Ethnic identity and dietary habits among Hispanic immigrants in Spain

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Abstract. *Immigration has become a new phenomenon in Spanish society during the last years. In 2007, immigrants represented around 10% of total population, with 35% coming from Latin-American countries. When immigrants arrive, they bring their own values and cultural symbols, which, essentially, are different from those of the indigenous population. As time goes through, two alternative processes are observed: 1) a gradual switch towards the Host Society values; or 2) a maintenance of their ethnical identity. Focussing in the Latin-American immigrants in Barcelona, the objective of this paper is twofold: 1) to measure their degree of ethnical identity; and 2) to analyse the relationship between food habits and their ethnical identity. Food habits refer here to the consumption of traditional meals from their country of origin. Face-to-face interviews with a representative sample of Latin American immigrants in the Metropolitan area of Barcelona are undertaken. First, socioeconomics characteristics of the sample are described. Second, the MEIM scale is used to measure their ethnical identity, which combines aspects from the social identity and personal development theories. Finally, a Multinomial Logit Model is estimated to identify the relationship between food habits and ethnical identity. Results indicate that the higher the level of ethnic identity and feeling of belonging, the greater the persistence of dietary habits from the country of origin.*

Keywords: Ethnic identity, Food habits, Latin American immigrants, Spain.

1. Introduction

The world's population is growing at a staggering rate; in 2006, there were 6,600 million people on the planet [18], which was twice as many as there had been 50 years earlier. This dramatic increase in population, combined with an increasingly unequal distribution of wealth among different parts of the planet, has led an increase in migratory movements from lesser to more developed countries. While this trend is not entirely new, in recent years, it has increased as the global population has grown. According to the United Nations [18], over 190 million people (3% of the world's population) are estimated to be living outside their country of origin.

Spain has not remained unaffected by these migratory processes, and has gone from being a major source of emigration for much of the 20th century to an attractive destination for immigration, particularly in the past 20 years. From 1910 to 1960 there was a mass migration from Spain to the Americas, and this was followed by emigration to the richer parts of Europe (France, Germany, Switzerland, and Great Britain) between 1960 and 1980. Nonetheless, with the return to democracy in 1975, many Spanish exiles began to return to their homeland. This influx was particularly great during the 1980s for two main reasons: the recovery of the economy, which entered a period of stability in the second half of the 1980s, and Spain's joining of the European Union (EU) on January 1, 1986. Between 1996 and 2007, the country's immigrant population increased from 1.6% to 10% of the total population. Of the 4,519,554 immigrants registered in Spain in 2007, the largest group (33%) were from South America.

When immigrants arrive in a new place, they have different values and cultural symbols to those of the host society. Examples of these values and symbols include lifestyle habits, dietary habits, manner of dress and manners [6] or religion, language, leisure activities, art, literature, music and customs [2], [5], [13]. With time, however, two sharply contrasting trends emerge: acculturation and preservation of traditional culture. Acculturation is where an ethnic group gradually changes its cultural symbols, adapting them to the host society and sometimes even replacing them completely. Preservation of culture occurs in ethnic groups that decide to preserve the majority of their cultural symbols (i.e., their ethnic identity), despite contact with the host society.

In both cases, the first symbols to be lost are related to language, manner of dress, and manners. Dietary habits, in contrast, as several studies have indicated, seem to be preserved for longest, with resistance

increasing with age [4], [3], [9], [12]. The cultural significance of dietary choices becomes even more important if we consider that food is one of the most powerful symbols of who we are [8].

This study has two main aims: 1) to measure the level of ethnic identity of the immigrant population in Spain by focusing on ethnic groups in the metropolitan area of Barcelona, which is one of the regions with the largest numbers of immigrants; and 2) to measure the extent to which levels of ethnic identity can explain why immigrants choose to preserve dietary habits. We measured the preservation of these habits by analyzing the consumption of typical dishes from the country of origin. To ensure the greatest level of homogeneity possible, we included only Latin American immigrants in our study population.

Although the literature contains numerous studies of the correlation between ethnic identity and dietary habits [17], [1], [20], [15], [4], [22], [14] the present study has two innovative features. First, studies performed to date have only used partial indicators to measure ethnic identity, even though this is a multidimensional variable that embraces aspects such as feelings of belonging, attitudes, customs, traditions, and social interaction. To assess the multidimensional nature of ethnic identity, we used a measure developed by Roberts [19] which considers all of the above aspects. Second, and from an empirical perspective, this is the first study to characterize the socioeconomic status of Latin American immigrants in Spain on the basis of levels of ethnic identity[1].

The rest of the study is structured as follows. Section 2 analyzes migration flows in Spain to give an idea of the relevance of this study. Section 3 describes the data sources used and section 4, the characteristics of the study population. Section 5 analyzes levels of ethnic identity, and section 6 describes the model used and discusses our main findings. The final section presents some concluding remarks.

2. Spain, from a country of emigration to one of immigration

As already mentioned in the introduction, Spain has gone from being a country of emigration to one of immigration. The emigration took place in 2 waves. In the first wave (1910-1960), the Spanish emigrated great distances, heading mostly to the Americas, which received 71.88% of all Spain's emigrants during this period. In the 1920s and 1930s, the favoured destination was Argentina, but from 1950 onwards other countries such as Venezuela, Uruguay, and Brazil became popular choices. This first exodus can be explained by the difficult economic, social, and political conditions facing Spain in the aftermath of the Spanish civil war (1936-1939) and the Second World War (1939-1945). Faced with a Europe devastated by war, emigrants chose to go to the Americas. In the second wave of emigration (1960-1980), the destination changed, with Europe, in the midst of economic recovery, taking over as the destination of choice. Between 1970 and 1980, 85.4% of Spanish emigrants sought a new life in Europe (Figure 1), and along with emigrants from other parts of Mediterranean Europe, were a welcome addition to the increasing labour force needed to meet growing agricultural and industrial production needs.

(Take in Figure 1)

As mentioned above, Spain's migration flows began to change direction in the second half of the 1970s, with the restoration of democracy and the return of the first Spanish exiles from other parts of Europe. Although the influx decreased in magnitude over the years, it continued into the mid 1980s (Figure 2). A new trend emerged in 1987, following Spain's joining of the EU, as large numbers of emigrants began to return from the Americas. In 26 years, between 1975 and 2001, 689,418 Spanish emigrants returned to their homeland.

(Take in Figure 2)

This enormous influx coincided with the arrival of Spain's first immigrants and the beginning of a new era, which was to have an enormous impact on the country over the following 2 decades. Although the first wave of immigrants arrived in 1996, immigration did not become a recognizable upward trend until 2 years later (Figure 3). Interestingly, approximately 50% of new arrivals between 1998 and 2000 were from other parts of Europe. The second largest group (24%) were from Africa (mainly Morocco). During these early years, Latin Americans accounted for barely 15% of the total immigrant population but this was to change in 2002, when they became the most numerous ethnic group in Spain (Figure 3).

The rapid growth in the Latin American immigrant population was driven by at least 2 factors: 1) the excellent opportunities offered by the country's booming economy (with growth rates above the EU average), and 2) the lack of a language barrier, which made economic and social integration easier.

(Take in Figure 3)

Table 1 shows the evolution of immigration in Spain. As can be seen, immigrants accounted for just 1.6% of the total population in 1998 but this had risen to 10% by 2007 [11]. This percentage varied from region to region and was highest in Spain's strongest autonomous communities. In Catalonia, for example, immigrants accounted for 13.5% of the Catalan population in 2007. The corresponding percentage for Barcelona was around 13%.

According to the latest data released by the Spanish Ministry of the Environment and Rural and Marine Affairs, 54% of Latin American immigrants in Spain still eat dishes from their countries of origin, indicating that this is a habit that is not easily lost. In the following sections, we will analyze the situation in the metropolitan area of Barcelona and attempt to identify factors that determine this behaviour.

Table 1. Evolution of immigrants in Spain, Catalonia and Barcelona.

Year	Immigrants in Spain	% on total population	Immigrants in Catalonia	% on Catalonia population	% on Immigrants in Spain	Immigrants in Barcelona	% on Catalonia population
1996	542,314	1.4	97,789	1.6	18.0	67,179	1.5
1998	637,085	1.6	121,361	2.0	19.0	83,766	1.8
1999	748,953	1.9	144,925	2.3	19.4	96,499	2.1
2000	923,879	2.3	181,598	2.9	19.7	121,358	2.6
2001	1,370,657	3.3	257,354	4.1	18.8	182,242	3.8
2002	1,977,946	4.7	382,067	5.9	19.3	275,892	5.6
2003	2,664,168	6.2	543,008	8.1	20.4	398,459	7.9
2004	3,034,326	7.0	642,846	9.4	21.2	469,236	9.2
2005	3,730,610	8.5	798,904	11.4	21.4	569,305	10.9
2006	4,144,166	9.3	913,757	12.8	22.1	645,737	12.2
2007	4,519,554	10.0	972,507	13.5	21.5	669,263	12.6

3. Data Sources

To collect the information required for our study, we conducted face-to-face interviews with 262 immigrants considered to be representative of the Latin American immigrant community in the metropolitan area of Barcelona in terms of nationality and age. Drawing from the census, we chose immigrants from 7 countries (Ecuador, Colombia, Argentina, Peru, the Dominican Republic, and Chile), which, combined, accounted for over 75% of the Latin American countries with immigrants in the area. Table 2 shows the distribution of the sample. The field work was conducted between January and March 2007.

The questionnaire consisted of three main parts. The first part contained questions about the purchase of typical food from the country of origin (availability, place of purchase, frequency, reasons for buying or not buying, etc.). The second part was designed to collect information required to measure the level of ethnic identity, one of the main aims of the study. To do this, we used the multiple group ethnic identity measure (MEIM) scale proposed by Roberts [19]. This scale combines two theoretical approaches. The first is the social identity theory [21], which focuses on the feeling of belonging to a group and the accompanying attitudes and feelings. According to this theory, belonging to a group forms part of a

person's individual identity and self-conception. In other words, people who have a good knowledge of the group to which they belong value this group and gain self-esteem from the associated feeling of belonging. The second theory is Erikson's [7] personal development theory, according to which the formation of individual identity arises from a process of exploration and commitment to the identity group, which typically occurs during adolescence. The more intense the process, the greater the level of commitment to the group. When the process is less intense, the result is a simple feeling of affirmation and belonging. The third part of the questionnaire was designed to gather information on the socioeconomic background of those interviewed. Variables included age, sex, educational level, marital status, level of income, type of residence in Barcelona, reason for emigration, and length of time in Spain.

Table 2. Sample distribution by country, sex and age (%)

Country	Sex (%)		Age (%).		
	Female	Male	20-29	30-39	> 40
Ecuador	62.3	37.7	31.9	60.9	7.2
Colombia	55.3	44.7	26.3	68.4	5.3
Argentina	50.0	50.0	28.1	56.3	15.6
Bolivia	67.6	32.4	56.8	32.4	10.8
Peru	54.5	45.5	29.5	54.6	15.9
Dominican Republic	72.7	27.3	36.4	36.4	27.2
Chile	61.3	38.7	51.6	41.9	6.5
Total	**59.5**	**40.5**	**36.2**	**53.1**	**10.7**

4. Characterization of sample by nationality

Table 3 shows the main characteristics of the sample by group and by nationality. As can be seen, 58.8% of respondents were married or living with a partner while the remaining 41.2% were single, separated, divorced, or widowed. The high percentage of those married or living with a partner was to be expected given that one of the main reasons people migrate is to look for better economic opportunities for the family, and the majority emigrate with their families.

Almost half of the sample (48.5%) had secondary-level education. Education up to secondary level was particularly common among immigrants from the Dominican Republic (72.7%) and Ecuador (75.4%). The majority of the sample (51.9%) worked as builders or day labourers, occupations that were associated with secondary-level education. As the level of education increased, so did access to jobs requiring greater qualifications. This was evident in the case of the Peruvians, who had one of the highest levels of education in the group (36.3% had an undergraduate degree) and the highest percentage of jobs involving greater responsibility (34.1%). The situation was similar for those from Chile as 64.5% of these had a Masters or doctorate degree. The majority of immigrants from Chile, however, indicated that they were not working, suggesting that most of them had come to Spain to study and improve their qualifications. Of interest among the Colombians and Argentineans was the fact that they were the nationalities in which the greatest percentage of people with a higher level of studies were self-employed (business owners or professionals, among others).

Table 3. Socio-economic characteristics of the sample (%)

		Sample	Country*						
			1	2	3	4	5	6	7
Marital status	Married, couple	58.8	71.0	57.9	53.1	51.4	47.7	36.4	71.0
	Single, divorced	41.2	29.0	42.1	46.9	48.6	52.3	63.6	29.0
Education level	Secondary school	48.5	75.4	34.2	31.3	62.2	36.4	72.7	16.1
	Graduate	21.8	14.5	21.1	28.1	18.9	36.3	9.1	19.4
	Post-Graduate	29.7	10.1	44.7	40.6	18.9	27.3	18.2	64.5
Labour	Unemployed	17.5	15.9	15.8	18.8	16.2	11.4	0.0	38.7
	White collar	23.7	15.9	34.2	21.8	10.8	34.1	18.2	32.3
	Blue collar	51.9	68.2	36.8	43.8	67.6	47.7	63.6	25.8
	Own business	6.9	0.0	13.2	15.6	5.4	6.8	18.2	3.2
Monthly income (€)	< 1500	42.8	43.5	28.9	53.1	59.4	34.0	54.5	35.5
	1500 a 2100	27.5	26.1	28.9	25.0	16.3	40.9	18.2	29.0
	> 2100	29.7	30.4	42.2	21.9	24.3	25.1	27.3	35.5
Housing	Renting room	13.7	10.2	5.3	12.5	35.4	13.6	0.0	12.9
	Renting apartment	63.4	56.5	78.9	71.9	53.8	56.8	72.7	67.7
	Own apartment	22.9	33.3	15.8	15.6	10.8	29.6	27.3	19.4
Number of cars	1 or 2	24.0	29.0	39.5	21.9	10.8	22.7	27.3	12.9
	More than 2	0.8	2.9	0.0	0.0	0.0	0.0	0.0	0.0
Migration motivation	Economic	64.1	76.8	55.3	53.1	86.5	70.5	72.7	19.4
	Education	16.0	4.4	28.9	12.5	5.4	13.6	9.1	48.4
	Other	19.9	18.8	15.8	34.4	8.1	15.9	18.2	32.2
Years in Spain	0 to 4	38.1	10.2	34.2	21.8	67.6	56.8	18.1	67.7
	5 to 9	55.0	85.5	63.2	71.9	27.0	36.4	36.4	25.8
	More than 9	6.9	4.3	2.6	6.3	5.4	6.8	45.5	6.5

*1=Ecuador, 2=Colombia, 3=Argentina, 4= Bolivia, 5=Perú, 6= Dominican Republic, 7=Chile.

Of those interviewed, 70.3% had a monthly household income of less than €2100 (this was less than €1500 in 42.8% of cases). These income levels are consistent with the labour situation of the immigrants as a whole, most of whom were employed in physical labour, as mentioned previously. Type of residence was also associated with income level, with 63.4% of those interviewed living in rented accommodation. Of particular interest was the case of the Bolivians, one of the groups with the lowest level of income, as 35.4% of these were living in a rented room. Income levels also affected car ownership. Only 24% of those interviewed had a car (some had 2 cars) and 75.2% stated that they could not afford one.

Almost two thirds (64.1%) of the respondents stated that they had left their country for economic reasons. The majority of countries in Latin America are undergoing economic difficulties, although the complexity of the situation varies from one country to the next. Countries which experienced serious economic and political problems several years ago account for the most numerous groups of immigrants in Spain. The percentages for those who left their countries for economic reasons were 76.8% for the Ecuadorians, 86.5% for the Bolivians, 70.5% for the Peruvians, and 72.7% for the Dominicans.

A majority (55%) of those interviewed had been living in Spain for between five and nine years. This percentage was considerably higher in the case of the Ecuadorians (85.5%), who have benefited from special agreements between the Spanish and Ecuadorian governments. Dominicans were the group that had been in Spain for the longest (45.5% had been there for over 10 years).

5. Measurement of ethnic identity

As already mentioned in section 3, we measured ethnic identity using the MEIM scale [21], which combines aspects from the social identity and personal development theories. To measure the level of ethnic identity (social identity theory), the scale considers five items, labelled affirmation and belonging, dealing with attachment, pride, and positive feelings towards one's ethnicity. To measure aspects related to the exploration of one's identity and commitment to a group (personal development theory), it considers four items related to exploration (activities to learn about the identity group) and three related to commitment (a clear understanding of one's ethnicity). These seven items were labelled ethnic identity achievement. Finally, the MEIM scale included two questions designed to measure aspects such as customs, traditions, and social interaction. These two items were labelled ethnic behaviour. The MEIM thus consisted of 14 items, each of which was rated by the respondents on a scale of 0 to 10.

Using the scores obtained, we conducted factor analysis to determine if the structure of the factors on the scale provided a good fit to the 2 theories being explored and to identify which items were correlated with which factors. Our analysis revealed three factors, one of which, however, consisted of just two items. Because this violates the criteria proposed by Hatcher [10], we eliminated these two items, leaving the scale with 12 items. Subsequent factor analysis revealed two factors, which, combined, accounted for 45.7% of the total variance. The results of this analysis are shown in Table 4, together with the mean scores and standard deviations for each item (the two columns on the right).

Table 4. Factor analysis of ethnical identity

Item	Affirmation, belonging and commitment	Exploration of and active involvement in group identity.	Mean	Standard deviation
I have a strong sense of belonging to my own ethnic group	0.730		7.9	2.6
I feel a strong attachment towards my own ethnic group.	0.727		7.8	2.8
I have a lot of pride in my ethnic group and its accomplishments.	0.719		8.8	2.1
I understand pretty well what my ethnic group membership means to me, in terms of how to relate to my own group and other groups	0.686		8.3	2.6
I feel good about my cultural or ethnic background.	0.664		9.2	1.7
I am happy that I am a member of the group I belong to.	0.574		9.3	1.7
I have a clear sense of my ethnic background and what it means for me.	0.547		9.0	1.8
I participate in cultural practices of my own group, such as special food, music, or customs.		0.735	5.8	3.8
I am active in organizations or social groups that include mostly members of my own ethnic group.		0.695	4.1	3.8
I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs.		0.596	6.5	3.2
In order to learn more about my ethnic background, I have often talked to other people about my ethnic group.		0.535	7.0	3.4
I think a lot about how my life will be affected by my ethnic group membership.		0.530	4.2	3.6

Cronbach's alpha: 0.77
Barlett's test: 827.1 (p-value 0.0001)

As can be seen, the analysis confirmed the validity of the MEIM scale for the purpose of the study as the two factors were correlated to the items generated by the two theories on which they were based. Factor 1 consisted of the five original questions from the affirmation and belonging subscale (social identity theory) and two questions from the commitment subscale (personal development theory). This factor accounted for 32.64% of the total variance and was labelled affirmation, belonging, and commitment. Factor 2 consisted of three items from the exploration subscale and two from the ethnic behaviour subscale, and was labelled exploration and active participation in group identity. This factor accounted for 13.06% of the total variance. Both factors include exactly the same items than in Roberts [19]; thus, we have used the same labels for them.

6. Consumption habits and ethnic identity

This last section deals with the main aim of this study: the analysis of the extent to which ethnic identity is capable of explaining why Latin American immigrants living in the metropolitan area of Barcelona change or do not change their dietary habits. To this end, we measured the frequency with which the respondents ate traditional dishes from their country (typical dishes) using a nominal scale containing 4 categories: does not eat, eats daily, eats once or twice a week, and eats once or twice a month.

6.1. Specification of model

Considering the nature of the dependent variable, we analyze the main factors affecting the consumption of typical dishes by specifying and estimating a multinomial logit model. The likelihood of an individual choosing one of the four categories that comprised the dependent variable is given by:

$$P(y_i = j) = \frac{e^{\beta_j ' x_i}}{\sum_{j=1}^{4} e^{\beta_j ' x_i}} \tag{1}$$

where j (J=1,2,3,4) represents each of the four choices of the dependent variable and "x" is a vector of explanatory variables affecting each choice.

As can be seen, (1) features an identification problem that needs to be resolved. If we define $\beta_j^* = \beta_j + q$, for any vector q we get exactly the same probabilities as all the terms affected by q are cancelled. This means that not all the parameters would have been identified. To resolve this problem, we chose one of the choices as the reference category and all its parameters are normalized to zero. The category chosen was "does not eat typical dishes". As in other discrete choice models, the parameters are interpreted by calculating the effects on the respective likelihood of unit changes or by interpreting signs on the parameters.

Table 5 shows which explanatory variables might predict the consumption of typical dishes on the basis of the information collected during the interviews. As can be seen, in addition to factors influencing ethnic identity, we also gathered information on aspects related to 1) socioeconomic characteristics, 2) habits related to the purchase and consumption of food, 3) reasons for immigration, 4) length of time in Spain, and 5) knowledge of Catalan (official language in Catalonia together with Spanish).

Table 5. Variables included in the Multinomial Logit Model

Variable	Categories
Affirmation, belonging and commitment.	Continuous (Table 4).
Exploration of and active involvement in group identity.	Continuous (Table 4).
Marital status Married-couple	Dummy variable which takes the value 1, if the respondent is married or lives as a couple, and 0, otherwise.
Consumption occasion. Family event	Dummy variable which takes the value 1, if the respondent eats typical dishes in family events, and 0, otherwise
Distribution of consumption among household members All members the same	Dummy variable which takes the value 1, if all memebers in the househld eat typical dishes, and 0, otherwise
Place of consumption Away-from-home	Dummy variable which takes the value 1, if the respondent eats typical dishes away from home, and 0, otherwise
Buying of specific ingredients from their country Regularly	Dummy variable which takes the value 1, if the respondent buys specific ingredients from his/her country regularly, and 0, otherwise
Occasionally	Dummy variable which takes the value 1, if the respondent buys specific ingredients from his/her country occasionally, and 0, otherwise
Education level Secondary School	Dummy variable which takes the value 1, if the respondent has at least a secondary school degreee, and 0, otherwise
Graduate	Dummy variable which takes the value 1, if the respondent is graduate, and 0, otherwise
Monthly Income Low income	Dummy variable which takes the value 1, if the respondent has a monthl household income less tha 1500€, and 0, otherwise
Years in Spain A few	Dummy variable which takes the value 1, if the respondent lives in Spain since less than 5 years, and 0, otherwise
Migration motivation Economic	Dummy variable which takes the value 1, if the respondent had an economic motivation to emigrate, and 0, otherwise
Education	Dummy variable which takes the value 1, if the respondent had an educational motivation to emigrate, and 0, otherwise
Age Young	Dummy variable which takes the value 1, if the respondent is between 20 and 29 years old, and 0, otherwise
Middle age	Dummy variable which takes the value 1, if the respondent is between 30 and 39 years old, and 0, otherwise
Speak Catalan	Dummy variable which takes the value 1, if the respondent speaks Catalan, and 0, otherwise

6.2. Results

Table 6 shows the results of the multinomial logit model. As can be seen, the goodness of fit is quite good, with a McFadden [16] value of 0.22 [2]. In considering the results presented for the different categories of the dependent variable, it should be borne in mind that these should be interpreted at all times with respect to the reference category (does not eat typical dishes). Five of the explanatory variables considered were significant. With respect to the aim of the study, the two variables that explained ethnic identity were both significant and positive, indicating that the higher the level of ethnic identity, the greater the tradition of continuing to eat typical dishes. In other words, dietary habits are preserved as an important expression of culture. It is noteworthy that exploration and active participation in group identity had a slightly higher impact on the consumption of typical dishes than affirmation, belonging, and commitment. Specifically, an increase in the affirmation, belonging, and commitment variable was associated with a 2.03-fold increase (exp(0.71) in the likelihood of eating typical dishes more frequently, compared to those who did not eat them (reference category). The corresponding unit increase for the

exploration and active participation in group identity variable was 1.98. This would seem to indicate that the likelihood of eating typical dishes on a frequent basis increases if ethnic identity has been acquired through a process of exploration and commitment, which, as Erikson [7] indicated, results in a greater level of identification with the group and its associated cultural features. Our results also show that the likelihood of eating typical dishes every day increases if all the members of the family are involved. It is reasonable to assume that these dishes are eaten at home and that the family would need to buy typical ingredients, a hypothesis that is supported by the positive sign on the buy frequently variable. Also of interest is the fact that we detected the highest level of consumption of typical dishes among respondents with the lowest levels of education.

We also found that ethnic identity was not such a strong explanatory factor for eating typical dishes once or twice a week. Indeed, of the two variables considered, only affirmation, belonging, and commitment (associated with a simple feeling of belonging to a group) was significant and positive. An increase of one unit in this variable corresponded to a 1.75-fold increase in the likelihood of eating typical dishes once or twice a week relative to not eating any. The second variable, exploration and active participation in group identity, was not significant in this case. The other variables found to be significant are similar to those mentioned in the previous category, but in this case, consumption of typical dishes was associated with eating at home (negative sign for outside the home) and with family events and traditions.

Finally, the results observed for those that ate typical dishes less frequently seems to confirm that there is an association between ethnic identity and the maintenance of traditions related to food. In this case, neither of the 2 variables that defined the level of ethnic identity was significant. In other words, the higher the level of acculturation, the weaker the feeling of belonging to the group and the lower the likelihood of eating typical dishes.

Considering the negligible significance of the rest of the variables, we can conclude that this sporadic consumption of typical dishes occurs when the people in this category are invited to dinner by compatriots as they do not buy typical ingredients (even occasionally) and all the members of the family are involved equally.

Table 6. Multinomial Logit Model parameter estimates

Frequency of consumption	Daily	1 or 2 times per week	1 or 2 times per month
Constant	-1.35 (0.88)	-0.34 (0.80)	0.15 (0.78)
Affirmation, belonging and commitment.	0.69 (0.24)*	0.56 (0.22)*	0.34 (0.21)
Exploration of and active involvement in group identity.	0.71 (0.24)*	0.26 (0.23)	0.25 (0.23)
All members the same	2.07 (0.64)*	2.12 (0.63)	1.82 (0.65)*
Regular buying of specific ingredients	2.89 (0.82)*	2.69 (0.82)*	
Secondary School	1.15 (0.54)*		
Family event		1.08 (0.49)*	
Away-from-home		-1.44 (0.57)*	
Married – Couple			-1.38 (0.58)*
McFadden's R^2: 0.22			

Note: Standard deviations in parentheses.
An * indicates that the corresponding parameter is significant at the 5% level of significance

7. Conclusions

Immigration is a relatively recent phenomenon in Spain. Despite the political controversies it has sparked, it has given rise to a large number of studies aimed at gaining a better understanding of new immigrants in Spain. Because dietary habits are one of the last lifestyle habits to be lost when adapting to a new culture, we decided to analyze the extent to which immigrants in Spain continued to eat dishes from their country of origin. Given the large variety of immigrant nationalities in the study area, we

decided to focus on immigrants from Latin America. Unlike other immigrants, Latin Americans in theory should find it easier to integrate in the host society as they do not have to overcome the problem of language.

The hypothesis we wanted to test was whether dietary habits were closely associated with the ethnic identity of a population. In other words, we wished to see whether these habits were more common in immigrants with a higher level of ethnic identity. We sought to obtain empirical evidence to support this hypothesis using a representative sample of Latin American immigrants from the metropolitan area of Barcelona.

Our results confirmed this hypothesis in that we found that the higher the level of ethnic identity and feeling of belonging, the greater the persistence of dietary habits from the country of origin. We also found that the tradition of eating typical food was shared by all the members of a family, meaning that there was an active search for the necessary ingredients. Contrary to what might have been expected and contrasting with results from other studies [23], [22], we found no association between the persistence of dietary habits and either the length of time spent in Spain or the level of integration into the Catalan culture (measured through the use of the Catalan language). Also of interest was the fact that the consumption of typical dishes was greatest in families with a lower level of education.

This study sought to shed light on the dietary habits of immigrants in Spain, which is something that has been briefly studied by the Spanish Ministry of the Environment and Rural and Marine Affairs. While our findings should logically be interpreted within the context of the population and sample studied, they do raise new questions that require further analysis. One obvious extension of our work would be to analyze other immigrant groups such as Muslims, Asians, and Eastern Europeans. The second one would be to use alternative scales to measure levels of ethnic identity and acculturation. From our perspective, two issues would require further research in the future. First, to what extent there are behavioural differences when comparing at-home and away-from-home food consumption. Second, new research should be addressed to analyze the generation (cohort) effect to detect possible differences between the behaviour of immigrants and that of their children in order to anticipate future patterns of behaviour.

Notes.

1. To date, only the Spanish Ministry for the Environment and Rural and Marine Affairs (MARM) has studied the food-buying and dietary habits of different immigrants in Spain. It has produced a descriptive report for the last 3 years.

2. McFadden (1973) considers that a value of between 0.2 and 0.4 reflects a good fit; this would be equivalent to a determination coefficient of between 0.75 and 0.9 using a linear regression model.

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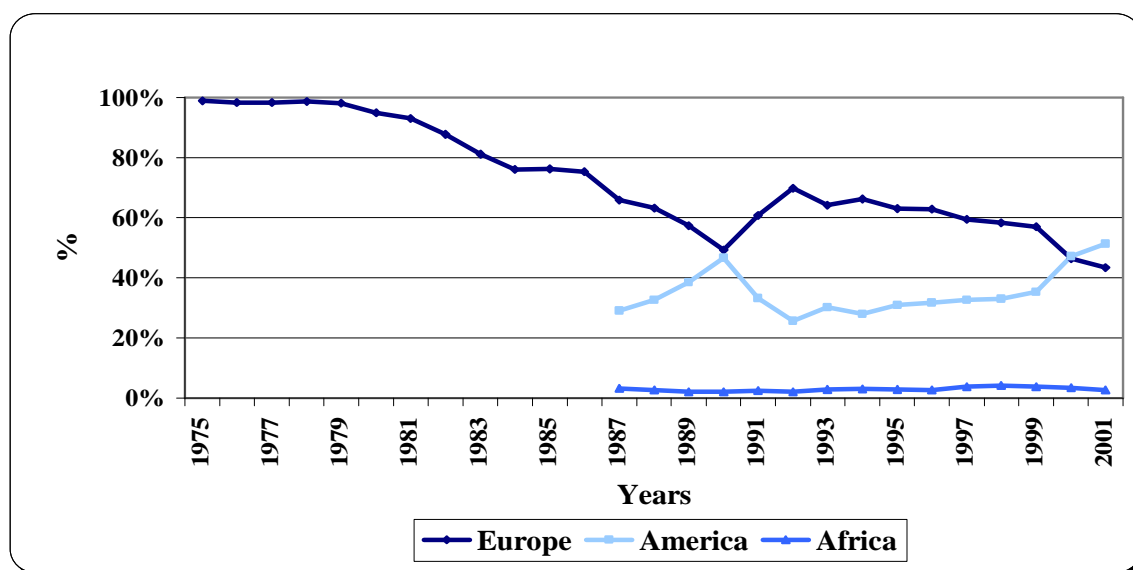7. Erikson, E. (1994), *Identity: Youth and crisis"* Norton, New York.

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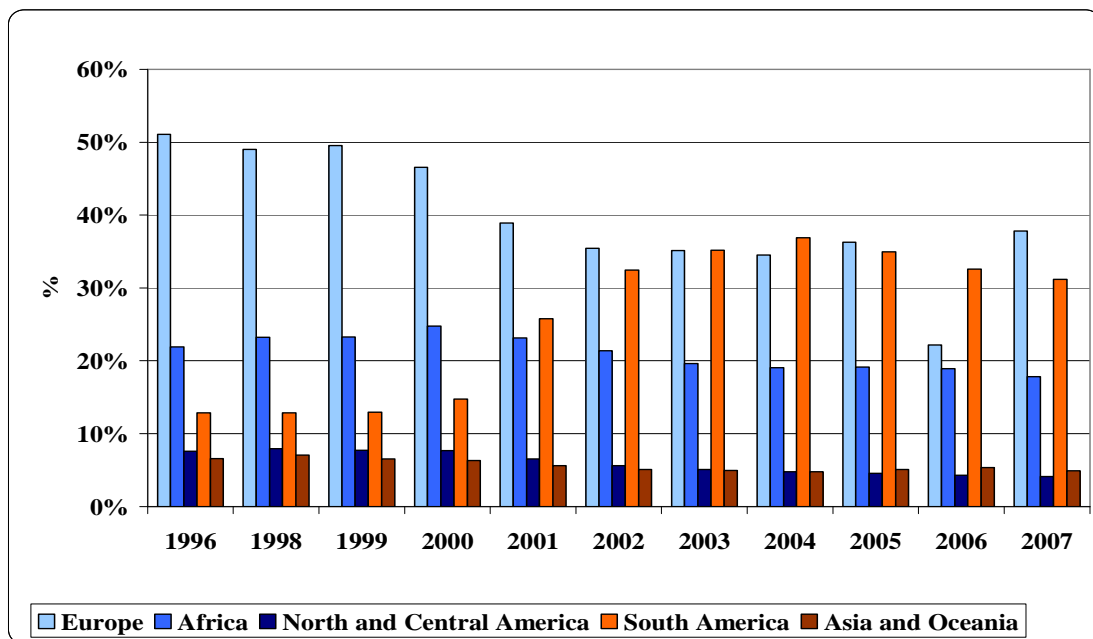**Figure 1.** Geographical distribution of Spanish emigration (%)
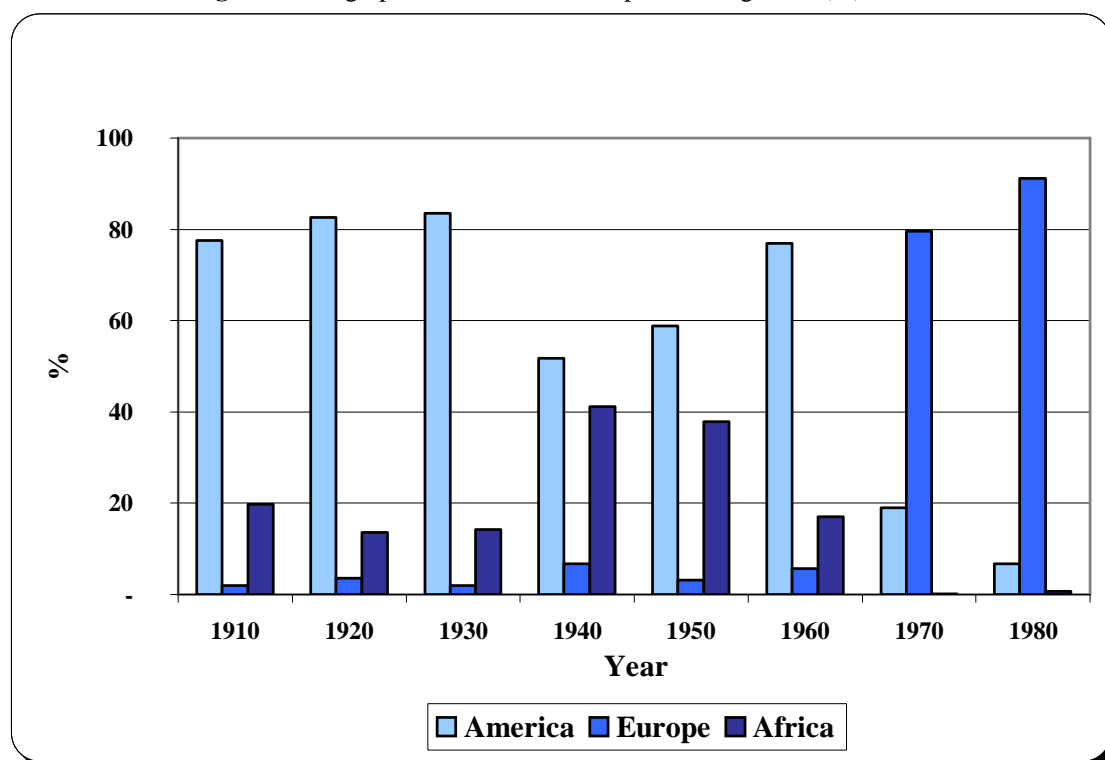
Source: INE (2007) and own elaboration.

Figure 2. Origin of Spanish emigrants returning (1975 – 2001) (%).

Figure 3. Origin of Spanish immigration (%)

Source: INE (2007) and own elaboration.