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Immigrants at Retirement: Stay/Return or 'Va-et-Vient'?

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Abstract
In this paper, we investigate the location choice of immigrants at retirement. In a context where labour considerations no longer matter, the location decisions are expected to depend not only on a comparison of standard-of-living between the origin and host countries, but should also be affected by the strength of family relationships. Assuming that migrants derive some satisfaction from contact and visits with other family members, we suggest that migrants may choose a third type of migration move beyond the standard stay/return decision called the 'va-et-vient' where individuals choose to share their time across the host and the origin country. In the empirical analysis, we test the determinants of the location intention at retirement using a recent data set on migrants currently living in France. We found that the migrant's choice is significantly related to the location of other family members and that those determinants vary with respect to the different preferred choices.

Keywords: Return migration, retirement, family interactions
JEL classification: J26, O15, R23

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1. Introduction

The decision of immigrants to return to their home country has attracted much attention over the previous decade (see in particular Dustmann, 2001). Until now, the literature has only investigated the returns of working age immigrants. This paper brings some new findings on the optimal location decision of immigrants at the time of their retirement. In particular, we document a previously unknown location "strategy" beyond the traditional stay/return choice. We observe that around a quarter of immigrants in our comprehensive data set are willing neither to return home, nor to stay in the host country, but they intend to spend a fraction of the year in each country. The data set being collected in France, we call this strategy the "va-et-vient".

Some facts lead us to think that the importance of this alternative strategy may not be confined to our data set. Importantly, immigrants living in France who decide to retire can claim their full pension benefits in the chosen country of living. In fact, as much as 8% of all pension benefits in France are paid to retirees who live abroad (CNAV, 2001). So, the French pension system does not appear to provide any incentives to choose to conduct a "va-et-vient" rather than to return to the home country or to stay in the host country. Recent evidence suggests that immigrants' decision of location is certainly not restricted to a simple stay versus return choice.

For instance, in Germany, Constant and Zimmermann (2003) find that as much as 60% of immigrants interviewed in the German Socio-Economic Panel (GSOEP) are multiple movers, who at one time during their stay in Germany chose to spend a period in the home country and then to come back to the host country[1]. Other evidence suggests that a substantial proportion of Indian and Taiwanese immigrants in the US tend to commute to their origin country for investment purposes (ILO, 2003). Sociologists have documented that a third of a sample of Italian and Spanish retired immigrants in Switzerland choose to share their time between the host and the origin country (Bolzman et al., 1993). Other evidence in Sweden and in the US points to a related pattern observed amongst retirees who can afford to spend part of the year in "warmer" regions at the time of retirement (Gustafson, 2001; Hogan and Steinnes, 1998).

With the bulk of unskilled immigrants having arrived in the main European host countries such as Germany, France and the UK during the 1960s and 70s, we expect those

immigrants to take their retirement soon. The optimal location of retired immigrants could pose a challenge to policy makers in both the host and the origin countries if we imagine the case of a sudden return of large waves of retired immigrants to their home country. Health expenses would be alleviated in the host and increased in the origin country and aggregate consumption would increase in the origin and decrease in the host. Little is however known of the individual location choice arising for immigrants at retirement, and this paper sets to provide a first investigation of such a choice.

Our paper is related to the analysis of Konrad et al. (2002), where the optimal location decision of children is primarily determined by the location of siblings with the view of caring for parents. Unlike them, however, we focus on the location decision of parents at the time of their retirement. Another main difference with this paper is their focus on a "geography of the family" - living in the same country. Our paper is set in the international rather than the internal migration framework. We do consider the effect of a taste for living in a different country that can determine the location at retirement. Finally, by studying the location of immigrants at retirement, our paper implicitly relies on models of lifecycle migration where individuals move for a limited duration with the intention of returning to their country of origin (Djajic and Milbourne, 1988).

Dustmann (2003) considers both realised and intended return decisions of immigrants in their home country, and introduces the role of young children as a main determinant. He finds support for a chronicle where children cause the return decisions of parents, using the randomness of the sex of children as an identifying strategy. The empirical results are consistent with a model where parents care for the future of their children; those considerations being different for sons and daughters. The home country is judged more beneficial for daughters, while the host country is preferred for boys. Parents highly favour the cultural environment of the origin country for daughters whereas they value more the economic prospects offered in the host country for sons. Implicitly, in this framework, parents are the only decision makers in the location decision, an assumption implied by the time frame investigated (i.e. the working life). For older parents at retirement, however, this assumption has to be relaxed.

Empirically, we investigate the main determinants of the "va-et-vient" choice in comparison with the decision to return and to stay. Using a similar identifying strategy as Dustmann (2003), we find that the actual location of children, in the host or the origin

[1] The use of a panel data set may lead to measurement errors, owing in particular to selective attrition. It is certainly very

country, matters for the return, while the presence of children, whatever their location, is an important determinant of the "va-et-vient". We also investigate the importance of other family ties on the respondents' location at retirement (namely their parents, siblings, and other family members), both for the "va-et-vient" and the return. The data shows that the "va-et-vient" is more often chosen by immigrants originating from other countries than Northern Europe and that the return is more frequent for immigrants originating from Southern Europe and from Central and the South of Africa.

The remainder of the paper is organised as follows: in Section 2, we introduce a simple model where individuals maximise their utility through interactions with their children, their income and a preference parameter for the host or the origin country. In Section 3, we describe the data set which focuses on older immigrants living in France and discuss further the importance of the "va-et-vient" choice. In Section 4, we first show that the location of the family members strongly influences the preferred location at retirement and then discuss the potential endogeneity of the actual location of children. Concluding comments are in Section 5.

2. Theoretical Background

Numerous papers have considered a return of immigrants to their home country motivated by positive income differentials between the home and host countries. Recently, Dustmann (2003) has introduced altruism of parents towards their offspring as a further determinant, with the focus on families with young children who are most often constrained by the decision of their parents. It is however likely that the children will not comply with the decisions of their parents when they are adult and live on their own. In the context of retirement, we believe that the location decision of children and other family members may play a significant role in the migrant's choice of location.

As a motivation, let us consider a framework with two persons - one parent referred as p and one adult child denoted by k^2. Suppose first that parents make their decision of preferred location taking into account the exogenously given decision of their children. It could be the case if children have currently a paid job in the host country for instance, so that

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difficult to track a migrant who decides to return to the origin country and then to come back in the host country.

they would face loss of income by moving to the home country following the move of their parents. Parents are supposed to gain utility from increased interaction with their children, but distances between the area of living of parents and children act as the shadow price of those interactions (see Konrad et al., 2002). Parents choose their location at retirement yielding the highest utility, either the host or the origin country.

The parent's level of satisfaction depends on private consumption C_{pj}, on S_{kj} the number of interactions with the child, and on a preference parameter for the country a_j ultimately chosen as residence[3]. Those variables are defined with reference to country $j = O, H$, O being the origin country and H the host country, where the parents have accumulated work experience and savings for their retirement. The utility function is $U_j(C_{pj}, S_j, a_j)$, with $\partial U_j / \partial S_j > 0$[4]. The location choice of p depends on the price of interactions, which is much higher when the parent and the child choose different countries. We denote the price by $1 + d$, d being the distance between the countries. We normalize d to 0 when both agents live in the same country, but contact and visits become more expensive as distance between residence countries grows (phone calls, plane or train tickets cost more) and $d > 0$.

Notional incomes in both countries, Y_O and Y_H, also differ[5]. Assuming that the child chooses to reside in the host country H, where he has been raised as a second generation immigrant, the budget constraint is $C_{pH} + S_H = Y_H$ if the parent chooses H, and $C_{pO} + (1+d)S_O = Y_O$ if he chooses to return to the origin country O. The parent seeks to maximize the utility function $U_j(C_{pj}, S_j, a_j)$ with respect to the previous budget constraint. The location choice is given by a comparison of the corresponding indirect utility functions, denoted by V_O and V_H, and the parent decides to return home if $V_O(Y_O, d, a_O) > V_H(Y_H, a_H)$. Otherwise, he decides to stay in the host country.

The decision depends then on a comparison of the notional incomes in both countries, the price of interactions and the preference parameter for each country. For instance, with a

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[2] We consider only children in our analysis, but this should be taken as proxy for all persons whose interaction generates increased utility to the parents. So, children are used instead of aunts, grandparents, sisters or friends made during younger years as long as those individuals are adults and therefore make their own location decision.

[3] We therefore treat children as a consumption good.

[4] The utility function is assumed continuous, twice differentiable and concave with respect to the first two terms.

[5] Two interpretations are possible: if pension flows are identical in both countries, then the different costs of living imply different standards of living. But it may also be that real pension payments are not equal, if capital is not perfectly mobile between the countries and/or if pension benefits cannot be fully claimed in the home country.

utility function of the form $U_j = \ln C_{pj} + \beta \ln S_j + \gamma \ln a_j$, with $\beta > 0$ and $\gamma > 0$ a positive parameter, we easily deduce the optimal values for private consumption and attention. The difference $V_O - V_H$ is equal to $V_O - V_H = (1+\beta)\ln(Y_O / Y_H) - \beta \ln(1+d) + \gamma \ln(a_O / a_H)$, and the parent chooses to return if $V_O - V_H > 0$ [6]. The model leads to the following results: first, as the parent values interactions, he/she will attach more weight to the income differential. Second, the higher price of contact and visits when the distance increases, also lead to a lower probability of return (the amount of attention is reduced). So, the location of the child matters since it influences the parent's decision through the price of contact[7].

As it stands, the previous setting suggests that there is only one choice of location or indifference between locations. With several family members, the problem is different. For instance, consider the case of two children, so that both children live in *H* or *O*, or one chooses the origin *O* and the other one chooses *H*. In the latter case, there may exist a third choice for the parents. By spending some time in both countries, the migrant is in a position to influence the price of contact and visits with the rest of the family. Imagine that the migrant returns temporarily to the origin country. Then, he will spend some time only with other family members currently living in that country; but when coming back to France, he will have visits only with family members located in France. We named this strategy the "va-et-vient".

If the parents spend, for example, 6 months in each country, the price of attention with respect to each child is now lower. It would be equal to one half when the child lives in *H* and the parent is in the host country, and also equal to one half when the child lives in *O* and the parent is in the origin country. But the parent supports a fixed cost when choosing the "va-et-vient" (for instance, owing to housing in both countries). If this fixed cost is not too high, the parent will choose the "va-et-vient" strategy since it provides more contact with both children. One expects the "va-et vient" to be more probable the higher the cost of attention. This can be explained by the higher cost of buying plane tickets every time parents want to see their child compared to the solution of paying for one return flight per year in the case of "va-et-vient". As costs of transportation are positively related to the distance between the two countries,

[6] When β=0, the setting is exactly the one presented in Dustmann (2003). The higher the standard of living in the origin country, the higher will be the probability to return. And similarly, the higher the preference for the origin country, the more returns will happen.

[7] If the child chooses *H*, then two counteracting effects are an income-effect inciting the parents to return and a lower price of attention in *H* inciting the parent to stay in the host country. Now, if the child chooses to live in the origin country *O*, both effects act actually in the same direction and provide increased incentives for the parent to return.

more distance between a parent and their children should favour a solution of "va-et-vient" (which also depends on the cost of accommodation in both countries).

The location of children and more generally of every individual whose interactions lead to increased utility has a central role as the determinant of the preferred location. This is different to the framework analyzed in Dustmann (2003), where children always follow their parents. The location of all family members in the same country leads to higher incentives for choosing this location. But as children are spread across the host and the origin country, then the choice of a "va-et-vient" strategy becomes more probable. In addition, interaction with children is a service without any direct substitute (see Ehrlich and Lui, 1991; Laferrère and Wolff, 2004). As elderly parents are certainly expecting immaterial transfers and attention from their children, it increases the probability of time sharing between the host and the source country. Also, one expects that the further away from the nuclear family the individuals are, the less these interactions matter[8].

So far, we have assumed the exogeneity of children's location choice. A central concern here is to know how restrictive this assumption is. At the time of retirement for migrants, children are most often adult and have frequently a paid job, either in the origin or host country. If we allow for children deciding whether they move closer to their parents (or move far away from them) at the time of retirement, the cost of such a move may be considerable for the child. They will have to quit their paid activity, and will also suffer from the loss of social contacts.

Konrad et al. (2002) consider a more general model of family location where siblings are altruistic towards the parents and both parents and children are allowed to choose where to locate, depending on where the parents and siblings are located. In that case, the firstborn child's location decision should influence the location choice of latter born children. Locating further away from the parents allows to shift part of the burden of providing parental care. The "va-et-vient" choice is not a strategy in this model, which is more appropriate to explain a "geography of the family" rather than the location of immigrants at retirement. It may still be the case that in migrants' families, children (and other family members) make independent location choices. Younger children entering their adult life may for instance decide to live in the same country as the one chosen by their parents.

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[8] This hierarchy may be explained by the evolutionary theory of sympathy between relatives (see Bergstrom, 1996). Following the theory of kin selection given by Hamilton's rule, one can define a coefficient of relationship between kin such that children and parents matter the most, then siblings, then grand-parents, uncles, aunts, less close friends and acquaintance having ultimately the lower weight.

Then, first order conditions would suggest a simultaneous equations model, where the children variable in the parental choice equation is endogenous. But if location decisions of family members are all simultaneously taken, it becomes less clear to understand the rationale for a "va-et-vient" strategy. We will discuss the problem of endogeneity of the other family members more closely when presenting the empirical results.

3. Description of the Data

In this paper, we use a single cross-sectional data set in which the range of questions goes far beyond any traditional survey used until now for studying returning immigrants. The PRI (Passage à la Retraite des Immigrés) survey has been collected by the 'Caisse Nationale d'Assurance Vieillesse' from December 2002 to March 2003 in France, in collaboration with the 'Institut National de la Statistique et des Etudes Economiques'. The sample consists of individuals aged between 45 and 75, who were born abroad or of foreign nationality, but live in France at the date of the survey. Each respondent has been asked a wide range of questions related to his individual migration moves. Also, a detailed picture of the family members including parents, siblings and children is gathered together with the migration history, their position with respect to either paid activity or retirement, health, intergenerational transfers, income, wealth and housing, and many other indicators of social assimilation.

The sample, which is representative of the migrant population currently living in France, is composed of 6211 individuals, for which 51% originate from Europe and 38% from Africa. Nationalities are rather concentrated as six countries account for 70% of the total. These are, in decreasing order of their size: Portugal, Italy, Spain, Algeria, Morocco and Tunisia. More women originate from the first three countries (56%) than from the three remaining (33%). Males are older than women (34% over 60 years old compared to 29%). Recent predominantly female migration in France has tended to equalise the previous male dominated gender imbalances. Finally, average number of years since migration is 33, with an average age at migration of 24.

In order to better understand the location choices of migrants after retirement, one would ideally need a panel data set that follows individuals over the years and across the different locations. The cost of finding individuals after they move in another country is most

probably prohibitive and therefore researchers often rely on intentions[9]. We proceed in the same way in this paper. Although this strategy is necessary considering the cross-sectional property of our data set, it is clear that it is subjected to potential bias due to subsequent changes of intentions. This potential bias has been extensively considered in Dustmann (2003), who showed that 86% of those who returned in the GSOEP between 1985 and 1997 had indicated their intention to return in 1984. Also, Gordon and Mohlo (1995) using the General Household Survey found that 80% of individuals who expressed an intention to move had actually migrated within the following 5 years[10].

The exact wording of the return intention question is: "at the time of your retirement, would you like to: stay in France – return to the origin country – perform the 'va-et-vient' between France and the origin country – do not know yet?". Two comments can be made here. First, we restrict our analysis to respondents who are not retired at the time of the survey, which reduces our sample to 4336 observations. Second, since individuals are all over 45 year old, we can expect them to have a rather clear idea of their location decision when they retire. It seems important to note that the labour market status is particularly important for migrants. Returning to the origin country, while still in employment, may be very costly because of the loss of current income. The benefits of the initial migration move are certainly lower when retired. So, higher mobility can be expected at the time of retirement. However, until now, most of the literature on return migration has focused on returns during activity for individuals.

In Table 1, we give the percentage for the different answers given to the preferred choice at retirement. Relatively few immigrants who live in France at the date of the survey state that they will return to their home country (7%), whereas a large proportion intends to stay in the host country (58%). But the most striking figure is the very high proportion of those who state they will spend a fraction of the year in the host and in the home country. The frequency of the 'va-et-vient' strategy is around 24%.

A central area of concern is to determine whether the importance of this 'va-et-vient' strategy is confined to our data, for instance owing to some strange features of the French pensions system that makes it particularly attractive. As described on websites linked to the French government, no restrictions are imposed on the payment made abroad for pensions

[9] The GSOEP has been used for studying returns using the attrition property of the data set where a "moved abroad" is indicated (Dustmann, 2003; Constant and Zimmermann, 2003). Burda et al (1998) have also used the GSOEP to investigate moving intentions of East Germans to West Germany.

[10] See Manski (2003) for a demonstration of the importance of using intentions in economics.

accumulated in France[11]. In fact, as much as 8% of all pension payments are made to residents abroad (CNAV, 2001). This suggests that the "va-et-vient" does not appear to be resulting from particularity of the French pensions system. The "va-et-vient" has already been documented by other areas of specialisation. Sociologists observed a similar proportion of "va-et-vient" for retired Italians and Spanish immigrants in Switzerland (Bolzman et al., 1993). Gerontologists have studied the question of "seasonal" migration for retired immigrants (Hogan and Steinnes, 1992, 1998; McHugh, 1990), where retired individuals spend part of the year in southern sunnier states of the US. Although the economic literature has until now largely ignored this case, it seems that the "va-et-vient" decision does indeed constitute an extra strategy for retired immigrants.

We have two other sources in the data set that confirm the importance of the "va-et-vient" choice at retirement. First, the intention of the partner (if any) is asked of the respondent. Not surprisingly, intentions are highly correlated, the corresponding proportions being equal to 21.1% for the "va-et-vient" and 61% for the stay in the host country. Since both partners are expected to live in the same country during retirement, both decisions are highly interdependent. Also of interest is the fact that respondents are asked about the current choice of their friends and social network ("nationals", see Table 1). The choice of "va-et-vient" appears even higher for those: around 30% among individuals from the same origin country as the respondent, whereas the choice to stay in France is slightly lower (around 40%).

After having shown the importance of this extra-strategy, we now seek to better understand its main motivation. We give the reasons chosen by respondents for their location in Table 2. Regarding the decision to stay in France, the main motivation is the presence of children and family. The second most important reason is that the respondent feels better in the host country, which is very vague and a not very informative indication. The main reasons for a return at retirement are the willingness to join the family (76%), the ownership of a residence (59%) and the lower cost of living (58%)[12]. We may expect the first two motives to be highly correlated. For the "va-et-vient" intention, the main motivations are all linked to the family. In particular, 54% say that they want to come back often to see their children and 23% say that they have family in both countries. So, accounting for the different motives reported

[11] A simple search on google with the key words: "retraite a l'etranger" leads to official webpages indicating the apparent easy steps to claim pensions benefits in case of a move abroad (see for instance the following link: http://www.expat.org/retraite/retraite_etranger.htm).

[12] Respondents were asked to say yes or no to each answer, which explains why percentages do not add up to 100%.

by the migrants suggests that the main reasons for the location at retirement deal with family considerations.

Location intentions by origin countries are in Table 3. A comparison by continents shows that Europeans and Asians tend to mostly favour the stay in the host country, while Africans and Middle Easterners choose more often the "va-et-vient". But breaking down the continents further introduces large discrepancies: North Europeans tend largely to prefer to stay in France, and the same applies to Eastern Europeans. The "va-et-vient" is a much more popular option amongst the Portuguese (41%), whose intentions dominate by far all other single countries considered. Many Tunisians currently living in France also intend to perform a "va-et-vient" between their origin country and France (40%). Finally, the intention to return is comparatively more important for Central and Southern Africans, the Portuguese and the Americans.

In Table 4, we present the characteristics of the sample according to the three locations choice given by the respondents. For the purpose of our analysis, we choose only the individuals who have reported a location decision (stay in France, return, or "va-et-vient"), which left us with a sample of 3915 observations. Females on average tend to desire more often to stay in the host country, the same applies for older individuals. The "va-et-vient" appears to be more popular amongst men and younger individuals. More years of education does increase the decision to stay in France. Intentions to stay in the host country are more likely with many years since migration, whereas the more recent immigrants favour a return. The "va-et-vient" appears to be the preferred choice for immigrants with intermediate years since migration (from 20 to 39 years). Finally, levels of income (measured at the household level) do not seem to be associated with any clear-cut location intention[13].

We finally consider the locations of the other family members. Information is not identical for all family members. We know the current country of residence of parents and siblings of interviewees. For other family members (grandparents, uncles, aunts, etc), the interviewees communicate whether some of them are living in the origin country, without any further details on their position within the extended family. Characteristics of children of interviewees are well described. For each of them, the survey provides their age, their country of birth, and their current country of living. Generally, no information is provided on the intended location of family members at the time of retirement for interviewees.

[13] In the PRI survey, there is no information concerning the migrant's level of personal income. This is certainly not problematic in the context of our problem, since the migration decision at retirement is likely to be a joint decision from both spouses as shown by the descriptive statistics reported in Table 1.

More than 8 over 10 respondents with parents in France intend to stay at retirement. Conversely, only 58% of respondents who have parents living in the origin country intend to stay in France. Only a few immigrants have no children in France (10.5%), and a similar proportion have children in the home country (13.5%). Clearly, the location of children appears to make a difference. When the respondent has children in France, the preferred location choice at retirement is the host country for 66.1% of migrants, but this proportion equals only 52.7% when there are some children in the origin country. In the latter case, we observe a significant increase in the probability of returning to the origin country, respectively 17.1% instead of 7.2%, and the frequency of "va-et-vient" is also slightly higher.

These descriptive results suggest that family location certainly matters when explaining migrants' location at retirement, but results in Table 4 also show that characteristics differ widely whether the interviewees intend to stay in France, to return to the origin country or to perform a "va-et-vient" across both countries. Thus, we turn to a multivariate analysis to better understand whether the location of other family members is really helpful to explain the migrant's intention.

4. Econometric Analysis

4.1. Empirical strategy

According to the data, each migrant faces three location decisions: he may either stay in the host country ($j = 1$), return to the origin country ($j = 2$) or spend some time in both the origin and host countries ($j = 3$). For these random alternatives, we denote the corresponding utilities by $U_j = \beta_j X + \varepsilon_j$, with X a set of individual explanatory variables, β_j the associate vector of coefficients for each alternative j ($j = 1,2,3$), and ε_j a random perturbation. The probability for a migrant to choose outcome j is $\Pr(j) = \Pr(U_j > U_k, U_j > U_l)$, with $k,l \neq j$.

Under the assumption that the stochastic utilities are independently and identically distributed with extreme value distribution, the corresponding model is the classic multinomial Logit model. The probability of occurrence for the alternative j

is $\Pr(j|X;\beta) = e^{\beta_j X} / \sum_{i=1}^{3} e^{\beta_i X}$. Since choice depends only on utility differences, identification is achieved by normalizing the utility of an alternative to zero. We will always define the intention to stay in France as the base category. Estimation of the MNL model is straightforward, but a central problem is its underlying assumption of the independence of irrelevant alternatives, such that the odds for any pair of outcomes are determined without reference to the other outcomes that might be available.

In our analysis, we test the IIA assumption using a Hausman-type test proposed by Hausman and McFadden (1984). The test involves three subsequent steps. First, we estimate the full model with all outcomes included, the resulting vector of estimated coefficients is $\hat{\beta}_F$. Second, we estimate a restricted model by eliminating one outcome category and obtain the estimates $\hat{\beta}_R$. If $\hat{\beta}_{FF}$ is the subset of $\hat{\beta}_F$ after eliminating coefficients not estimated in the restricted model, the Hausman test of IIA is $H_{IIA} = (\hat{\beta}_R - \hat{\beta}_{FF})'[\hat{V}(\hat{\beta}_R) - \hat{V}(\hat{\beta}_{FF})]^{-1}(\hat{\beta}_R - \hat{\beta}_{FF})$. The statistic H_{IIA} is asymptotically distributed as chi square, degrees of freedom being equal to the number of raws in $\hat{\beta}_R$ under the null hypothesis (i.e if IIA holds true). As $\hat{V}(\hat{\beta}_R) - \hat{V}(\hat{\beta}_{FF})$ is not necessarily positive semi-definite, H_{IIA} can be negative[14].

4.2. Results assuming exogenous location of family members

Let us now discuss the econometric results. For the estimation, we begin by estimating the MNL model where we only introduce the characteristics of the migrants, including their origin country. We include as covariates in the regression: gender, age, presence of a spouse, age at migration, years of education and a measure of the household's income. We subsequently discuss the effect of the additional family variables dealing with the location of parents, children, siblings and more distant relatives. We report the corresponding estimates in Table 5, the base category being the decision to stay in France. To make the interpretation of estimates easier, we present the marginal effects and their standard errors.

We first consider the decision to return to the origin country (keeping in mind that staying in France is the reference). This choice is significantly decreased for women, and

living as a couple is not relevant for the optimal choice. Years of education exert a negative impact, one additional year leading to a decrease of 2.2% in the return probability. Income measured at the household level does not influence the return decision. The location choice is strongly influenced by the migrant's trajectory, since duration of migration significantly reduces the return decision. Staying in France one additional year reduces by 3.5% the probability of returning to the origin country. As the migrant's age is also the sum of age at entry and duration of migration, this means that a migrant who has come to France early in his life cycle has a strong preference for staying in France at retirement. All of these findings are not surprising[15].

In order to control for country heterogeneity, we also introduce in the regression a set of dummy variables corresponding to the different regions of origin. With respect to countries of Northern Europe, the probability to return is significantly increased for persons originating from the countries of Southern Europe and Central and Southern Africa. In the former case, the return probability increases by 8.6% and by 16.8% in the latter. It is also slightly more important for persons who come from America, but the marginal effect is just below conventional thresholds for statistical significance.

Turning to the "va-et-vient" strategy, we first observe that several characteristics have a similar impact on the "va-et-vient" and the return decision. The probability of "va-et-vient" is less important for women, higher-educated persons; and both age and migration duration exert a negative impact on this location choice. For instance, one additional year in France reduces the "va-et-vient" probability by 7.4 per cent. As opposed to the return category, we now observe that household's income has a positive effect on the "va-et-vient" decision (at the 5% level). A simple explanation is that increased housing and travel costs are associated to the "va-et-vient" strategy, so that poorer or liquidity constrained households are less likely to share their time between two different countries.

As for the country effects, we observe that the "va-et-vient" is significantly less frequent for migrants emanating from Northern Europe (which is the reference left-out category). To quote a few figures, the probability is increased by 25.4% for those coming from Southern Europe, by 22.5% for Northern Africa, and by 22.7% from Middle East. This

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[14] On this point, see the further discussion in Hausman and McFadden (1984). In our context, several Hausman tests of the IIA are possible. After having chosen a base category, two tests can be conducted by excluding each of the remaining categories to form the restricted model. Another test can be computed by changing the base category.

[15] To further investigate this result that better assimilated migrants are less likely to return, we have also estimated models with dummy variables for respondents holding the French citizenship and owning a home in the home country. Although both covariates are most probably endogenous to the location decision, they are negatively and significantly associated with the return probability at retirement.

result may be due to the fact that the longer the distance separating the origin country and France, the higher the probability of choosing the "va-et-vient". Other unmeasured cultural aspects, however, may also explain location intentions at retirement since migrants from Southern Europe are the most likely to rely on a "va-et-vient" strategy.

Two additional comments are in order concerning these MNL estimates. First, when testing the relevance of the IIA assumption, we obtain a negative test statistics (see Table 5). As pointed out in Hausman and McFadden (1984, p.1226), it is evidence that the IIA assumption has not been violated. Second, when comparing estimates respectively for the return and for the "va-et-vient" decisions, we have shown that many characteristics were acting in the same direction. So, it seems worthwhile to know whether the "va-et-vient" choice is really a different one from the return strategy. We perform a simple Wald test for linear hypothesis and investigate whether the coefficients of the covariates are identical for both the return and "va-et-vient" decisions. The null assumption is clearly rejected, and we take this as further evidence that the "va-et-vient" strategy is a different choice deserving more investigation[16].

We then reestimate the MNL model introducing additional variables describing the location of other family members (see Table 5). In general, the effects of covariates remain unaltered, although there are some slight differences. The coefficient for years since migration is still significant, but its size is reduced by a factor of 2. This is an interesting result as this coefficient approximates better the 'true' assimilation in the host country as family variables are now controlled for. As suggested in our theoretical framework, family variables are highly relevant to explain both return and "va-et-vient" intentions.

We note that the different variables dealing with family locations are all significant for the return decision (except for the presence of parents in France). This choice is particularly associated with the location of siblings, other family in the origin countries and children. The probability to return to the origin country is a decreasing function of those family members who are currently living in France. Conversely, the intent to return at retirement is more often quoted when the migrant has parents, siblings, other family members and children in the origin country.

Results are slightly different for the "va-et-vient" decision, although the data clearly indicates that these family location variables are still jointly significant. Having parents in France strongly reduces this location choice at retirement, while the impact of siblings in

[16] The corresponding statistic is equal to 61.8 with 13 degrees of freedom, and thus highly significant.

France is now less significant (compared to the return decision) and having children living in France does not influence the migrant's intent. The data indicates an insignificant effect when parents live in the home country, while having siblings, other family members and especially children in the origin country strongly increases the probability for the migrant to choose the 'va-et-vient'.

Generally, those results confirm the idea put forward by Dustmann (2003) of explaining return migration by family variables. Nevertheless, this author was not able to distinguish the children according to their current location in the home or the origin country. The use of our more comprehensive data allows us to empirically demonstrate that the present location of not only children, but also other family members is necessary to understand location's decision of retirees. Now, the question arises of whether we can give a causal interpretation to those family variables on the optimal location of the respondents at retirement.

4.3. Family location as an endogenous process

Until now, we assumed that respondents take their retirement decisions conditional on the location of other family members. Here, exogeneity depends on the assumptions that location choice of other family members including children is exogenous. It is however likely that decisions within the household are taken simultaneously, where other family members may move where parents would like to spend time. For instance, children may have a higher propensity to return home if parents express a wish that they would like to retire in their home country. In that case, the estimates of the effects of location of children on parental intentions are subject to reverse causality. Let us further investigate this problem.

We should first emphasise that the severity of this endogeneity problem most probably differs across the family ties considered in the analysis. In particular, consider first the ties between respondents and their siblings. Keeping in mind that our sample is composed of older individuals (of at least 45), siblings can be expected to have their own children, parents-in-law and other friends and ties. It appears rather improbable that siblings may move following the location decision of respondents at retirement. Also assuming that siblings do not retire at the same time, the costs of multiple moves caused by the location of siblings appears to be much too high. Similar reasoning applies to other family members such as aunts and uncles. The parents of respondents can be expected to be rather old when the respondents retire. It seems rather improbable that they may decide to follow their children in their location decision when

aged of 80 or more. The resulting costs (financial and health related) of a move for them are again certainly much too high at this later stage of life to be recovered by subsequent benefits.

We believe that this is mostly in the case of the respondent-children relationship that the question of endogeneity arises. On the one hand, young children may be forced to join their parents who decided to return (in a tied move). On the other hand, children may decide to move where their parents intend to spend their retirement for caregiving purposes. If that is the case, then the estimated coefficients previously presented can not be interpreted as causal. Here, we would like to point out that this problem is much more relevant for the return than for the "va-et-vient". This latter choice is, in most cases, not feasible for active children. Very few jobs offer sufficient flexibility to allow the worker to split the residence across two different countries during the year.

One way of testing for the presence of simultaneity in the location decisions is to investigate the association between the location decision of respondents and the effect of their daughters and sons. Interestingly, although fertility decisions may be taken simultaneously with return decisions, the gender of the child is always exogenous (see the further discussion in Dustmann, 2003). In a regression of the intended location at retirement of individuals on their children differentiated by sex, a simultaneous location decision would necessarily imply the coefficients for girls and boys to be identical. Evidence of different coefficients is compatible with a story where children cause parental location decision. Assuming further that parents consider the origin country environment as more beneficial for daughters than for sons, we can expect the coefficients for girls to be positive, implying more returns for parents. The difference in the effects should be more important in very traditional communities.

Our results are presented in Table 6. A first comment of interest is that children coefficients are generally not significant for the return in the home country in models where we do not introduce the location of children (models 1 to 3). Conversely, they are significant when introducing child location (model 4). For the "va-et-vient", the opposite result is observed. This result confirms our theoretical approach where individuals tend to reduce the cost of separation from the family by adopting such a strategy. Spending part of the year in each country makes it possible to maintain contacts with children wherever they live (in the host or the origin country).

We note that young children tend be associated negatively with the propensity to realise the "va-et-vient", with a 1.39% decrease for each additional child (model 1)[17]. Adding in model 2 the number of daughters implies that the coefficient for children measures now the effect of sons only. We observe significantly different estimates for sons and daughters: each boy decrease the probability to conduct a "va-et-vient" by 3.9%, whereas each girl increases it by 1.26% (the difference between the coefficient of children and girls). This is incompatible with a simultaneous decision on fertility and location decision at retirement, and suggests that the coefficients can be taken as causing the decision to conduct a "va-et-vient"[18]. When looking at the effect of children whatever their age, only the number of daughters increases the probability of a "va-et-vient".

For the return versus the stay in the host country, we find few effects of children when their location is not differentiated. When we introduce those living in the host and the home country, we find that each additional boy living in France decreases the probability of return by 0.74% whereas each boy living in the origin country increases it by 2.74% (model 4, Table 6). Importantly, the difference between the coefficients of sons and daughters living in the origin country is significant at all conventional levels. This is again support for a story where children cause the return of parents.

All those results are observed given the present location of children. In order to further investigate the potential endogeneity of the child location in the intended location of parents, we have attempted to estimate a simultaneous model where the determinants of the current location of the children are estimated jointly with the intended location of the respondents at retirement (Table 7). As the location of children may differ in the same family, we construct a new sample where each child is counted as an observation. We end up with a new sample of 11349 children, corresponding to 3659 parents. For each observation, we have then some information on both the parent and child's characteristics.

We first estimate a multinomial Logit model to explain the parent's choice of preferred location at retirement and introduce a dummy variable when the child lives in the origin country. So, the child's location is exogenous in the regression (model 1, Table 7). We correct the standard-errors for potential correlation of the parental choice across children in

[17] We obtain similar results when we control for the other family variables introduced in Table 5. We chose to exclude them as there may be potentially endogenous in the location decision of parents.
[18] We have also estimated the previous model with individuals from Southern Europe and North Africa only. When focusing on immigrants coming from more traditional countries, the probability to do a "va-et-vient" is decreased by 6% for each additional boy while no effect of daughters is detected.

the same family using the Hubert-White method (White, 1980) [19]. We find similar results to those described in Table 5. That the child lives in the origin country is associated with an increase propensity to return and to realise a "va-et-vient". Then, we relax the exogeneity assumption and estimate the same model with an instrumented child's location.

Let us briefly describe the underlying econometric model. First, there is an equation for the parent's preferred location at retirement j given by $U_{jk} = \beta_j X_k + \delta_j L_k + \varepsilon_{jk}$, where k as subscript stands for the child, L_k is the current location of the child (it is equal to 1 when the child is located in the origin country, and to 0 otherwise); and ε_{jk} is a random perturbation. The ε_{jk} are extreme value distributed. Second, there is an equation for the child's location, which is given by $L_k^* = \alpha Z_k + \mu_k$, L_k^* being the latent value associated to L_k. The μ_k is a random perturbation normally distributed. The parameter of interest for our analysis is δ_j.

Both equations define a simultaneous recursive model with one Probit equation for the child's location and a MNL Logit for the parent's preferred location with the endogenous child's location as an additional explanatory variable. For the estimation, we add to the MNL model an unobserved heterogeneity term (specific to each observation), and we suppose that this perturbation and the residual of the Probit equation follow a bivariate normal distribution with unitary variances and a correlation coefficient taking a value in the range –1 to 1. We estimate jointly the Probit and the multimomial Logit equations using a maximum likelihood method. Residuals are integrated out numerically, since no closed form solution to the likelihood exists (see the further discussion in Lillard and Panis, 2003)[20].

According to the results of the joint estimation (model 2, Table 7), the location of each child is explain by gender, age and birthplace of the child. We expect the birthplace to exert a significant influence on the future location of the child. Children born in France hold the French nationality, whereas those born abroad would face more difficulties to obtain it. Girls are also expected to be located preferably in the origin country if the cultural environment is judged more beneficial for them. Younger children are also more likely to be located in the

[19] It is not possible to control for unobserved heterogeneity by introducing fixed effects in the regression since the choice of a parent is identical across all children of the same family.

[20] We specify 20 points of integration per dimension for the bivariate distribution, so that there are 400 points of support. The program is written in aML and available upon request to the authors. Our results are very close to those obtained with a standard instrumental variable approach, where the predicted probability for the child to live in the origin country is introduced into the MNL Logit equation for the parental preferred location.

same country as their parents at the time of interview, as they are not financially independent. Conversely, older child may make their own decision to move back to the country of origin.

Simultaneous results in Table 7 indicate first that the probability for a child to live in the origin country is greater for female and older children, and it is much higher when the child is born in the origin country. Also, we find that the coefficient for the child location in the origin country is still significant for the return versus the stay in the host country. Correcting for the endogeneity of the child location implies however a decrease by half of this coefficient. It is no more significant for the "va-et-vient" versus the stay in the host country. This is further support for a story where the child's location is less relevant for the "va-et-vient", as parents may spend part of the year in each country and still be able to minimise the cost of separation.

5. Concluding Comments

In this paper, we investigate a new migration strategy for immigrants at the time of their retirement, which is to spend a fraction of the year in the host and the rest in the origin country. We explain why this strategy is unlikely to be confined to our data set and argue that it may be chosen by the increasing proportion of workers who reach retirement while having migrated earlier during their working life. We show that the main determinants of this "va-et-vient" for French migrants differ significantly with respect to the choice of making a definite return to the origin country. Most notably, immigrants from Southern Europe, Northern Africa and the Middle East are more likely to choose this strategy. This is also the case for richer households, lower educated individuals and those who migrated more recently in the host country.

When investigating the effect of family ties, we discuss their potential endogenous location with respect to the choice of respondents. We argue that this endogeneity is more likely to arise for children, and is less likely to bias our estimates for more distant relatives. When investigating the effect of children, we use an identifying strategy related to Dustmann (2003) that relies on the randomness of the sex composition of siblings. We find that children cause location choice of respondents at retirement. An interpretation for this outcome is that respondents reduce the cost of separation from their children and family ties by choosing to perform a "va-et-vient" between the host and the origin country at retirement.

This is a new result with respect to the previous migration literature, which has important policy applications with respect to housing markets, economic growth, remittances, or social assimilation. Along with additional evidence on the magnitude of this phenomenon, a better understanding of the consequences of the "va-et-vient" strategy by migrants is needed, and we leave these issues for future research.

Table 1

Preferred location at retirement (%)

Respondent	France	59.1
	Return to origin country	7.2
	'Va et vient'	24.0
(N=4336)	Don't know yet	9.7
Partner (1)	France	61.3
	Return to origin country	8.5
	'Va et vient'	21.1
(N=3647)	Don't know yet	9.1
Nationals (2)	France	39.4
	Return to origin country	10.5
	"Va et vient"	29.2
	Don't know anybody with same nationality	12.7
	Differs with generation	4.0
	Differs between ethnic groups	1.2
(N=4336)	Don't know	3.0

Source: Survey PRI 2003

(1) Only asked to respondents with a partner.

(2) Respondents are asked about regular choices for individuals from the same origin country as the respondent.

Table 2

Motives for the preferred location (in %)

Remain in France (1)	
Has children or family members in France	76.2
To benefit from healthcare	7.8
No freedom in origin country	3.7
Has no more connections at home	11.1
Difficulty to settle back into origin country	11.5
Consider himself a foreigner at home	9.9
Partner desires to remain in France	12.8
Is happy in France	45.2
Other	6.0
Return in origin country (2)	
To reunite with family	75.8
Life is cheaper	57.7
Owns a house or business there	59.4
Doesn't feel well in France	10.3
Better climate there	5.2
Love for home country	12.3
Other	14.2
"Va-et-vient" (1)	
To keep in touch with children in France	58.1
Has got family in both the origin and home country	52.8
Love both countries	45.8
For French social security	13.8
Owns a house or business in both countries	20.4
To benefit from a better climate	16.9
Other	4.8

Source: Survey PRI 2003

(1) Total adds to more than 100% as several reasons may be chosen.

(2) Respondent answers "yes" or "no" to each motive.

Table 3

Preferred location by origin country

Origin country	Preferred location		
	France	Origin country	"Va-et-vient"
Europe	67.2	7.9	24.9
Northern Europe	84.9	3.7	11.4
Southern Europe	62.9	9.1	28.0
Italy	86.9	4.5	8.6
Portugal	46.8	12.0	41.2
Spain	73.5	7.9	18.6
Eastern Europe	77.5	3.1	19.4
Africa	62.9	7.8	29.3
Northern Africa	66.1	4.8	29.1
Morocco	67.9	5.8	26.4
Algeria	70.0	3.0	27.0
Tunisia	53.7	6.6	39.7
Central and Southern Africa	49.3	20.7	30.0
America	60.9	12.0	27.2
Middle-East	62.2	6.7	31.1
Asia	72.4	8.6	19.0
Total (%)	65.5	7.9	26.6

Source: Survey PRI 2003

Table 4

Descriptive statistics

Individual characteristics		Preferred location for retirement			Column percentages
		France	Origin country	"Va-et-vient"	
Sex	Male	62.0	8.4	29.6	57.0
	Female	70.1	7.2	22.7	43.0
Age	Less than 50	62.9	8.5	28.6	29.7
	50 – 54	62.9	9.0	28.1	31.3
	55 plus	69.6	6.6	23.8	39.0
Has a partner	No	69.8	8.3	21.9	15.0
	Yes	64.7	7.9	27.4	85.0
Years of schooling	5 less	59.2	9.0	31.9	45.3
	6 – 11	72.4	7.0	20.7	29.4
	12 plus	68.8	7.2	24.0	25.3
Years since migration	0 – 19	64.6	13.7	21.7	11.5
	20 – 29	59.5	8.6	31.9	23.4
	30 – 39	61.0	8.4	30.6	38.3
	40 plus	87.0	2.4	10.6	18.3
Household income	Quartile 1	68,1	8,6	23,4	25,0
	Quartile 2	66,1	8,0	25,9	25,0
	Quartile 3	60,3	9,0	30,7	25,0
	Quartile 4	67,5	6,2	26,4	25,0
Parents in France	No	62.1	8.6	29.3	83.6
	Yes	82.9	4.3	12.7	16.4
Parents in origin country	No	70.2	6.6	23.2	61.4
	Yes	58.0	10.0	32.0	38.6
Siblings in France	No	62.5	9.2	28.2	51.5
	Yes	68.6	6.5	24.9	48.5
Siblings in origin country	No	76.5	5.0	18.5	31.9
	Yes	60.3	9.3	30.4	68.1
Children in France	No	60.3	13.9	25.8	10.5
	Yes	66.1	7.2	26.7	89.5
Children in origin country	No	67.5	6.5	26.0	86.5
	Yes	52.7	17.2	30.1	13.5

Source: Survey PRI 2003

Table 5

MNL models of the location decision

Variables	Return		Va-et-vient		Return		Va-et-vient	
	Marg. e.	s.e.	Marg. e.	s.e.	Marg. e.	s.e.	Marg. e.	s.e.
Respondent's characteristics								
Female	-0.019**	0.008	-0.066***	0.015	-0.016**	0.007	-0.065***	0.015
Age (10^e-2)	0.017	0.074	-0.290**	0.147	-0.146*	0.081	-0.775***	0.170
Years since migration (10^e-2)	-0.350***	0.042	-0.738***	0.088	-0.002***	0.046	-0.367***	0.099
Live in couple	-0.006	0.011	0.023	0.021	0.000	0.010	0.018	0.022
Years of education (10^e-2)	-0.217***	0.082	-0.607***	0.159	-0.161**	0.079	-0.441***	0.162
Household's income (10e-5)	-0.011	0.019	0.061**	0.026	-0.011	0.018	0.061**	0.026
Origin country (reference = Northern Europe)								
Southern Europe	0.086***	0.030	0.254***	0.045	0.099***	0.031	0.264***	0.045
East Europe	-0.010	0.030	0.155**	0.068	-0.002	0.032	0.162**	0.068
North Africa	0.011	0.024	0.225***	0.048	0.021	0.024	0.222***	0.048
Middle and South of Africa	0.168***	0.060	0.198***	0.063	0.186***	0.066	0.190***	0.064
America	0.094	0.061	0.202***	0.078	0.109*	0.065	0.201***	0.079
Middle East	0.018	0.035	0.227***	0.064	0.032	0.038	0.225***	0.065
Asia	0.050	0.041	0.077	0.058	0.088*	0.051	0.112*	0.062
Family location								
Parents in France					-0.004	0.014	-0.140***	0.021
Parents in home country					0.013*	0.008	0.012	0.016
Siblings in France					-0.017**	0.008	-0.025*	0.015
Siblings in home country					0.019**	0.009	0.045**	0.018
Other family members in home country					0.020**	0.010	0.062***	0.021
Children in France					-0.031**	0.015	-0.023	0.027
Children in home country					0.076***	0.016	0.051**	0.024
Tests of linear hypothesis								
Return estimates = Va-et-vient estimates								
Value; d.f.; prob.	61.80; 13; 0.000				92.27; 20; 0.000			
Family location estimates = 0								
Value; d.f.; prob.					168.9; 14; 0.000			
Family location: Return = Va-et-vient								
Value; d.f.; prob.					32.4; 7; 0.000			
Test of H_0: IIA holds (return omitted)								
Value; d.f. ; prob	-8.99; 14; 1.000				-1.535; 21; 1.000			
Pseudo R^2	0.058				0.085			
Log likelihood	-3063.4				-2974.0			

Source: Survey PRI 2003

Note: Multinomial Logit models. Marginal effects and their standard errors after estimation are computed at the means of the independent variables. Levels of significance are respectively equal to 1% (***), 5% (**) and 10% (*). For each specification, the reference alternative is to stay in France and the sample comprises 3915 observations.

Table 6

MNL models of the impact of children's location

Specification	Return		Va-et-vient	
	Marg. e.	s.e.	Marg. e.	s.e.
(1) All observation (N=3915)				
Control variables: Individual + Country dummies				
Family variables: Number of children under 16	-0.0020	0.0033	-0.0139**	0.0069
(2) All observation (N=3915)				
Control variables: Individual + Country dummies				
Family variables: Number of children under 16	-0.0040	0.0055	-0.0399***	0.0110
Number of girls under 16	0.0053	0.0084	0.0525***	0.0165
(3) All observation (N=3915)				
Control variables: Individual + Country dummies				
Family variables: Number of children	0.0002	0.0031	-0.0085	0.0060
Number of girls	-0.0002	0.0044	0.0182**	0.0081
(4) All observations (N=3915)				
Control variables: Individual + Country dummies				
Family variables: Number of children living in France	-0.0074***	0.0033	-0.0093	0.0063
Number of girls living in France	0.0044	0.0047	0.0154*	0.0086
Number of children living in origin country	0.0274***	0.0058	0.0039	0.0167
Number of girls living in origin country	-0.0154	0.0105	0.0409	0.0279

Source: Survey PRI 2003

Note: Multinomial Logit models. Marginal effects and their standard errors after estimation are computed at the means of the independent variables. Levels of significance are respectively equal to 1% (***), 5% (**) and 10% (*). For each specification, the reference alternative is to stay in France and the sample comprises 3915 observations. Other covariates are similar to those of Table 5, without family location variables.

Table 7

The impact of the child's location on the parent's location decision

	Model 1 : Exogenous child's location				Model 2 : Endogenous child's location			
Variables	Return		Va-et-vient		Return		Va-et-vient	
	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.
EQUATION 1 – LOGIT MNL								
Constant	0.202	0.532	0.532*	0.310	0.383	0.567	0.690*	0.357
Respondent's characteristics								
Female	-0.591***	0.080	-0.409***	0.049	-0.682***	0.085	-0.488***	0.057
Age (10^e-2)	-2.758***	0.798	-2.743***	0.456	-2.787***	0.861	-2.825***	0.539
Years since migration (10^e-2)	-5.437***	0.496	-3.019***	0.273	-6.525***	0.536	-3.942***	0.321
Live in couple	-0.114	0.119	0.058	0.075	-0.128	0.127	0.046	0.086
Years of education (10^e-2)	-2.480***	0.790	-2.584***	0.481	-3.078***	0.842	-3.188***	0.559
Household's income (10e-5)	0.083	0.187	0.401***	0.104	0.136	0.201	0.463***	0.116
Origin country (reference = Northern Europe)								
Southern Europe	1.574***	0.265	1.363***	0.158	1.775***	0.278	1.567***	0.176
East Europe	-0.107	0.415	0.646***	0.211	-0.040	0.430	0.721***	0.237
North Africa	0.539**	0.260	1.177***	0.156	0.688**	0.273	1.325***	0.174
Middle and South of Africa	2.011***	0.258	1.418***	0.166	2.241***	0.273	1.650***	0.186
America	1.390***	0.332	1.153***	0.224	1.564***	0.356	1.330***	0.255
Middle East	0.796***	0.294	1.184***	0.175	0.970***	0.310	1.362***	0.197
Asia	0.919***	0.280	0.509***	0.185	1.000***	0.296	0.591***	0.207
Child' location								
Child in origin country	1.365***	0.109	0.531***	0.081	0.870***	0.178	0.026	0.161
EQUATION 2 – PROBIT					coef		s.e.	
Constant					-3.490***		0.087	
Child's characteristics								
Female					0.108**		0.053	
Age (10^e-2)					0.030***		0.003	
Born in origin country					1.697***		0.058	
Correlation between residuals					0.542*** (0.113)			
Log likelihood	-9039.4				-11720.5			

Source: Survey PRI 2003

Note: The first model is a standard MNL model with Huber-White corrected standard errors. The second model is a simultaneous recursive model with one MNL Logit equation (for the parent's preferred choice of location) and one Probit equation (for the child's location). Huber-White corrected standard errors are reported. Levels of significance are respectively equal to 1% (***), 5% (**) and 10% (*). For each specification, the reference alternative is to stay in France for the MNL model. The sample comprises 11349 child-parent pairs belonging to 3569 families.

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