Home leaving among second generation migrants in Spain: A Cross-classified Multilevel Analysis

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Abstract We investigate the transition outside the parental home for second generation migrants in Spain, a "latest-late" transition to adulthood country which has recently become a destination for migrants. We simultaneously take into account two sources of heterogeneity: the country of origin and the province of destination in Spain. Micro-census data provide an opportunity to study all large migrant groups coming from a variety of countries worldwide. Applying cross-classified multilevel analysis, we study the probability to live outside the parental home for migrants and natives. Results show that for second generation migrants in Spain, the country of origin contributes more to explaining the existing variability in home-leaving than the province of residence. Also, heterogeneity across migrant groups exists in terms of propensity to leave the parental home, although a geographical clustering is evident. Finally, we find a strong association between mean age at marriage in the country of origin and the propensity to leave home for second generation migrants.

1 Introduction

The literature on the transition outside the parental home only recently started to acknowledge the importance of studying the living arrangements of second generation migrants (see, e.g., [2], [3]) while, to our knowledge, most contributions on migrants' living arrangements study migration from one or few sending countries toward one or few receiving countries. Our contribution attempts to investigate the transition outside the parental home for second generation migrants in Spain by simultaneously taking into account the influence of their country of origin and final destination, which is

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considered as the province of residence. In fact, previous research documented that the timing and quantum of home leaving and marriage in Spain are characterized by regional diversity (see, e.g., [4], [5], [9], [11]). Hence, Spain is not considered as a homogeneous destination for migrants, but geographical differences are taken into account. Therefore, in this study Spain is not considered as a homogeneous destination for migrants, but geographical differences in the labour and housing markets as well as in the social acceptability of non-traditional family models are taken into account.

The main question which is addressed here is how second generation migrants, who have been socializing in Spain, experience their transition outside the parental home. Are second generation migrants comparable to Spanish peers with respect to the transition outside the parental home? Or do they show any difference? And if so, are these differences common to all young second generation migrants, or are there commonalities with respect to the country of origin? Moreover, does the province of residence matter for the housing transition? And if so, is the effect the same for migrant and Spanish young adults?

2 Data and Methods

We consider micro-census data as an opportunity to disaggregate large migrant samples according to their place of residence and country of origin, i.e. the two sources of heterogeneity which are of interest in this study. Hence, in order to address the research questions, micro-census data from the Spanish 2001 Population and Housing Census are used. The census is accessed via two different sources: individual-level information on a 5% sample drawn from the census are gathered from the Integrated Public Use Microdata Series International (IPUMS-I) ([7]), while the provincial-level information are provided by the Spanish National Statistical Institute (INE) ([6]). IPUMS-I collects comparable samples of individual-level data from population censuses, which are made available for public use. Information on the nativity status, country of immigration and years since immigration took place allow identifying second generation migrants. However, second generation migrants are identifiable only among those who were born in the country of origin (and who migrated before age 12, according to the usual definition) while those born in Spain from migrant parents are not identifiable according to census data. Therefore we refer to the so called “1.5 generation”. Migrants who report a correspondence between their year of birth and the year of immigration are excluded from our sample due to inconsistencies, following Cortina Trilla et al. (2008) ([1]).

Empirical analyses are based on a cross-classified multilevel logistic model where the outcome is the probability of living outside the parental home (see, e.g., [8], [10]). The multilevel structure consists of migrants at the first level clustered into a cross-classification of second level units defined by place of birth and province of current residence in Spain.

The final sample includes individual information for 6,761 second generation migrants aged 17 to 35 coming from more than seventy countries which we group into 35 sending areas (see Table 1) and residing in the 50 Spanish provinces (we exclude from the analyses the provinces of Ceuta and Melilla). We also rely on a sample of 562,648 Spanish individuals, for comparative analyses. Sending areas sample sizes

range from 15 to 1,528, the mean size being 193. Finally, from the World Marriage Patterns 2000 data produced by the United Nations we obtain information on the mean age at marriage for women in each sending area.

The model, presented in the latent index formulation, takes the form:

$$Y^*_{i(p,s)} = X_{i(p,s)}\ \beta + Z_p\ \gamma + W_s\ \delta + e_{i(p,s)} + u_p + v_s$$

$$i = 1,\ldots,n_{(p,s)}\ ;\ p = 1,\ldots,50\ ;\ s = 1,\ldots,35\ ;\ \sum_p \sum_s n_{(p,s)} = N = 6,761$$

$$e_{i(p,s)} \sim\ Logistic\left(0, \frac{\pi^2}{3}\right);\quad u_p \sim\ N\left(0, \sigma_p^2\right);\quad u_s \sim\ N\left(0, \sigma_s^2\right)$$

where

Y^*: unobserved propensity to leave the parental home, s.t. $\text{Prob}\left(Y = 1\right) = \text{Prob}\left(Y^* > 0\right)$
X: Individual covariates; Z: Provincial covariates; W: Sending Area covariates

As individual-level covariates we consider the following: gender (ref. woman), age, educational enrolment (ref. not in school), educational level achieved –primary or less, secondary (ref.), university– and employment status (ref. not employed). At the provincial-level we consider two indicators of the difficulty to enter the labour and housing markets, i.e. the youth unemployment rate and the proportion of owner-occupied households in the province of residence, and an indicator of the "modernity" of the cultural climate, i.e. the proportion of cohabiting couples. In the final model for the migrant sample, we also control for the mean age at marriage in the country of origin.

3 Results

Fixed effect and random effect estimates results from our cross-classified multilevel logistic model are presented in section 3.1 and 3.2, respectively. Section 3.3 shows the main results obtained computing predicted probabilities for some typical individuals.

3.1 Fixed effect estimates

According to Table 2, from a qualitative point of view, the effect of individual-level covariates does not differ much between second generation migrants and natives. As expected, the likelihood of living independently is higher for women than for men and increases with age. Women who are still enrolled in (higher) education are more likely to live with their parents, while the opposite association is found for men. In both samples, being employed is negatively associated with home-leaving for women while the association is positive for men; on the other hand, the lower the educational level achieved, the higher the likelihood of living independently. Youth unemployment rate in the province of residence is positively but poorly significantly associated with home-leaving for natives, while the association is not significant for migrants. The proportion of owner-occupied households does not have any effect. The proportion of cohabiting

couples, instead, shows a positive association with the probability of living outside the parental home in both samples. Finally, in the model for migrants we find that 1.5 generation migrants coming from countries where age at marriage is high are more likely to co-reside with their parents.

3.2 Random effect estimates

From a methodological point of view, we show that neglecting the cross-classified structure of the data, i.e. using a two-level model with individuals nested in provinces, would lead to overestimating the provincial variability in the home-leaving (Table 3). We show that the country of origin contributes more to explaining variability in home-leaving among migrants than province of residence. Residual variance both at the provincial and sending area levels remains significant even after controlling for individual covariates. Introducing provincial-level variables contributes to explain 31% and 30% of the residual provincial-level variance for the migrants and natives' samples, respectively. Finally, age at marriage alone explains the 17% of the residual variability across sending areas, thus suggesting that norms and behaviours which are typical of the country of origin, still play a role for 1.5 generation migrants when the residential transition outside the parental home is concerned. Moreover, Empirical Bayes predictions of province and sending area errors highlight interesting aspects of the sources of heterogeneity under study. For instance, as it is shown in the two top panels of Figure 1, the effect of province is similar for migrants and natives: provinces where the propensity to leave home is higher (red areas) for migrants also tend to show high propensities for natives. On the other hand, the bottom panel of Figure 1 clearly suggests that the behaviour of 1.5 generation migrants can be geographically clustered according to their country of origin.

3.3 Predicted Probabilities

Figure 2 presents the predicted probabilities of living independently for some typical individuals among migrant and Spanish young adults. To allow comparisons we use a random sub-sample of Spanish young adults and fit the model for second generation migrants including Spain as an additional country. We use the model with individual-level covariates only (i.e., model IPS+X). Not surprisingly, Spain is one of the countries with the lowest predicted probabilities to exit the parental home. It need to be noticed that uncertainty associated with predicted probabilities will be higher for sending areas which have smaller sample size. An interesting result that we obtained is the existence of a correspondence between mean age at marriage in the country of origin and the predicted probabilities for 1.5 generation migrants: young adults born in countries where mean age at marriage is high, tend to leave home later, all else being equal.

4 Conclusion

This paper investigated the transition to independent living for natives and second generation migrants in Spain taking into account two sources of heterogeneity simultaneously: the country of origin and the province of destination in Spain.

From a methodological point of view, we showed that ignoring the cross-classified structure of the data leads to overestimating the provincial variability. We showed that for second generation migrants in Spain, the country of origin contributes more to explaining the existing variability in home-leaving than the province of residence. We also showed that second generation migrants are heterogeneous with respect to their country of origin for what concerns the transition to independent living, albeit a geographical clustering is evident. Moreover, a connection between the mean age at marriage in the country of origin and the propensity to leave the parental home clearly exists. This finding suggests that the transition outside the parental home for second generation migrants in Spain remains influenced by factors attaining to their country of origin rather than adapting to the province-specific behaviour. In our view, the main novelty of this paper is that a variety of different groups of migrants are simultaneously considered.

Table 1: Proportion of 1.5 generation migrants who are living independently outside the parental home (in descending order) and group size by Sending Areas

Sending Country	Outside PH (%)	N.	Sending Country	Outside PH (%)	N.
Ecuador	85.6	97	South-Eastern Asia	48.1	27
Western Africa	84.9	53	Uruguay	48.1	79
Portugal	84.4	128	South-Central Asia	44.4	36
Middle Africa	83.7	49	Southern Europe	44.4	63
Northern Africa	76.0	25	United Kingdom	44.2	326
Western Europe	73.3	15	Northern Europe	43.4	189
Eastern Europe	63.9	108	Switzerland	42.5	671
Morocco	62.3	443	South America	41.7	24
Colombia	61.7	128	Venezuela	38.0	474
France	59.4	1,528	Chile	36.5	52
Belgium	57.1	205	Australia	35.9	39
Brazil	54.4	68	Argentina	33.3	288
Americas	54.3	46	Peru	30.9	68
Canada	53.3	45	Western Asia	27.3	22
Germany	51.9	1,141	United States	27.1	70
China	51.6	62	Mexico	24.6	65
Central America	51.1	47	Eastern Asia	23.5	17
Dominican Republic	50.8	63	**Total**	51.9	6,761

Table 2: Fixed Effects estimates (Multilevel logistic model, regression coefficients)

	Migrants		***Spain***	
Individual-level variables:				
Male	-1.54	***	-1.65	***
Age	0.21	***	0.27	***
Still in education	-0.97	***	-1.18	***
Male * Still in education	1.41	***	1.34	***
Employed	-0.25	**	-0.50	***
Male * Employed	1.00	***	1.20	***
Educational level achieved:				
Primary or less	-0.03		0.30	***
Male * Primary or less	0.06		-0.10	***
Higher education	-0.91	***	-0.63	***
Male * Higher education	0.28	*	0.11	***
Provincial-level variables:				
Youth UR	0.00		0.01	*
Owner-occupied HH	0.02		0.00	
Cohabiting couples	0.06	**	0.07	***
Sending area-level variables:				
Age at marriage	-0.16	**	---	
N	6,761		562,648	

Note: p-value: ***<0.01;** <0.05;*<0.10

Figure 1: Empirical Bayesian Predictions of Province effects: Native sample (top-left panel), Migrant sample (top-right) and Empirical Bayesian Predictions of Sending area effects (bottom)

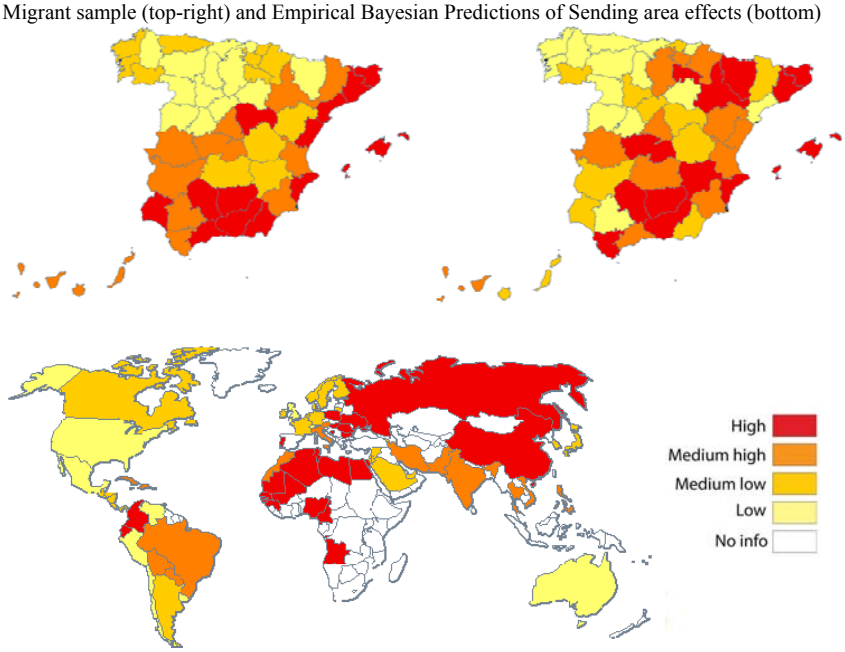


Table 3: Random Effects, Migrant and Spanish samples

Model	***Migrants: Province***			***Migrants: Sending area***			***Model***	***Spain***		
	Δ% Var.	ICC (%)	LRT	Δ% Var.	ICC (%)	LRT		Δ% Var.	ICC (%)	LRT
IP		2.56	***		-		IP		1.22	***
IS		-			13.27	***	-			
IPS		1.93	***		16.96	***	-			
IPS + X (*baseline*)		1.90	***		20.03	***	IP + X (*baseline*)		2.33	***
IPS + X + Youth UR	-3.38	1.84	***	-0.25	20.00	***	IP + X + Youth UR	-0.80	2.31	***
IPS + X + Owner-occupied HH	0.10	1.90	***	0.04	20.04	***	IP + X + Owner-occupied HH	-9.03	2.12	***
IPS + X + Cohabiting Couples	-22.20	1.49	***	-0.16	20.09	***	IP + X + Cohabiting Couples	-25.16	1.75	***
IPS + X + Z	-31.43	1.31	***	-0.75	20.03	***	IP + X + Z	-29.62	1.65	***
IPS + X + Age at marriage	-0.66	1.96	***	-17.32	17.16	***	-			
IPS + X + Z + W	-31.53	1.36	***	-17.68	17.20	***	-			

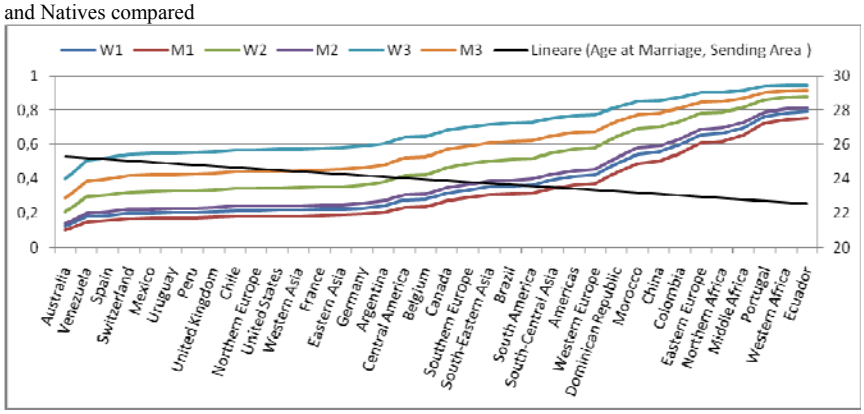
Note: p-value: ***<0.01;** <0.05;*<0.10

I: Individual; P: Province; S: Sending Area; X, Z, W: Individual- Provincial- and Sending Area level variables, respectively.

The columns "Migrants: Province" and "Migrants: Sending area" refer, respectively, to the provincial and sending area random effects of the cross-classified multilevel models applied to the migrant sample. The column, "Spain", refers to the provincial random effects of two-level models applied to the Spanish sample.

Δ% Var.: percent variation of the random effect variance with respect to the baseline model; ICC: Intraclass Correlation Coefficient; LRT: Likelihood Ratio Test.

Figure 2: Predicted Probabilities for six typical individuals and Mean Age at Marriage, Migrants and Natives compared



Note: Typical Women (W) and Men (M) - W1/M1: age 23, in school, secondary education achieved; W2/M2: age 23, employed, secondary education achieved; W3/M3: age 27, employed, secondary education achieved

References

1. Cortina Trilla, C., Esteve, A., Domingo, A.: Marriage Patterns of the Foreign-Born Population in a New Country of Immigration: The Case of Spain. Int. Migr. Rev. 42(4), 877-902 (2008)
2. De Valk H.A., Billari, F.C.: Living arrangements of migrant and Dutch young adults: the family influence disentangled. Popul. Stud. 61(2), 201-17 (2007)
3. Giuliano, P.: Living Arrangements in Western Europe: Does Cultural Origin Matter? J. Europ. Econ. Assoc., 5(5), 927-952 (2007)
4. Holdsworth, C., Irazoqui Solda, M.: First Housing Moves in Spain: An Analysis of Leaving Home and First Housing Acquisition. Europ. J. Popul., 18(1), 1-19 (2002)
5. Holdsworth, C.: Leaving Home in Spain: A Regional Analysis. Int. J. Popul. Geogr., 4, 341-360 (1998)
6. Instituto Nacional de Estadistica – INE (2001). Population and Housing Census
7. Integrated Public Use Microdata Series – International. Minnesota Population Center, Minneapolis: University of Minnesota. Retrieved in July, 2009
8. Rasbash, J., Goldstein, H.: Efficient analysis of mixed hierarchical and cross-classified random structures using a multilevel model. J. Educ. Behav. Stat., 219, 337-350 (1994)
9. Reher, D.S.: Marriage Patterns in Spain, 1887-1930. J. Fam. Hist., 16(1), 7-30 (1991).
10. Van den Noortgate, W., De Boeck, P., Meulders, M.: Cross-Classification Multilevel Logistic Models in Psychometrics. J. Educ. Behav. Stat., 28(4), 369-386 (2003)
11. Van den Noortgate, W., De Boeck, P., Meulders, M.: Cross-Classification Multilevel Logistic Models in Psychometrics. J. Educ. Behav. Stat., 28(4), 369-386 (2003)