+16} \qquad (8)$$

The stationnary assumption ensures that the return to 16 years of residence in France for cohort c is given by subtracting (7) to (8) and yields:

$$\hat{y}_{08,c} - \hat{y}_{08,c+16} = \hat{\beta}_c - \hat{\beta}_{c+16} \qquad (9)$$

From that time on, the first key point for assessing the cohort bias consists in rewriting the cross-sectional earnings growth given by equation (9) into two components:

$$\hat{y}_{08,c} - \hat{y}_{08,c+16} = (\hat{y}_{08,c} - \hat{y}_{92,c}) + (\hat{y}_{92,c} - \hat{y}_{08,c+17}) \qquad (10)$$

Equation (9) and (10) clearly reveal that the steepness of immigrant earnings profiles is "inflated by a cross-cohort [component]" (Bloom and Gunderson 1995:988). Indeed, cohort c's earnings growth found in cross-sectional sample is actually the sum of (1) the "real" earnings growth experienced by cohort c over 16 years (*withing-cohort growth*, first term of equation (10)) with (2) the differential earnings occurring between cohort c and the cohort having the same number of years since migration but entered 16 later, i.e cohort $c + 16$ (*cross-cohort growth*, second term of equation 10). As cohort c in 1992 has same number of years spent in France than cohort $c + 16$ has in 2008, earnings differences between this two cohort capture the fixed-cohort effect causing the over-identification issue in a cross-sectional setting. Hence, the cross-sectional growth will be found biased upwardly if immigrants' skills have deteriorated over the 16 years (the cross-cohort growth component is positive, $\hat{y}_{92,c} > \hat{y}_{08,c+17}$), and the other way around occurs if the successive cohorts had been more skilled. As we already control for immigrant educational background, one might legitimately argue that changes in skill composition across cohorts have nothing to do with the existence of the cross-cohort

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[10]The same individual-average point is use through the method (Voir on Borjas page 479, Garvey page 298, voir aussi Baker and Benjamin page 380: à commenter, entre autres aussi: The prediction is evaluated at the mean socioeconomics charactristics of cohort c in 2008. Common features with the Blinder-Oaxaca Decomposition literature.

component in (10). However, as Bloom and Gunderson (1995:989) relevantly pointed out, it is rather changes in unobservable characteristics correlated with the educational background (schooling and experience basically) that are partially responsible for the potential cohort bias[11].

Lastly, the pseudo-cohort approach adopted here is not free of any bias either. Indeed, the within-cohort component in equation (10) is itself subject to "period-effects" (Borjas 1985, McDonald and Worswick 1999, Barth *et al.* 2004) if the aggregated labor market conditions have changed over the last decades, which very likely occurred. For instance, if the economic condition worsened over the 1992-2008 period, then the within-cohort growth derived in equation (10) will be underestimated while the difference *across-cohort* growth will be overestimated if positive or underestimated if negative.

Fortunately enough, the solution to that problem fits the bill for answering the immigrant-native convergence issue. Indeed, until now native earnings did not weigh in the SCM yet. Precisely, the period-effect hidden in the two components of equation (10) can be canceled out if one considers immigrants' earning relative to the earnings of a native base group[12]. For that, if we derive the native log earnings prediction in 1992 and 2008:

$$\hat{y}_{92,n} = \bar{X}_c\hat{\lambda}_{92} + \hat{\alpha}_n \qquad (11)$$

$$\hat{y}_{08,n} = \bar{X}_c\hat{\lambda}_{08} + \hat{\beta}_n \qquad (12)$$

It is noteworthy to notice that the cross-section growth derived in (9) is not affected

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[11]Justifiably, changes in the value of the estimated coefficients across cohorts (i.e changes in the human capital returns or "prices of observables") might reflect the unobservables change in the "ability composition" of the successive cohorts entering the labor market. This is particularly noteworthy if we develop equation (10) further:

$$\hat{y}_{08,c} - \hat{y}_{08,c+16} = (\hat{y}_{08,c} - \hat{y}_{92,c}) + (\hat{y}_{92,c} - \hat{y}_{08,c+17})$$
$$= \left((\hat{\gamma}_{08} - \hat{\gamma}_{92})\,\bar{X}_c + (\hat{\beta}_c - \hat{\alpha}_c)\right) + \left((\hat{\gamma}_{92} - \hat{\gamma}_{08})\,\bar{X}_c + (\hat{\alpha}_c - \hat{\beta}_{c+10})\right)$$

where the differential return to human capital skills ensure the non-nullity of the cross-cohort growth component;

[12]For the period-effect to being dropped out, it is assumed that the period-effect affects equally natives and immigrants. A section of the literature discusses the relevancy of the choice of the base reference group (See for example Baker and Benjamin 1994). There is no "one best reference group", rather the choice of the base group depends on the research question one raises. Roughly speaking, two positions hold through the literature. The first consists in choosing the reference group that is likely to undergo common time effect with the immigrant group. The major criterion is then to net out as better as possible the time-effect. The second position favors the "intuitive" concept of assimilation, that is to choose as the reference group, the "mainstream population" that immigrants are supposed to be integrated into or assimilated into. In this paper, I have favored the second approach, I then take "individuals born in metropolitan France of French parents who were themselves born in metropolitan France" as the base group (See section 3.1)

by the introduction of the native group in the analysis since equation (9) can also be rewritten as:

$$
\begin{aligned}
\hat{y}_{08,c} - y_{08,c+16} &= \hat{\beta}_c - \hat{\beta}_{c+16} \\
&= (\hat{y}_{08,c} - \hat{y}_{08,n}) - (y_{08,c+16} - \hat{y}_{08,n})
\end{aligned}
\tag{13}
$$

Finally, using the same logic as we did to derive the cross-sectional decomposition in (10), equation (13) can be decomposed into:

$$
\begin{aligned}
\hat{\beta}_c - \hat{\beta}_{c+16} &= [(\hat{y}_{08,c} - \hat{y}_{08,n}) - (\hat{y}_{92,c} - \hat{y}_{92,n})] \\
&\quad + [(\hat{y}_{92,c} - \hat{y}_{92,n}) - (\hat{y}_{08,c+16} - \hat{y}_{08,n})]
\end{aligned}
\tag{14}
$$

The first bracketed term in (14) refers to the *within-cohort* growth expressed here as the difference in the *relative* earnings of cohort c between 1992 and 2009. If positive, it means that the relative immigrant-native gap narrowed over the period or, in other words, that the earnings of cohort c converges to natives' earnings levels. The second bracketed term, the *cross-cohort* effect expressed in relative terms, represents the cohort fixed effect bias: if positive, it says that for a given number of years since migration ealier cohorts performed, relatively to natives, better than recent cohorts.

3 Empirical estimates

3.1 Data and Sample

The data used for the study are from four sources: the 1992 annual Labor Force Survey (Insee) and the 1992 MGIS survey (Ined-Insee) in one hand, and in the other hand, the 2008 continuous Labor Force Survey (Insee) and the 2008 TeO survey (Ined-Insee)[13]. Given the limited availability of immigrant national groups across sources, the analysis is limited to 6 countries/regions of origin: Sub-Saharan Africa, Morocoo, Algeria, South-East Asia, Turkey and Portugal[14]. In this analysis, an individual is considered as "immigrant" if he is born abroad without the French nationality at birth. "Natives" are all individuals born in metropolitan France of French parents who were

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[13]The two Labor Force Surveys have been used in this study to increase the immigrant sample size provided by the TeO and MGIS samples. For these two latter, the labor section of the questionnaire was mostly inspired by their contemporary national Labor Force survey so that the variables' comparability is ensure for our analysis. The exception being for the earnings variable in the MGIS survey: individuals reported their annual earnings into brackets. Following Meng and Meurs (2009), I took the midpoints. Having also the number of months worked during the year and the number of hours per week worked, I derived the monthly earnings.

[14]Immigrants born in Sub-Saharan Africa were mainly born in Mali and Senegal. As for the South-East Asia group, it only includes immigrants born either in Cambodia, Vietnam or Laos.

themselves born in metropolitan France [15]. Finally, the analysis is restricted to men who report non-zero earnings and working hours. Table 1 reports the study sample by year, source and country of origin. Finally, we consider a similar Borjas's (1985) parcimonious specification for the earnings equation where the log monthly earnings is our dependant variables and, the monthly working hours, the number of years of schooling completed, the number of years of potential experience, the marital status and the region of residence consitute our set of explanatory variables. To ensure a meaningful comparison between 1992 and 2008, the consumer price index has been used to transform 1992 Francs earnings into 2008 inflation-adjusted euros earnings[16].

3.2 Resutls

3.2.1 Basic patterns across national groups and across arrival cohorts

In in its raw form, the immigrant-native wage gap amounted to 19% in favour of natives for both years, 1992 and 2008 (Table 2). This semblance of stability over the 16 years hides noteworthy variations occurring, *first*, across country-specific groups, and, *second*, across arrival cohorts within each group. The variations in this two dimensions explain precisely why, when controlling for the socio-economic background, the same quantities worsen up to 23% and 28%. The following lines give some brief but important insights to understand the earnings convergence estimates given in the next section.

Coming across the country-specific groups at first (Table 2), three groups emerge. First, the *African group* (Sub-Saharan Africa, Morocco and Algeria) is the most disadvantaged with an earnings gap ranging from -42% to -25% (the worst being for Sub-Saharan African countries). Second, for the group of *Asian group* (South-East Asia and Turkey), the difference is relatively less evident as it rarely significantly ranges between -14% and +16%. Third and lastly, *Portugal* alone stands out as an exception as it significantly and strikingly outperforms the native group by 20% and 30% in 1992 and 2008 respectively.
Such country-specific earnings performances seem thought-provoking if one briefly look through earnings-related characteristics. Indeed, one may assert that the relative successfulness of immigrants originally from Portugal is not surprising at all as they entered quite young in France (at 15 years-old on average) and they also constitute the oldest cohorts of immigrants so that they may be quite similar to natives in terms of human capital composition. However, immigrants from Portugal are relatively unskilled

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[15]Are then excluded from the analysis all persons born in the French Overseas Departments and Territories (DOM-TOM), the repatriates, the descendants of these two latter groups, and the descendants of immigrants. For convenience purposes only: (1) I will often use the general term of "immigrants" to only denote the national groups mentioned above; (2) to remove any confusion also, the reader has to be aware that the improperly-used term of "native" in this analysis does not include descendants of immigrants, who by definition were *born in France*.

[16]The series are provide by the Insee in `http://www.insee.fr/fr/themes/indicateur.asp?id=29&page=achatfranc.htm`

compared to the African group and natives, and the differences were more pronounced in 2008. If we look at the two extremes of the immigrant earnings distribution (Sub-Saharan Africa and Portugal), the first group enjoyed more than three additional years of schooling than the second in 1992 and 5 more years in 2008. The group of Turkey performed a little bite better than Portugal but it still lags far behind Sub-Saharan Africa. Asian group also enjoyed the highest average number of years of schooling in 1992 (12 years) but they are quickly overtaken by the African group over the 16 years, both group ranging between 12 and 14 years.

The differences in educational skill level between countries are more blatant when looking at the distribution of diplomas (Figure 1). Looking at diplomas rather than years of schooling might be more relevant to point out the professional profile over the country group. In 2008[17], more than one third of immigrants had no diploma while it is only the case for 12% of natives. At the same time, the Sub-Saharan African group had the highest proportion of graduated and post graduated (50%) followed by South-East Asia (40%), Maghreb (30%) and Turkey (19%). The group of Portugal is rather constituted by unskilled workers (48%) or with professional degree (44%), the rest rarely had an university degree (5%).

The profile of immigrants appears quite clear enough now: in one hand, the Portugal group is the less penalized in term of earnings, the earliest cohorts of arrival and is also the less skilled group. In the other hand, Africa is the most penalized and the most skilled group. Between this two, the group of Asia keeps balanced in the immigrant-native earnings differential scale. Thereby, when taking into account the human capital composition of the different groups, the immigrant-native earning differential worsen for the most skilled whereas it narrows (or reverses) for the less skilled and professional groups. This suggests, in some extent, that the transferability of foreign skills is more problematic for high skilled workers, as often evoked in the literature (Friedberg 2000), so that highly-educated migrants may be subject to "education-occupation" mismatch. However, the South-East Asian group waives this rule and stands out as a good counterfactual for the group of Sub-Saharan Africa. Indeed, both group share the same migration and human capital characteristics[18] but they do not display similar economic performances; immigrants from South-East Asia being less subject to earnings deficiency.

As regards the time-cohort dimension, table 3 provides the estimated coefficients of the years-since-migration dummy variables obtained from the 2008 cross-sections immigrant sample. The most recent cohort arrived in 2000-2007 (D_{07}) is used as the reference group so that all reported coefficients capture the wage differential of each

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[17]For 1992, a large proportion of the information regarding diplomas are missing for immigrants

[18]Regarding the migration characteristics, the main difference between Asian countries and the Sub-Saharan countries is that for the latter the migration inflows remain important from 1975 onwards whereas the migration inflows from South-East Asia shrank significantly in the late 80's and remained marginal up until recently.

cohort with respect to the 2000-2007 entry cohort.

The results tend to confirm the stylized facts on immigrants' earnings: the earnings of the oldest cohorts of arrival are on average significantly higher than those of recently arrived immigrants, all other things being equal. For instance, Sub-Saharan African and Algerian migrants arrived in 1968-1975 earned roughly 25% more than their most recent of 2000-2007. For the same groups the differential is about 18% to 28% respectively when we compare the 1984-1991 cohort with the 1992-2007 one. Thus, each cohort performed better than its close predecessor. The same patterns are observed for the groups of Morocco and Turkey with less variation across cohorts. A minor exception is find for the group of Portugal for which the cross-section coefficients oscillate non-significantly around zero. However, as we will see in the next session, the apparent cross-section growth underestimated the real growth and thus the speed at which immigrant earnings converge to native earnings. Another and last feature emerging across the successive cohorts of arrival is the changes in educational attainment. African countries show an upward sloping shape over their cohorts in the number of years of school completed; the most obvious being for Sub-Saharan group starting with 10 years for cohort 1968-1975 to 15 years for cohort 2000-2007 (Figure 2). Conversely, marginal changes occurred across Turkish cohorts (10 years) and particularly across Portuguese cohorts (9 years). As for South-East Asian cohorts, they form a U-shape profile wherein the most recent cohort records similar educational attainments as the earliest cohort (15 years). Therefore, as across-cohort variations in human capital composition are more present in the African groups thus cohort biases may be more likely to occur and be more pronounced among these groups than among others.

3.2.2 Experience-earnings profile within and across cohorts

Naturally, the magnitude of cross-sectional biases is only meaningful to the extent that cross-sectional estimates are checked against the estimates found with the pseudo-panel methodology. Analyzing cross-sectional estimates first helps in understanding the bias-corrected estimates.

Cross-sectional estimates of the immigrant-native earnings convergence profiles by country of origin are given in figure 3. Figure 3 is drawn by estimating equation (3) for the year 2008 and table 4 provides the corresponding entry-effect and assimilation rate. These two outputs bring out three profiles. Firstly, the immigrant group from Africa performs the worst with an entry-effect ranging significantly from -42% to -25%, and a speed of convergence of only 0.008% per year on average. Thus, the earnings catch-up is not complete until 36 to 54 years after entry in France for this first group. Secondly, for the group of Turkey and South-East Asia, the governing parameters are most certainly not significant. Lastly, the group of Portugal alone draw a "*negative assimilation pattern*" (Chiswick and Miller 2012:35): a fairly large and significant positive entry-effect (33%) coupled with a negative assimilation rate (-0,005% per year) is

found for this last group[19]. Roughly speaking and according to the 2008 cross-sectional estimates, not any of immigrants aspires to reach earnings parity with natives over the course of residence in France unless it be the group of Portugal, for which the assimilation process seems to occur in the other way around, and for the Asian group for which the earnings convergence failed to occur.

However, given the issues driving the core of this paper, figure 3 may raise doubts in the reader's mind. Precisely, in what extent the country-specific immigrant-earnings profiles drawn in figure 3 hide an heterogeneity across cohorts ? Or, in other words, are the estimated governing parameters displayed in table 3 free from any cohort or period effects ?

Applying the decomposition of cross-section growth, as derived in section 2, we find that both cohort-effect and period-effect are undeniably acting (Table 5, equation (10)). For clarification and illustrative purposes, let us take the example of immigrants from Sub-Saharan Africa. According to cross-sectional estimates (table 5, column 1), in 2008, immigrants arrived in 1984-1991 (D_{91}) from Sub-Saharan Africa earn roughly 18.2% more than the most recent cohort in 2008 (i.e, Sub-Saharan Africans arrived in 2007-1992 (D_{07})). Thus, the cross-section analysis consists in predicting that, every else being equal, the 1984-1991 entry cohort will experience an earnings growth of the same amount of 18.2% over the next 8 years. However, if we compare the position of this cohort in 1992 and in 2008, the real earnings growth was actually almost two times larger in percentage points (30.32% instead of 18.2%, table 5, column 2). The -12.09% difference between the cross-section growth and the within cohort-growth is assigned to the cohort-effect (table 5, column 3). In other words, for the same number of years of residence, the cohort of 1984-1991 earned in 1992 -12.09% less than the most recent cohort of 2007-1992 in 2008. In other words, and to borrow the expression often used and debated in the Anglo-Saxon literature, the "quality" across these two consecutive cohorts has increased. Not only for these two cohorts but for all cohorts and for all country groups (with one relative minor exceptions in the Algerian case), the absolute improvement in earnings is underestimated in the cross-section framework.

Moreover, the immigrant earnings growth found in cross-section sample is all the more underestimated when we correct for period-effects. To correct for the fact that immigrant cohorts may not have been subject to the same economic conditions, equation (14) is estimated. Table 6 reveals that the labor market conditions worsened for immigrants between 1992 and 2008. Indeed, over their first 16 years of residence, the 1984-1991 arrival cohort from Sub-Saharan Africa actually experienced an increase of 47.5% in earnings relative to natives (Table 6, column 1). Consequently, the differences pointed out above (Table 5) in earnings performances between the successive cohorts

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[19]However, as we will see further below, the motivations of the existence of a negative assimilation pattern evoqued by Chiswick and Miller (2012) are different - or even opposite- to our specific case of France.

13

are revised upwards: the higher within-cohort earnings growths found for the most recent cohorts (Table 5) are amplified when each of these cohorts is compared to its native contemporary counterpart (Table 6). Again, this trend is observed for all groups and this confirms our suspicions regarding the cross section estimates. As suggested in section 3.2.1 too, the cohort biases are proportionally larger for country-groups which experienced the largest variation in educational attainment across the successive cohorts. It is also important to note, as Wright and Maxim (1993:339) stressed it (See also Bloom and Gunderson (1995:989)), that differences in human capital composition across cohort "is not a full explanation of the [increase] in immigrant quality", otherwise we would not have found any cohort effects for the groups of Portugal and Turkey, since their educational attainment distribution remained relatively stable across cohorts (See Figure 1 and 2). However, contrary to what Borjas suggested for the Canadian case (1991:10), the increase in educational attainment for African migrants over the last two decades was relatively larger than for French natives to account for the cohort biases.

In an aptly manner, figure 4 summarizes the earnings convergence heterogeneity across country-cohorts. In figure 4, each cohort evolves in its own specific ysm-relative earnings profile represented by each line. This representation gives additional information to the country-cohort specific assimilation processes and explain very clearly the cross-sectional profiles previously plotted in figure 3.
Grouping again the countries into typological profiles helps our understanding. The group of Sub-Saharan Africa and Morocco shares the same profile: the more recent the cohort, the higher the earnings convergence rate to native earnings levels, but the higher the negative entry-effect. As a comparative static illustration: had it been a lower earnings deficiency at entry (similar to the earliest cohort) for Sub-Saharan African and Moroccan 1984-1991 cohorts, the latter would overtake natives after 21 years and 6 years, instead of 28 and 31 years respectively (table 7)[20]. Thus, the deterioration in the initial earnings level across the successive cohorts *mainly* explains why the economic assimilation for this group is misleading in cross-section sample. It is noteworthy to mention that such pattern particularizes the case of France among the panel case studies of the 80's and 90's literature. Indeed, it was often argued in the U.S and Canadian cases, that cross-sectional estimates of immigrants' earnings convergence profile were overestimated. Thus, the 10-to-20 years overtaking-point consensually evoked in the Anglo-Saxon literature hid the "secular decline" in immigrants' skill levels, engaged from the post-war period until the late 90's, and gave the illusion of a rapid assimilation (Borjas 1985, 1995). The deterioration of the entry-effect was then used as a hallmark to illustrate that the recent cohorts were less skilled and so less successful than their predecessors (Bloom and Gunderson 1989; Borjas 1989, 1991; Chiswick and Miller 1988; Coulson and DeVoretz 1990; DeVoretz and Fagnan 1990; Nakamura and Nakamura 1990)[21]. However, in our recent case of France, the oppo-

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[20]These calculations are made by attributing the 1968-1975 cohort's entry effect to the 1984-1991 cohort, in table 7.

[21]For illustrative purposes, Wright and Maxim (1993:339) write: "Th[e] human capital interpreta-

14

site phenomenon happens for African migrants: the successive cohorts entering France since the 70's were increasingly and significantly more educated. How possible then is the entry-effect deteriorating across successive cohorts while, in the same time, the average skill level is increasing across African cohorts ? This observation takes a clear stance against the classical "vintage-effect" argument (Garvey 1997:295) used in the early literature. On the contrary, it is rather more likely that the deterioration in the entry-effect for the more recent skilled cohorts is due to a well-marked "education-job mismatching" process at entry. Consequently, the resultant higher assimilation rates observed for these skilled cohorts most likely reveals the recovery of job positions more compatible with their pre-migration skills. Indeed, a high skilled migrant entering the French labor market has "more room" or is more likely to experienced a downwarding occupational or downwarding earning mobility than a low skilled migrant worker who already hit rock bottom at entry. This merely brings the misleading interpretation of the higher entry-effect for less skilled cohort into disrepute. Moreover, this observation for the case of France is more consistent with the argument that high level skills are less "portable" (Friedberg 2000:225) across country. This interpretation is all the more consistent as it also gives support to the inverse relationship found in the recent Canadian empirical literature between *initial immigrant earnings* and *subsequent earnings growth* (Duleep and Regets 2002, Skuterud and Aydemir 2004, Frenette and Morissette 2003). Precisely, a set of Canadian studies tried recently to explain the ongoing and apparently puzzling relation between the declining entry-level earnings from the early 1980 up to now with the increasing proportion of high skilled immigrants entering Canada (Garnett Picot 2008). In the same veine, Chiswick and Miller (2009), using the 2000 U.S Census, recently find that "Overeducation is found to be more common among recent labor market entrants, while undereducation is more likely among older workers" (2009:162). Thus, it seems then that Moroccan and African recent immigrants entered France share qualitatively common features with their highly-educated counterparts evolving on the other side of the Atlantic. That being said, this similarity should not overshadow the well-marked difficulties undergo by Sub-Saharan and North-African migrants in the French labor market; difficulties that worsen over the 1992-2008 period as mentioned above through the across-components growth given in Table 6. Indeed, one striking fact immediately apparent through figure 4, is that immigrants originally from Sub-Saharan African, Morocco or Algerian (in some extent) *will never fully complete the earnings catch-up before the end of their professional career* or at least very lately, though the speed of convergence is found significantly higher for new cohorts or arrival. Only the 1983-1991 Algerian entry cohort performs better relative to natives, but their relative position to natives did not change at all between 1992 and 2008 (Figure 4).

In a relatively less dramatic tone, the Turkish group recorded large improvements across cohort in initial entry earnings level (figure 4), reducing by two the number of

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tion of immigrant earnings implies that "higher quality" immigrants have smaller on-entry earnings differentials and have earnings that grow at a faster rate (i.e. converge to the average of native-born individuals more quickly").

years before earnings parity's completion (Table 7). It now clearly appears the reason why the governing parameters where found "highly insignificant" in the cross-sectional regression for the group of Turkey. Indeed, the cross-section regression, consisting in drawing a -horizontal- line fitting the three cohorts-specific earnings lines, glossed over each upward cohort mobility profiles (Figure 4). This remains equally true for the South-East Asian group.

Lastly, the same reasoning can be apply for the very successful case of Portugal. Indeed, for this group, cross-sectional estimates have revealed an "upside down convergence" earnings pattern relative to natives, while the cohort-specific lines clearly show that each cohort performed actually -relative to natives- better than its forerunner. The entry-effect gradually changes its sign across Portuguese cohorts and the latter overtake natives earnings, giving the illusion - in cross-section sample- of a negative assimilation profile (Table 7 and figure 4). Thus, for the last group Portugal, the reduction of the entry-effect combined with a relative stabilization of the speed of convergence over the cohorts, lead to a diminution of the earnings crossover point: 24 years after migration for the 1968-1975 entry cohort and 10 years for the 1976-1983 entry cohort. Better still, the 1984-1991 cohort earned 10% more than natives after only 5 years of residence in France. Unlike African cohorts, Portuguese cohorts did not experience significant changes over the last decades in their skill composition. Rather, their unskilled and professional profile remained unchanged (See figure 1 and 2). The fact that they also constitute the migrant group with the lower entry-deficiency earnings gives more support to the transferability skills issue mentioned above. Also, the successive cohort arrived from Portugal are the only ones among the other national cohort group who experienced an improvement in their labor market conditions over the 1992-2008 period. The positive across-cohort effect found for Portuguese cohorts illustrates such argument as they stands alone with a positive across-cohort earnings growth component (Table 6).

4   Conclusions

This article has confirmed, first, the immigrant-native earnings inequalities existing on the French labor market and the heterogeneity found on the individual's national origin criterion. Secondly, unprecedented and relevant information regarding the evolution of the immigrant-native earnings gap since migration has been found.

Indeed, the economic assimilation theory predicts that the initial relative disadvantaged undergo by migrants at entry into the host country's labor market vanishes over the course of residence. The quasi-panel approach adopted in this article showed that the cross-section regressions underestimate the real growth experienced by immigrants over the 1992-2008. Three profiles has emerged. *First*, immigrants originally from Sub-Saharan African, Morocco and Algeria recorded the worst earnings performances relative to natives while they constitute the most skilled group. Immigrants originally from Africa did witness a significant increase in the earnings convergence rate across the successive cohorts of arrival, however the most recent cohorts also underwent a

large deterioration in their initial earnings deficiency and in their labor market conditions. Thus, these two opposite effects annihilate with each other, stabilizing the earnings crossover point estimated over the cohorts (around 35 years on average). *Second*, Turkey and South-East Asia countries conversely experienced a net improvement in the entry-effect with a more stable earnings speed of convergence across cohorts, reducing almost by two the numbers of years before the earnings catch-up completion. *Third* and lastly, the pseudo-negative assimilation profile found in cross-section regression for the group of Portugal hid actually a very successful and improving economic assimilation across cohorts. The relatively small negative entry-effect exhibited by the earliest cohort disappeared gradually across the successive cohorts of arrival to such an extent that the most recent cohort earned 10% more than its native counterpart 5 years after migration only. Being also the least-skilled group and because the human capital composition across cohorts did not change at all for Portugal, while more highly-educated immigrants characterize the recent arrival cohorts from Africa, the education-occupation mismatching argument has been suggest to explain in some extent such heterogeneity patterns across national-origin groups.

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Tableau 1 : Individual sample by year, source and country of origin.

| Country of birth	1992		2008		Total
	MGIS	LFS	TeO	LFS 08	
Natives	837	-	1 314	20 715	22 866
Immigrants	1 720	86	1 126	814	3 746
Sub-Saharan Africa	216	8	288	195	707
Algeria	159	6	140	123	428
South-East Asia	198	6	196	52	452
Spain	57	8	17	19	101
Morocco	380	17	162	170	729
Portugal	342	38	200	213	793
Turkey	368	3	123	42	536
Total	2 557	86	2 440	21 529	26 612

Source : Enquête Emploi 1992, 2008 (Insee), TeO 2008 (Ined-Insee), MGIS 1992 (Ined-Insee)

Tableau 2 : Descriptive Statistics by year and by country of origin.

|	Sub-Sah Africa		Algeria		South-East Asia		Morocco		Portugal		Turkey	
	1992	2008	1992	2008	1992	2008	1992	2008	1992	2008	1992	2008
wage_m2008	1366,70	1607,78	1385,20	1539,64	1560,36	1796,20	1434,76	1711,90	1579,00	1815,15	1300,47	1543,52
wage_h2008	8,14	10,18	8,13	9,69	9,18	10,98	8,49	10,68	9,05	10,86	7,55	9,37
hm1	171,66	160,28	171,61	161,40	171,30	163,41	172,27	161,99	174,47	166,94	174,18	165,25
hw1	39,55	36,93	39,54	37,19	39,47	37,65	39,69	37,32	40,20	38,47	40,13	38,08
coup	0,57	0,80	0,69	0,81	0,70	0,86	0,70	0,87	0,88	0,91	0,84	0,95
mari	0,49	0,69	0,62	0,76	0,53	0,75	0,66	0,81	0,80	0,79	0,82	0,91
etud	10,61	14,00	7,16	12,17	11,62	12,81	8,43	12,45	7,38	8,99	8,69	10,19
etud_after	2,10	2,07	2,41	4,19	2,93	4,40	1,83	3,42	3,28	4,28	2,66	2,82
etud_before	8,50	11,93	4,75	7,98	8,68	8,42	6,60	9,03	4,10	4,71	6,03	7,36
exp	14,04	24,81	24,11	26,73	12,48	27,52	21,97	27,48	21,96	30,92	14,67	25,48
tenure	4,90	9,32	9,79	10,10	4,44	13,76	9,60	12,69	9,05	14,58	5,10	8,13
ysm	11,96	20,83	22,41	25,18	12,74	28,81	18,78	26,08	21,78	32,24	13,66	22,74
age_arriv	22,21	25,74	18,92	20,90	18,70	18,72	21,10	21,58	16,83	15,71	18,01	20,75
Ile-de-Frc	0,68	0,68	0,36	0,36	0,48	0,53	0,30	0,33	0,34	0,39	0,15	0,25
français	0,28	0,45	0,07	0,41	0,44	0,88	0,14	0,56	0,16	0,25	0,05	0,33
etranger	0,72	0,55	0,93	0,59	0,56	0,12	0,86	0,44	0,84	0,75	0,95	0,67
tenure	4,90	9,32	9,79	10,10	4,44	13,76	9,60	12,69	9,05	14,58	5,10	8,13
immig	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
age	34,17	46,57	41,33	46,08	31,44	47,54	39,88	47,66	38,61	47,94	31,67	43,48
N	228	490	303	314	206	257	444	343	537	499	372	165

Source : Enquête Emploi 1992, 2008 (Insee), TeO 2008 (Ined-Insee), MGIS 1992 (Ined-Insee)

Figure 1 : Distribution of diplomas by country of origin, 2008
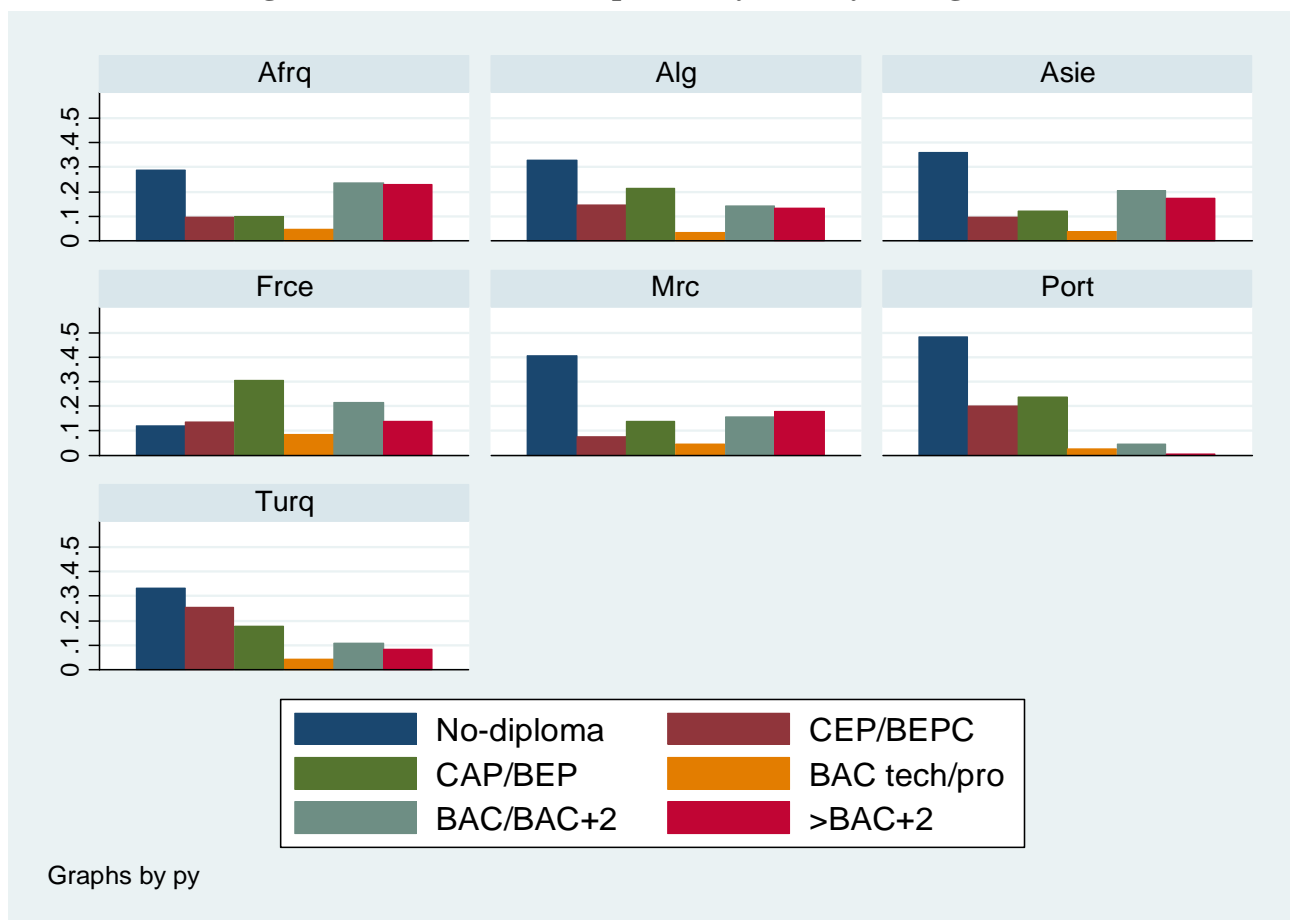
Source : Enquête Emploi 2008 (Insee), TeO 2008 (Ined-Insee)

**Figure 2 : Number of years of education by country of origin and by cohort of arrival, 2008.**

Source : Enquête Emploi 2008 (Insee), TeO 2008 (Ined-Insee)

21
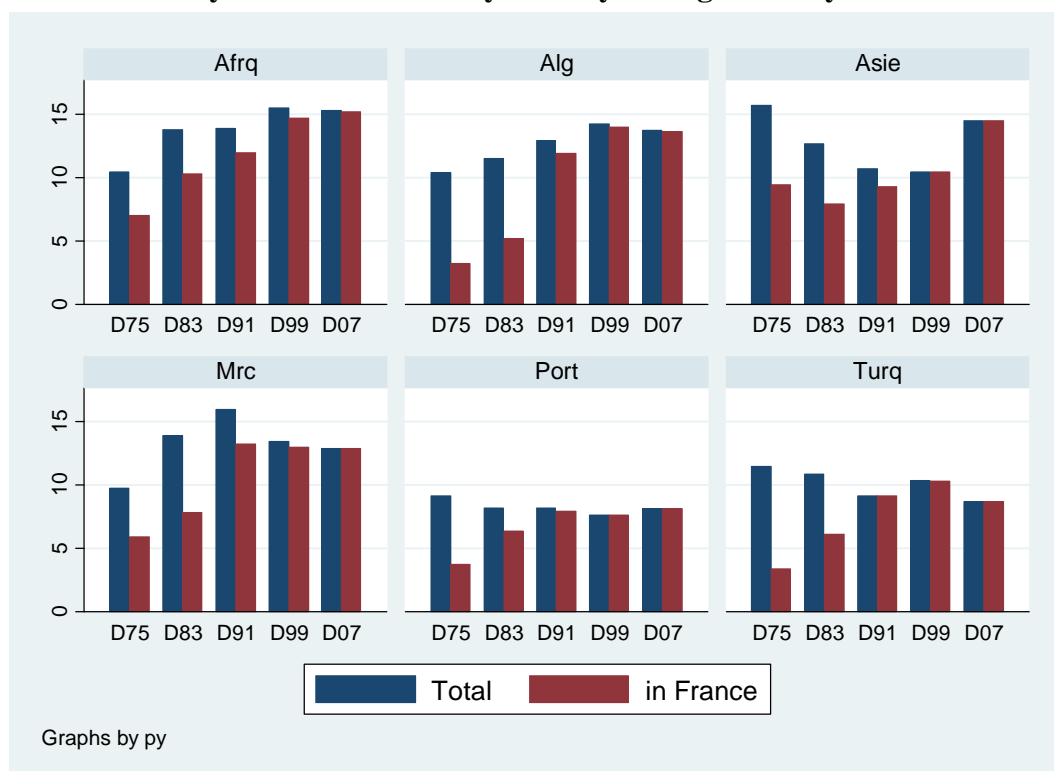
Tableau 3 : Coefficients of Years-Since-Migration dummy variables in 2008 Cross-section.

	coef	p-value
All		
2000-2007	Ref	
1992-1999	.0499837	0.084
1984-1991	.1444356	0.000
1976-1983	.1746218	0.000
1968-1975	.2529484	0.000
Sub-Saharan Africa		
2000-2007	Ref	
1992-1999	.055509	0.298
1984-1991	.1822679	0.000
1976-1983	.2200339	0.000
1968-1975	.2512291	0.001
Algeria		
2000-2007	Ref	
1992-1999	.0842691	0.124
1984-1991	.2822806	0.000
1976-1983	.1966893	0.001
1968-1975	.245773	0.000
Morocco		
2000-2007	Ref	
1992-1999	.068714	0.347
1984-1991	.0650459	0.415
1976-1983	.1378223	0.048
1968-1975	.1689834	0.012
South-East Asia		
2000-2007	Ref	
1992-1999	.176702	0.407
1984-1991	.2036177	0.324
1976-1983	.2669943	0.196
1968-1975	.3884889	0.071
Portugal	Ref	
2000-2007		
1992-1999	-.0764873	0.288
1984-1991	.0559386	0.421
1976-1983	-.0738143	0.328
1968-1975	.0056722	0.932

Source : Enquête Emploi 2008 (Insee), TeO 2008 (Ined-Insee)

Figure 3 : Years-Since-Migration relative earnings profile, 2008 Regression.
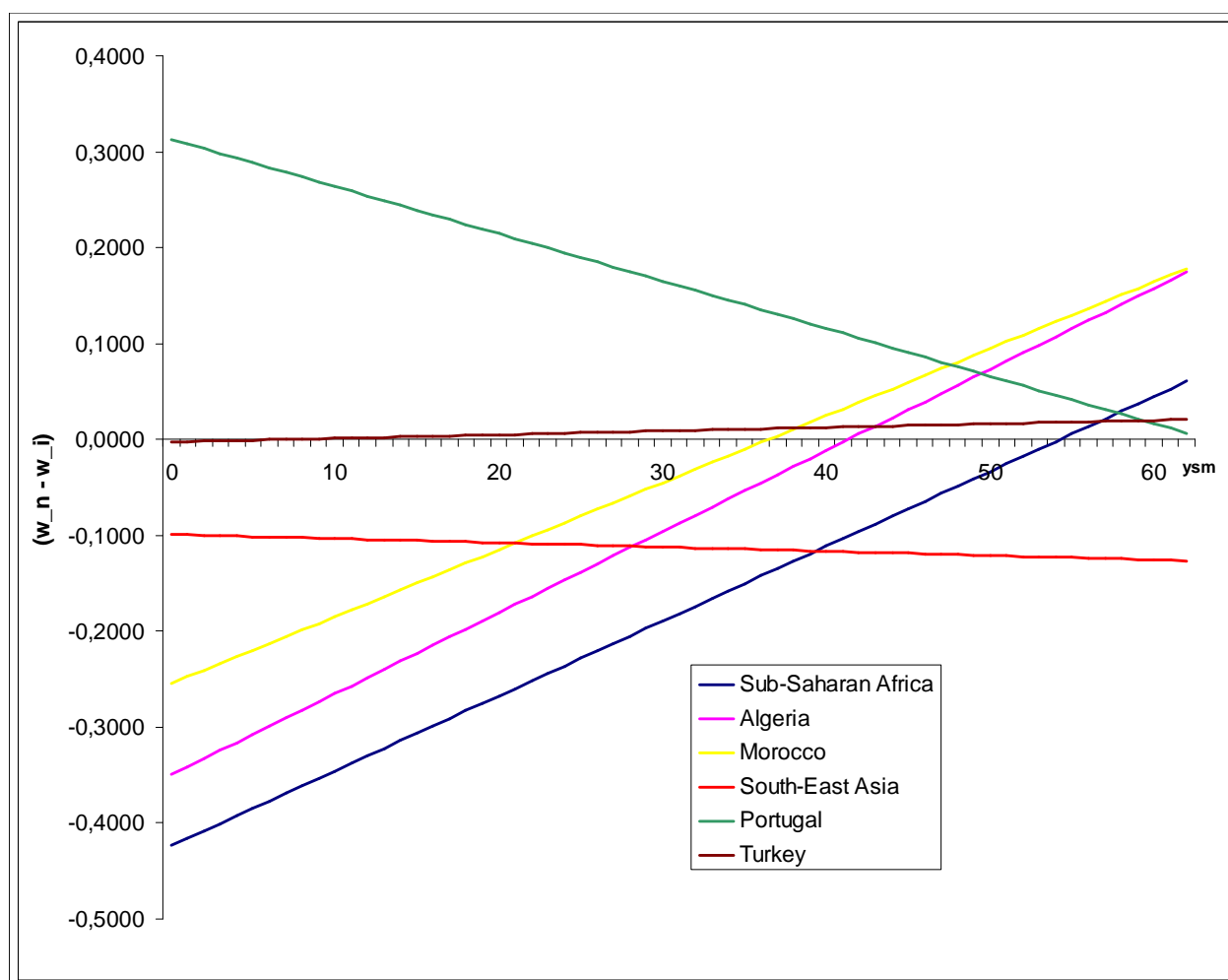
Source : Enquête Emploi 2008 (Insee), TeO 2008 (Ined-Insee)

Tableau 4 : Estimates of the governing parameters by country of origin, 2008 Cross-Section

COUNTRY	Entry-effect	Assimilation rate	Overtaking point
Sub-Saharan Africa	-42,35%	0,0078	54,24
	0,0000	0,001	
Algeria	-34,96%	0,0085	41,33
	0	0	
Morocco	-25,46%	0,0070	36,44
	0,0000	0,0000	
South-East Asia	-9,89%	-0,0004	-
	0,317	0,898	
Portugal	31,33%	-0,0049	-
	0	0,001	
Turkey	-0,24%	0,0004	6,39
	0,971	0,886	

Source : Enquête Emploi 2008 (Insee), TeO 2008 (Ined-Insee)

Tableau 5 : Decomposition of Cross-Section Growth in Immigrant Earnings.

|	Cross-Section Growth	Within-Cohort Growth	Across-Cohort Growth
Afrique			
1984-1991	0,1823	0,3032	-0,1209
	0,0003	0,0000	0,0000
1976-1983	0,1645	0,1781	-0,0136
	0,0006	0,0000	0,0810
1968-1975	0,0690	0,0965	-0,0275
	0,2631	0,0000	0,0563
Algérie			
1984-1991	0,2823	-0,1072	0,3895
	0,0000	0,0000	0,0000
1976-1983	0,1124	0,0627	0,0498
	0,1074	0,0161	0,0525
1968-1975	-0,0365	0,1023	-0,1388
	0,6025	0,0000	0,0000
Maroc			
1984-1991	0,0650	0,1610	-0,0959
	0,4150	0,0000	0,0000
1976-1983	0,0691	0,0867	-0,0176
	0,2369	0,0000	0,0452
1968-1975	0,1039	0,0789	0,0250
	0,0865	0,0000	0,0000
Portugal			
1984-1991	0,0559	0,1346	-0,0787
	0,4209	0,0000	0,0000
1976-1983	0,0027	0,0612	-0,0585
	0,9643	0,0000	0,0000
1968-1975	-0,0503	0,1606	-0,2108
	0,2292	0,0000	0,0000
Turquie			
1984-1991	0,1002	0,1197	-0,0195
	0,0724	0,0000	0,1374
1976-1983	0,0901	0,1534	-0,0633
	0,2036	0,0000	0,0000
1968-1975	0,0742	0,2010	-0,1269
	0,2741	0,0000	0,0000

Source : Source : Enquête Emploi 1992, 2008 (Insee), TeO 2008 (Ined-Insee),
MGIS 1992 (Ined-Insee)
p-values in parentheses

Tableau 6 : Decomposition of Cross-Section Growth in Immigrant/Native Relative Earnings.

	Cross-Section Growth	Within-Cohort Growth	Across-Cohort Growth
Afrique			
1984-1991	0,1823	0,4753	-0,2930
	0,0003	0,0000	0,0000
1976-1983	0,1645	0,3327	-0,1682
	0,0006	0,0000	0,0000
1968-1975	0,0690	0,2076	-0,1386
	0,2631	0,0000	0,0000
Algérie			
1984-1991	0,2823	-0,0117	0,2940
	0,0000	0,6840	0,0000
1976-1983	0,1124	0,1699	-0,0575
	0,1074	0,0000	0,0608
1968-1975	-0,0365	0,1583	-0,1948
	0,6025	0,0000	0,0000
Maroc			
1984-1991	0,0650	0,3254	-0,2604
	0,4150	0,0000	0,0000
1976-1983	0,0691	0,2041	-0,1350
	0,2369	0,0000	0,0000
1968-1975	0,1039	0,1405	-0,0366
	0,0865	0,0000	0,0004
Portugal			
1984-1991	0,0559	0,1966	-0,1406
	0,4209	0,0000	0,0000
1976-1983	0,0027	0,1068	-0,1041
	0,9643	0,0000	0,0000
1968-1975	-0,0503	0,1871	-0,2373
	0,2292	0,0000	0,0000
Turquie			
1984-1991	0,1002	0,1296	-0,0294
	0,0724	0,0000	0,0336
1976-1983	0,0901	0,1626	-0,0726
	0,2036	0,0000	0,0000
1968-1975	0,0742	0,1962	-0,1220
	0,2741	0,0000	0,0000

Source : Source : Enquête Emploi 1992, 2008 (Insee), TeO 2008 (Ined-Insee),
MGIS 1992 (Ined-Insee)
p-values in parentheses

Figure 4 : Immigrant-Native relative earnings profile by cohort of arrival.
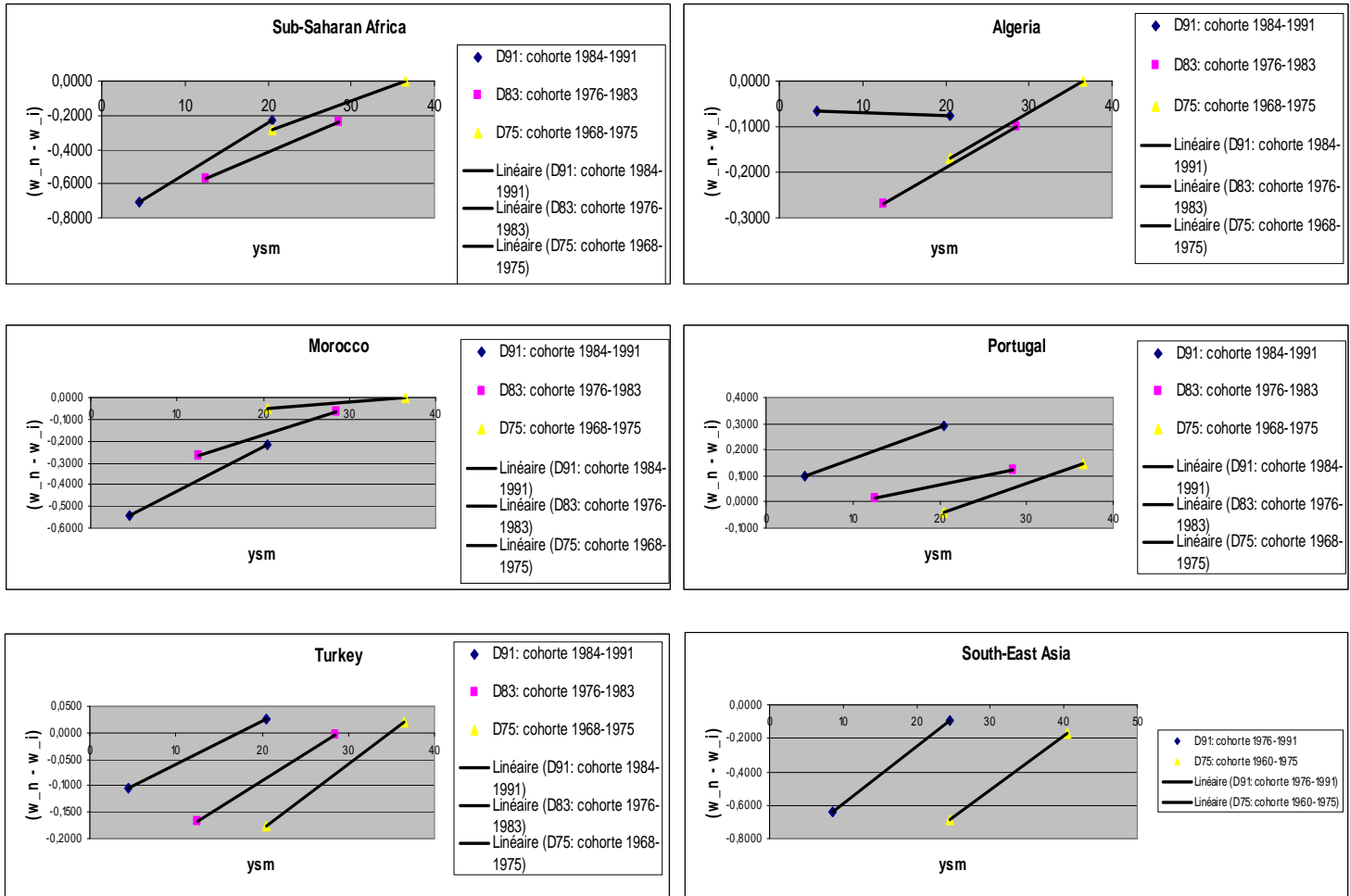
Source : Source : Enquête Emploi 1992, 2008 (Insee), TeO 2008 (Ined-Insee),
MGIS 1992 (Ined-Insee)

Tableau 7 : Corrected estimates of the governing parameters by country and by cohort of arrival.

	Entry-effect	Assimilation rate	Overtaking point
Sub-Saharan Africa			
D91: cohorte 1984-1991	-84,18%	2,97%	28
D83: cohorte 1976-1983	-83,00%	2,08%	40
D75: cohorte 1968-1975	-64,99%	1,78%	37
Algeria			
D91: cohorte 1984-1991	-	-	-
D83: cohorte 1976-1983	-40,15%	1,06%	38
D75: cohorte 1968-1975	-38,86%	1,06%	37
Morocco			
D91: cohorte 1984-1991	-63,67%	2,03%	31
D83: cohorte 1976-1983	-42,78%	1,28%	33
D75: cohorte 1968-1975	-12,14%	0,33%	37
Portugal			
D91: cohorte 1984-1991	4,07%	1,23%	-
D83: cohorte 1976-1983	-7,01%	0,67%	10
D75: cohorte 1968-1975	-27,78%	1,17%	24
Turkey			
D91: cohorte 1984-1991	-14,00%	0,81%	17
D83: cohorte 1976-1983	-29,40%	1,02%	29
D75: cohorte 1968-1975	-42,83%	1,23%	35
Asia			
D91: cohorte 1976-1991	-92,74%	3,40%	27
D83: cohorte 1960-1975	-148,00%	3,25%	46

Source : Enquête Emploi 2008, TeO 2008 (Ined-Insee)