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Salvadoran Consumption of Ethnic Foods in the United States

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Batres-Marquez, S. Patricia; Jensen, Helen H.; and Brester, Gary W., "Salvadoran Consumption of Ethnic Foods in the United States" (2001). *CARD Working Papers*. 299.
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Keywords
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Disciplines
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Working Paper 01-WP 289
October 2001

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Abstract

The U.S. Salvadoran population is the largest group of Central and South American people living in the United States today. This study investigates the U.S. food market for thirty Salvadoran foods and the demographic characteristics and attitudes of Salvadorans toward these foods, based on data obtained from a survey conducted among Salvadoran people in Los Angeles, California, and Houston, Texas. Those surveyed were predominantly low income, without a high school degree, and living in large families. The Salvadoran foods consumed most were tortilla flour, red beans, *loroco*, *semita*, *queso duro*, and *horchata*. Four different groups of households were determined by using cluster analysis. The results indicate that products from El Salvador with the greatest market potential in the United States are vegetables and fruits, bread and candy, and beverages.

Key words: cluster analysis, ethnic food demand, Hispanic population.

SALVADORAN CONSUMPTION OF ETHNIC FOODS IN THE UNITED STATES

Introduction

The 2000 U.S. Census identified 35.3 million Hispanics living in the United States, representing 12.5 percent of the total population (U.S. Bureau of the Census 2001a). Hispanics comprise the fastest-growing group of the U.S. population (a 57.9 percent increase since the last census), a group that may soon surpass the African-American population (currently 12.9 percent of the population) and become America's largest minority segment. Among this Hispanic population, the Salvadoran population has been increasing in recent years. The 2000 Census indicated that there were 655,165 Salvadorans—the largest group among Central and South American people—dwelling in the United States. According to the latest census, 50 percent of the Hispanic population lived in just two states: California (31.1 percent) and Texas (18.9 percent) (U.S. Bureau of the Census 2001a). The majority of Hispanics lived in central cities of metropolitan areas, especially in Los Angeles-Long Beach, New York, Miami-Hialeah, Chicago, and Houston (U.S. Bureau of the Census 1995). The 2000 Census indicated that the largest Central American population lived in Los Angeles, New York, Houston, Miami, and San Francisco (U.S. Bureau of the Census 2001a).

Investigating the effect of ethnicity on food expenditures is important in order to meet the needs of ethnic consumers and for improved understanding of factors that affect consumer behavior and demand. Hispanics have become increasingly important in both their proportion of the population and their share of total consumer expenditures (Paulin 1998). Several recent studies recognize the role of Hispanic ethnicity in markets, including some studies that focus on attitudes of Hispanics in markets (Koslow 1994). However, only a few economic studies examine the expenditure patterns of Hispanics (Wagner and Soberon-Ferrer 1990; Paulin 1998; Fan and Solis Zuiker 1998). Very little information is available on consumption of or expenditures on the ethnic foods that Hispanics or subgroups within this community consume.

People from different cultural origins and demographic groups express, to some extent, their differences through the foods they eat (Senauer, Asp, and Kinsey 1991). This study investigates the demand for 30 of the most popular Salvadoran foods, along with the demographic characteristics and attitudes of Salvadoran people toward these types of foods. The next section of the paper describes the survey and data collection. This section is followed by a presentation of characteristics of the sample, foods consumed, attitudes toward Salvadoran foods, and differences among the consumer groups. The final section discusses the potential markets for Salvadoran foods in the United States.

Survey Design, Data Collection, and Survey Instrument

The 1994 survey of Salvadoran people living in Los Angeles and Houston was designed to obtain market information regarding selected Salvadoran foods, the demographic characteristics of Salvadoran households, and Salvadoran consumer attitudes toward Salvadoran foods. We selected the sample for the study from adult Salvadoran people living in Los Angeles and Houston. The Salvadoran Consulates in Los Angeles and Houston provided a list of Salvadoran organizations from which we identified potential respondents. Courier offices, such as Gigante Express in Los Angeles and Houston and El Cairo Express and Envios Urgentes in Houston, also provided some information.

During the last week of July and the first week of August 1994, we obtained 207 surveys from U.S. resident Salvadorans through personal interviews in community businesses, centers, and organizations. In Los Angeles, we conducted personal interviews at the Salvadoran organization “Chalchuapanecos en Los Angeles,” and Gigante Express’s office. We obtained a total of 94 questionnaires from the two locations. The Salvadoran Chamber of Commerce in Los Angeles administered another six surveys through a mail questionnaire. Thus, we acquired 100 completed questionnaires from the Los Angeles area.

In Houston, we obtained 107 questionnaires via personal interviews. We interviewed sixty respondents at Gigante Express’s office; we interviewed 10 at Envios Urgentes’s office and 37 at two meetings of Salvadoran organizations in Houston.

The survey instrument consisted of 18 questions and contained three sections: demographics, markets, and Salvadoran food attitudes. The demographic section included factors such as gender, age, number of people per household, number of children in the family, education, employment, annual income, and length of residence in the United States.

The market section included questions regarding consumption and sources of Salvadoran foods, prevailing market prices, prices household would like to pay and quantities they would like to buy if Salvadoran products were available in the market, and expenditures on several food groups. The Appendix contains a description of the 30 Salvadoran foods included in this study.

The last part of the survey instrument considered the following aspects of U.S. resident Salvadoran food consumption: reasons for not consuming Salvadoran foods, importance of authenticity of this type of food, other products that people would like to buy, and expenditures on items brought from El Salvador to the United States by the respondents.

We used all 100 personal interviews obtained in Los Angeles in the analysis. For the Houston sample, we eliminated 4 out of the 107 personal interviews conducted due to the respondents' failure to answer the majority of the questions. Therefore, the total number of observations was 203.

Characteristics of the Sample

Table 1 presents an overview of the demographic characteristics of the households from Los Angeles and Houston. The combined sample contained both male (44.8 percent) and female (52.7 percent) participants. The respondents ranged in age from 18 years to over 58 years, with a mean age of 34 years. The average number of household members was four, and household size ranged from 1 to 11 people. The Houston sample included a relatively higher proportion of males (50.5 percent) and the mean age of respondents was lower (32 years). The majority of the respondents (63.5 percent) reported having children living at home. and distribution of children across age groups was fairly dispersed.

Table 2 presents the respondents' education, employment status, and income. A large proportion of the participants had not received a high school diploma (44.3 percent); 41.4

TABLE 1. Gender, age, and household composition

Demographic Characteristic	Whole Sample *N*= 203	Los Angeles Sample *N* = 100	Houston Sample *N* = 103
		(Percentage)	
Gender			
Male	44.8	39.0	50.5
Female	52.7	59.0	46.7
No response	2.5	2.0	2.9
Age			
18-27 years	23.6	21.0	26.2
28-37 years	43.8	42.0	45.6
38-47 years	20.2	20.0	20.4
48-57 years	7.0	13.0	1.0
58 years and older	1.0	0.0	1.9
No response	4.4	4.0	4.9
Number of people			
1 person	3.0	3.0	2.9
2 people	12.8	10.0	15.5
3 people	17.0	18.0	17.5
4 people	24.6	28.0	21.4
5-6 people	26.5	25.0	28.2
7-11 people	12.4	12.0	12.6
No response	3.0	4.0	1.9
Children living at home			
Households without children	31.0	29.0	33.0
Households with children	63.5	67.0	60.2
No response	5.4	4.0	6.8
Reporting children by age			
Less than 3 years	31.1	36.0	26.2
Between 3 and 10 years	34.9	34.0	35.8
Between 11 and 15 years	23.1	25.0	21.5

percent were high school graduates. Comparing the Los Angeles and Houston samples, the proportion of respondents with less than a high school diploma was higher in Los Angeles (53.0 percent) than in Houston (35.9 percent).

A relatively high proportion of adults in the households worked outside the home. A majority of respondents (69.0 percent) reported having a mother working outside the home, and the average number of household members earning a salary was two people per family. Most respondents reported their annual household income at below $30,000. Twenty percent of respondents in Los Angeles reported incomes below $10,000.

TABLE 2. Education, employment, income, and time residing in the United States

Characteristic	Whole Sample *N* = 203	Los Angeles Sample *N* = 100	Houston Sample *N* = 103
		(Percentage)	
Educational achievement			
Less than high school	44.3	53.0	35.9
High school graduate	41.4	35.0	47.9
Some college	6.4	3.0	9.7
Complete college	0.5	1.0	0.0
Graduate education	0.0	0.0	0.0
No response	7.4	8.0	6.8
Households with a mother working outside the home			
Yes	69.0	70.0	68.0
No	26.1	23.0	29.1
No response	4.9	7.0	2.9
Number of household members earning a salary			
1 person	14.3	17.0	11.7
2 people	42.9	43.0	42.7
3 people	19.7	21.0	18.4
4 people	11.8	8.0	15.5
5-7 people	8.3	8.0	8.8
No response	3.0	3.0	2.9
Approximate annual household income			
Less than $10,000	13.3	20.0	6.8
$10,000-$19,999	38.4	38.0	38.8
$20,000-$29,999	25.1	21.0	29.1
$30,000-$39,000	5.4	6.0	4.9
$40,000 and over	3.0	4.0	2.0
No response	14.8	11.0	18.4
The respondent's time living in the U.S.			
Less than 1 year	3.0	5.0	1.1
1 to 5 years	39.4	43.0	35.9
6 to 10 years	27.1	24.0	30.1
More than 10 years	24.1	21.0	27.2
No response	6.4	7.0	5.8

Other results show that length of residence in the United States varied from 1 year to more than 10 years, with the highest proportion of the respondents in the 1- to 5-year category. However, the proportion of respondents living in the United States from 6 to 10 years and more than 10 years was higher in Houston than in Los Angeles.

Other national-level evidence indicates the Hispanic population is younger, of lower income, less educated, and residing in larger households than the averages for the United States. Even though high school completion rates for the Hispanic population have improved in recent decades, there is still a large proportion (43.0 percent) of Hispanics age 25 and over with less than a high school education (U.S. Bureau of the Census 2001b). In addition, the Hispanic population is relatively poor: 22.8 percent of all Hispanics in the United States were living below poverty level in 1999 ($17,029 for a family of four) (U.S. Bureau of Census 2001b). In 2000, the Census found that 27.9 percent of Central and South American households had five or more people (U.S. Bureau of the Census 2001b). The results from our survey indicate that 51.7 percent of total sample respondents have an annual household income of $19,999 or less; 44.3 percent have not completed high school and 38.9 percent of households have five or more family members. Based on these findings**,** the Salvadoran population appears similar to the Hispanic population in general, though it is perhaps a bit poorer.

Market Characteristics of the Sample

Tables 3 and 4 show the percentage of households that consumed Salvadoran foods in the past year and the amount of food consumed in a typical week. Among corn products, tortilla flour was the most popular. Sixty percent of the sample participants reported that their household consumed an average of 4.72 pounds in a typical week.

Among bean products, red beans was the product most consumed during the previous year, with an average consumption of 3.03 pounds per week. The proportion of households that did not consume processed vegetables and fruits was higher than the proportion that did. *Loroco* was the product that was consumed most often, with 39.9 percent of the whole sample reporting having consumed it.

In the bread and candy category, *semita* and *quesadilla de queso* were the products most often consumed. Nearly 65 percent of the sample participants reported having consumed these products. The average consumption in a typical week was 1.84 packages of *semita* and 2.09 packages of *quesadilla de queso*.

Among cheese products, 84.2 percent of the sample respondents consumed *queso duro*. The next most popular cheese was *queso blando*. The average quantity consumed per week was 2.08 pounds and 1.60 pounds, respectively.

TABLE 3. Percentage of households that consumed Salvadoran foods in the past year

Type of Food	Whole Sample (*N*= 203)	Los Angeles Sample (*N* = 100)	Houston Sample (*N* = 103)
		(Percentage)	
Corn products			
Tortilla flour	60.1	56.0	64.1
Tamal enlatado	4.4	4.0	4.9
Bean products			
Red beans	88.7	89.0	88.3
Canned beans	29.1	28.0	30.1
White beans	31.5	33.0	30.1
Processed vegetables and fruits			
Loroco	39.9	55.0	25.2
Chipilin	23.1	30.0	16.5
Hoja de mora	12.8	17.0	8.7
Verdolaga	14.8	19.0	10.7
Flor de izote	30.5	46.0	15.5
Pito	21.7	33.0	10.7
Semilla paterna	15.3	20.0	10.7
Bread and candy			
Semita	65.5	80.0	51.5
Quesadilla de queso	64.0	75.0	53.4
Torta de yema	28.1	39.0	17.5
Salpor	26.6	35.0	18.4
Dulce de mazapan	9.3	8.0	10.7
Quiebra dientes	12.3	14.0	10.7
Conserva de coco	37.4	48.0	27.2
Dulce de panela	28.1	38.0	18.4
Cheese			
Queso duro	84.2	88.0	80.6
Queso blando	50.2	55.0	45.6
Queso capita	35.0	47.0	23.3
Queso morolique	18.7	20.0	17.5
Quesillo (achiclado)	26.6	31.0	22.3
Beverages			
Horchata	75.4	77.0	73.8
Cebada	29.1	28.0	30.1
Chilate	30.0	41.0	19.4
Atol chuco	30.5	40.0	21.4
Atol de elote	24.1	34.0	14.6

TABLE 4. Amount of Salvadoran foods consumed by households in a typical week

	Whole Sample (*N* = 203)		Los Angeles Sample (*N* = 100)		Houston Sample (*N* = 103)	
Type of Food	**Mean of all Households**	**Mean of Households that Consumed**	**Mean of all Households**	**Mean of Households that Consumed**	**Mean of all Households**	**Mean of Households that Consumed**
Corn products						
Tortilla flour (lb)	2.77	4.72	2.57	4.70	2.96	4.73
Tamal enlatado (cans)	0.09	2.87	0.09	2.06	0.09	4.50
Bean products						
Red beans (lb)	2.68	3.03	2.89	3.23	2.48	2.83
Canned beans (cans)	0.67	2.54	0.38	1.60	0.93	3.29
White beans (lb)	0.51	1.69	0.53	1.59	0.50	1.79
Processed vegetables and fruits						
Loroco (lb)	0.54	1.42	0.73	1.31	0.34	1.74
Chipilin (lb)	0.22	1.10	0.32	1.10	0.13	1.13
Hoja de mora (lb)	0.11	1.02	0.17	1.03	0.05	1.00
Verdolaga (lb)	0.15	1.10	0.19	1.04	0.10	1.25
Flor de izote (lb)	0.40	1.43	0.65	1.50	0.16	1.33
Pito (lb)	0.23	1.28	0.40	1.30	0.07	1.17
Semilla paterna (lb)	0.17	1.39	0.23	1.26	0.12	1.71
Bread and candy						
Semita (pkg)	1.18	1.84	1.54	1.91	0.84	1.73
Quesadilla de queso (pkg)	1.31	2.09	1.60	2.13	1.03	2.02
Torta de yema (pkg)	0.37	1.48	0.48	1.32	0.28	1.83
Salpor (lb)	0.32	1.29	0.44	1.28	0.21	1.31
Dulce de mazapan (lb)	0.11	1.37	0.11	1.31	0.12	1.44

TABLE 4. Continued

Type of Food	Whole Sample (N = 203) Mean of all Households	Whole Sample (N = 203) Mean of Households that Consumed	Los Angeles Sample (N = 100) Mean of all Households	Los Angeles Sample (N = 100) Mean of Households that Consumed	Houston Sample (N = 103) Mean of all Households	Houston Sample (N = 103) Mean of Households that Consumed
Quiebra dientes (lb)	0.18	1.62	0.18	1.42	0.17	1.89
Conserva de coco (lb)	0.35	0.99	0.46	0.97	0.25	1.04
Dulce de panela (lb)	0.36	1.34	0.54	1.42	0.19	1.17
Cheese						
Queso duro (lb)	1.74	2.08	1.99	2.25	1.48	1.88
Queso blando (lb)	0.77	1.60	0.96	1.66	0.59	1.50
Queso capita (lb)	0.55	1.72	0.87	1.90	0.24	1.28
Queso morolique (lb)	0.24	1.50	0.31	1.64	0.16	1.29
Quesillo (achiclado) (lb)	0.51	2.10	0.75	2.50	0.27	1.47
Beverages						
Horchata (lb)	1.08	1.46	1.21	1.57	0.94	1.34
Cebada (lb)	0.34	1.38	0.32	1.23	0.36	1.53
Chilate (lb)	0.34	1.25	0.50	1.26	0.19	1.25
Atol chuco (lb)	0.35	1.27	0.49	1.28	0.23	1.26
Atol de elote (lb)	0.26	1.41	0.41	1.38	0.13	1.56

Among beverage products, *horchata* was most consumed. In general, the proportion of households that consumed Salvadoran foods was higher in Los Angeles than in Houston, with the exception of corn tortilla flour, *tamal enlatado*, canned beans, *dulce de mazapan*, and *cebada*.

Table 5 provides an overview of quantities that households would be willing to buy if Salvadoran products were available in the market. The last column of this table summarizes the percentage of households who would buy each of the Salvadoran foods. In general, it seems that households would buy these products if they were available.

Table 4 (second, fourth, and sixth columns) shows that the average quantities per week that households would buy generally are similar to the quantities that they consumed during the past year.

Attitudes Toward Salvadoran Foods

Respondents indicated that the three most important reasons for not consuming Salvadoran foods were that products are not available in the market, are of low quality, and are too expensive.

For the majority of the respondents (88.7 percent), it is very important that Salvadoran products be made in El Salvador. Salvadoran fruits and vegetables are the most popular foods that respondents would be likely to buy if they were available.

Expenditures

Table 6 presents household expenditure on food consumption in a typical week. The average weekly expenditure for the whole sample on meat products was $35.21, which was the highest expenditure among food products. The next largest food expenditure category was fruits and vegetables. Both the Los Angeles and Houston samples followed similar patterns.

Analysis Comparing the Los Angeles and Houston Samples

We used statistical tests to determine differences between the consumption patterns of households that consumed Salvadoran foods in Los Angeles and Houston. We used a t-test to compare the percentage of households that consumed some of the most popular Salvadoran food products such as tortilla flour, red beans, *loroco*, *semita*, *quesadilla de queso*, *queso duro*, and *horchata* in the two cities. The t-tests showed no statistical

TABLE 5. Quantities that households would buy if products were available in the market (total)

Type of Food	Average Quantity (Per week)	Number of Answers (%)	Households Who Would Buy (%)
Corn products			
Tortilla flour	5.24 lb	63.5	48.3
Tamal enlatado	1.00 can	61.1	1.5
Bean products			
Red beans	3.60 lb	64.5	58.6
Canned beans	2.68 can	62.0	19.2
White beans	1.87 lb	61.1	25.1
Processed vegetables and fruits			
Loroco	1.85 lb	64.0	51.7
Chipilin	1.55 lb	63.5	46.3
Hoja de mora	1.52 lb	62.1	34.5
Verdolaga	1.54 lb	62.1	30.5
Flor de izote	1.88 lb	62.6	45.3
Pito	1.65 lb	62.6	44.8
Semilla paterna	2.04 lb	63.0	43.3
Bread and candy			
Semita	2.00 pkg	64.5	57.1
Quesadilla de queso	2.17 pkg	64.0	55.7
Torta de yema	1.56 pkg	62.3	35.0
Salpor	1.56 lb	62.1	29.6
Dulce de mazapan	1.36 lb	61.6	18.2
Quiebra dientes	1.62 lb	61.6	21.2
Conserva de coco	1.69 lb	62.1	33.5
Dulce de panela	1.56 lb	62.1	29.6
Cheese products			
Queso duro	2.16 lb	65.5	61.1
Queso blando	1.78 lb	63.1	40.4
Queso capita	1.76 lb	62.1	31.0
Queso morolique	1.43 lb	62.6	19.2
Quesillo (achiclado)	1.79 lb	62.1	18.8
Beverages			
Horchata	1.70 lb	64.5	55.7
Cebada	1.55 lb	63.1	33.5
Chilate	1.57 lb	62.1	30.5
Atol chuco	1.57 lb	62.6	33.0
Atol de elote	1.46 lb	61.6	12.8

Notes: Average quantity was calculated for the number of households that would consume. The number of observations is 203.

TABLE 6. Household expenditure on food groups in a typical week

	Average Weekly Expenditure ($)		
Food Category	**Whole Sample (*N* = 203)**	**Los Angeles Sample (*N* = 100)**	**Houston Sample (*N* = 103)**
Meat (beef, pork, poultry, and fish)	35.21	35.57	34.88
Cereals and bread	18.08	17.66	18.46
Dairy products	16.94	16.09	17.70
Fruits and vegetables	20.94	18.06	23.55
Beverages	12.53	9.23	15.53
Others	8.46	9.06	7.89

difference in the proportion of households that consumed tortilla flour, red beans, *queso duro*, and *horchata* between the two cities. However, for *loroco*, *semita*, and *quesadilla de queso*, the consumption proportions were significantly different.

Cluster Analysis

We used cluster analysis to classify types of Salvadoran consumers. The method separates respondents (households) into different groups based on their food consumption patterns. After forming the groups, we evaluated the demographic characteristics of each cluster to uncover any associations with food consumption patterns.

Clustering in this study involved grouping entities (households) into subsets or homogeneous subgroups based on their patterns of food consumption of specific ethnic (Salvadoran) foods. More specifically, we segregated households into several groups considering the amount consumed of the 30 Salvadoran foods identified in this study. We used the FASTCLUS procedure of the SAS statistical analysis computer package (SAS Institute 1985) as our cluster algorithm.

Most clustering techniques are sensitive to outliers, and removal of outliers previous to performing a cluster analysis is recommended (Everitt 1976; Afifi and Clark 1990). To determine the presence of outliers in our data, we first ran a FASTCLUS procedure, setting the number of clusters equal to 20. We considered resulting clusters containing one or two observations as outliers. We removed these low-frequency clusters and then ran the FASTCLUS procedure again, selecting the seeds from the high-frequency clusters

in the previous analysis. We performed a final FASTCLUS procedure with outliers assigned to specific clusters.

Using cluster analysis, we determined four groups or clusters; the number of households in each cluster ranged from 3 to 112. After determining the clusters, we examined characteristics of households in each cluster, including the average consumption of the 30 Salvadoran foods per cluster, as well as demographic characteristics (household size, annual household income, number of children per household, and percentage of households in the Los Angeles and Houston samples).

Table 7 presents the average quantity of 30 Salvadoran foods consumed by the households in a typical week per cluster. Cluster 4 is the largest group and consists of 112 households. Members in this group, in general, consumed relatively small amounts of all food categories (with the exception of corn products) compared with respondents in the other clusters. Cluster 1 consists of 37 households who, in general, consumed high amounts of Salvadoran bread and candy, moderate amounts of bean products, processed vegetables and fruits, and cheese, and low amounts of beverages. Cluster 2 includes six households who consumed low amounts of processed vegetables and fruits, and high quantities of bean products, cheese, and beverages. Cluster 3 is the smallest group, with only three households; their consumption included large amounts of corn and bean products, large amounts of processed vegetables and fruits, and moderate amounts of cheese and beverages.

Clusters 1 and 4 were typified by households with several children, lower income, and large household size. The majority of the households in clusters 1 and 4 had more than one child, and the children were likely to be in the age groups of between 3 and 10 years and between11 and 15 years. Although the highest proportion of the members (households) in these clusters earned a salary between $10,000 and $19,999, the clusters included households earning annual household incomes in most of the other income categories. Clusters 1 and 4 had fewer households in the higher income groups, and these two clusters included more of the larger households (e.g., eight or more people).

In general, clusters 1 and 4 showed similar demographic characteristics, with the exception of city location, as shown in Table 8. Nearly 76 percent of the members of cluster 1 lived in Los Angeles; 57.1 percent of those in cluster 4 lived in Houston. Because Houston

TABLE 7. Mean consumption by clusters

	Cluster			
Variable	**1 (*N* = 37)**	**2 (*N* = 6)**	**3 (*N* = 3)**	**4 (*N* = 112)**
Corn products				
Tortilla flour	3.53 lb	1.83 lb	3.66 lb	2.67 lb
Tamal enlatado	0.16 can	0.00	0.66 can	0.06 can
Bean products				
Red beans	3.97 lb	4.00 lb	4.67 lb	2.11 lb
Canned beans	0.51 can	1.50 can	0.50 can	0.54 can
White beans	0.58 lb	0.83 lb	2.33 lb	0.29 lb
Processed vegetables and fruits				
Loroco	0.81 lb	2.00 lb	1.33 lb	0.37 lb
Chipilin	0.68 lb	0.00	0.66 lb	0.08 lb
Hoja de mora	0.28 lb	0.00	1.00 lb	0.03 lb
Verdolaga	0.50 lb	0.00	0.00	0.05 lb
Flor de izote	1.28 lb	0.21 lb	1.33 lb	0.18 lb
Pito	0.70 lb	0.04 lb	2.33 lb	0.05 lb
Semilla paterna	0.26 lb	0.04 lb	3.00 lb	0.04 lb
Bread and candy				
Semita	1.90 pkg	1.33 pkg	1.67 pkg	0.97 pkg
Quesadilla de queso	2.36 pkg	4.50 pkg	2.33 pkg	0.89 pkg
Torta de yema	1.23 pkg	0.17 pkg	0.66 pkg	0.15 pkg
Salpor	0.99 lb	0.50 lb	0.17 lb	0.12 lb
Dulce de mazapan	0.45 lb	0.17 lb	0.33 lb	0.02 lb
Quiebra dientes	0.54 lb	1.58 lb	0.67 lb	0.01 lb
Conserva de coco	0.75 lb	1.08 lb	1.33 lb	0.18 lb
Dulce de panela	1.06 lb	1.08 lb	1.33 lb	0.13 lb
Cheese				
Queso duro	2.51 lb	3.33 lb	1.33 lb	1.38 lb
Queso blando	1.12 lb	2.33 lb	1.00 lb	0.55 lb
Queso capita	1.08 lb	1.33 lb	1.00 lb	0.31 lb
Queso morolique	0.65 lb	0.33 lb	0.67 lb	0.10 lb
Quesillo (achiclado)	1.46 lb	1.33 lb	0.67 lb	0.22 lb
Beverages				
Horchata	1.51 lb	3.00 lb	2.00 lb	0.87 lb
Cebada	0.47 lb	2.33 lb	1.00 lb	0.16 lb
Chilate	0.75 lb	1.83 lb	1.33 lb	0.12 lb
Atol chuco	0.63 lb	2.17 lb	1.33 lb	0.16 lb
Atol de elote	0.54 lb	1.33 lb	1.33 lb	0.07 lb

Note: Forty-five observations were omitted from the analysis due to missing values.

TABLE 8. Percentage of households in Los Angeles and Houston samples per cluster

	Cluster			
Demographic Characteristic	**1 (*N* = 37) (%)**	**2 (*N* = 6) (%)**	**3 (*N* = 3) (%)**	**4 (*N* = 112) (%)**
City				
Los Angeles	75.7	66.7	100.0	42.9
Houston	24.3	33.3	0.0	57.1

had a less developed market (i.e., only a small variety of Salvadoran food products could be found in this market), households may have consumed low amounts of all food products because of the scarcity of or difficulty in finding these products.

Households with toddlers or older children, smaller households, and somewhat higher incomes typified cluster 2. In cluster 2, 50 percent of the households had children, especially toddlers and children between the ages of 11 and 15. The number of people in these households ranged from one to seven, and the majority were located in the Los Angeles area. One-half of the households in this cluster earned a salary in the $10,000 to $19,999 range. The remaining 50 percent of the households earned a salary between $20,000 and $39,999. This combination of having some members earning a low income and others earning a relatively high income within the same cluster affected the Salvadoran foods they consumed. Households included in this cluster ate large amounts of staple foods (bean products) as well as specialty and more expensive foods (e.g., cheese products).

Cluster 3 included the largest share of low-income households. Sixty-seven percent of the members in cluster 3 had children, and most households earned an annual income less than $10,000. This cluster had households of one person and of four and five members. Households in this group were located in the Los Angeles area. The consumption patterns of households in this cluster were related to the low income earned. In general, household members within this group ate large amounts of staple foods (e.g., corn and bean products) and vegetables and moderate amounts of cheese and beverages.

Several differences among households in the variety of products consumed and in the relative share of staple products versus “luxury” or specialty items emerged from this analysis. Consumers within the lowest income bracket seem to eat more staple

foods and vegetables, whereas consumers with higher incomes tend to consume more expensive food items such as Salvadoran cheese. In addition, the geographic markets (Los Angeles and Houston) reveal evidence of different consumption patterns for the Salvadoran foods, indicating once again that the Houston market is less developed than the Los Angeles market.

The Salvadoran Food Market

The data from the two markets of Los Angeles and Houston provide some evidence for the potential market for Salvadoran foods in the United States. The estimation of the Salvadoran market size in the United States is based on information about the Salvadoran population in the United States and Salvadoran average household size. It is also based on quantities of foods that households would buy if these products were available in the market, percentage of households that would buy Salvadoran foods, quantities of foods consumed by households in a typical week, and percentage of households that consumed these foods.

According to the U.S. Bureau of the Census (2001a), there were 655,165 Salvadoran people living in the United States in 2000. Based upon the majority of households in our sample reporting having four family members (see Table 1), and assuming that the total Salvadoran population in the United States has similar demographic characteristics as in our sample, we estimate the number of Salvadoran households to be 163,791 (estimated by dividing the U.S. Salvadoran population [655,165] by 4).

Table 5 contains information about the average quantity of Salvadoran foods that households would buy per week if these foods were available in the market, as well as the proportion of households that would buy each food item. First, to estimate the total number of households that would purchase each food, we multiply the number of households (163,791) by the percentage of households that would buy each food. Second, to estimate the total quantity of each Salvadoran food that households would buy per week (i.e., potential demand for Salvadoran foods), we multiply the total number of households that would purchase each type of Salvadoran food by the average quantity that they would purchase per week. Third, we determine the total number of Salvadoran households in the United States that consumed each type of Salvadoran food in a typical week

by multiplying the proportion of households that consumed each Salvadoran food in the whole sample (from Table 3) by the total number of U.S. Salvadoran households (163,791). The total amount consumed of each type of Salvadoran food in a typical week is determined by multiplying the quantity consumed by households in the whole sample in a typical week (from Table 4) by the total number of households that consumed Salvadoran foods. These results indicate the estimated demand for Salvadoran foods in the United States.

The difference between potential demand for Salvadoran foods and estimated demand for Salvadoran foods is the demand surplus (or deficit) of Salvadoran foods. Table 9 shows the results of these calculations. The interpretation of this difference, especially where the estimated amount desired is less than actual purchase, should be viewed with caution. In general, the potential average quantity per week that households would buy is higher than the actual average quantity consumed of all food products, with the exception of *tamal enlatado*, *queso morolique*, and *quesillo*. However, for products with a surplus demand, there is some indication of unmet market. These foods include processed vegetables and fruits, bread and candy, with the exception of *semita* and *quesadilla de queso*, and beverages such as *cebada*, *chilate*, and *atol chuco*. These products were the least consumed in a typical week. For all remaining food items, future demand is smaller than actual demand because the proportion of households that would buy these foods is smaller than the proportion that actually buys them.

Discussion

Although there are no demographic data available for Salvadoran people living in the United States, there is information about Central Americans and Hispanics that can be used for comparison with some of the results from our survey. This comparison should be qualified, however, by recognizing the diversity existing among Hispanic groups (as Hispanics come from more than 20 different countries). However, research on Hispanic consumers seems to indicate that they have certain values, beliefs, and attitudes in common (Wagner and Soberon-Ferrer 1990).

Based on our survey of Salvadoran residents of Los Angeles and Houston, these Hispanic consumers show a relatively strong preference for Salvadoran and ethnic foods. In general, the results from the survey indicated that the sample mainly included low-income,

TABLE 9. U.S. Salvadoran market size using 2000 Salvadoran population

Type of Food	Households that Would Purchase (*N*)	Avg. Quantity per Week (Potential)	Amount Households Would Purchase (Potential)	Households that Purchased (*N*)	Avg. Quantity per Week (Actual)	Amount Purchased (Actual)	Demand Surplus
Corn products							
Tortilla flour	79,111	5.24 lb	414,542 lb	98,438	4.72 lb	464,629 lb	-50,087
Tamal enlatado	2,457	1.00 can	2,457 can	7,207	2.87 can	20,684 can	-18,227
Bean products							
Red beans	95,982	3.60 lb	345,533 lb	145,283	3.03 lb	440,206 lb	-94,673
Canned beans	31,448	2.68 can	84,280 can	47,663	2.54 can	121,064 can	-36,784
White beans	41,112	1.87 lb	76,879 lb	51,594	1.69 lb	87,194 lb	-10,316
Processed vegetables and fruits							
Loroco	84,680	1.85 lb	156,658 lb	65,353	1.42 lb	92,801 lb	63,857
Chipilin	75,835	1.55 lb	117,545 lb	37,836	1.10 lb	41,619 lb	75,925
Hoja de mora	56,508	1.52 lb	85,892 lb	20,965	1.02 lb	21,385 lb	64,507
Verdolaga	49,956	1.54 lb	76,933 lb	24,241	1.10 lb	26,665 lb	50,267
Flor de izote	74,197	1.88 lb	139,491 lb	49,956	1.43 lb	71,437 lb	68,054
Pito	73,378	1.65 lb	121,074 lb	35,543	1.28 lb	45,495 lb	75,580
Semilla paterna	70,922	2.04 lb	144,680 lb	25,060	1.39 lb	34,833 lb	109,846
Bread and candy							
Semita	93,525	2.00 pkg	187,049 pkg	107,283	1.84 pkg	197,401 pkg	-10,352
Quesadilla de queso	91,232	2.17 pkg	197,973 pkg	104,826	2.09 pkg	219,087 pkg	-21,114
Torta de yema	57,327	1.56 pkg	89,430 pkg	46,025	1.48 pkg	68,117 pkg	21,312
Salpor	48,482	1.56 lb	75,632 lb	43,568	1.29 lb	56,203 lb	19,429
Dulce de mazapan	29,810	1.36 lb	40,542 lb	15,233	1.37 lb	20,869 lb	19,673
Quiebra dientes	34,724	1.62 lb	56,252 lb	20,146	1.62 lb	32,637 lb	23,615

TABLE 9. Continued

Type of Food	Households that Would Purchase (N)	Avg. Quantity per Week (Potential)	Amount Households Would Purchase (Potential)	Households that Purchased (N)	Avg. Quantity per Week (Actual)	Amount Purchased (Actual)	Demand Surplus
Conserva de coco	54,870	1.69 lb	92,730 lb	61,258	0.99 lb	60,645 lb	32,085
Dulce de panela	48,482	1.56 lb	75,632 lb	46,025	1.34 lb	61,674 lb	13,958
Cheese							
Queso duro	100,076	2.16 lb	216,165 lb	137,912	2.08 lb	286,857 lb	-70,692
Queso blando	66,172	1.78 lb	117,785 lb	82,223	1.60 lb	131,557 lb	-13,772
Queso capita	50,775	1.76 lb	89,364 lb	57,327	1.72 lb	98,602 lb	-9,238
Queso morolique	31,448	1.43 lb	44,970 lb	30,629	1.50 lb	45,943 lb	-973
Quesillo (achiclado)	30,793	1.79 lb	55,119 lb	43,568	2.10 lb	91,494 lb	-36,375
Beverages							
Horchata	91,232	1.70 lb	155,094 lb	123,498	1.46 lb	180,308 lb	-25,214
Cebada	54,870	1.55 lb	85,048 lb	47,663	1.38 lb	65,775 lb	19,273
Chilate	49,956	1.57 lb	78,431 lb	49,137	1.25 lb	61,422 lb	17,010
Atol chuco	54,051	1.57 lb	84,860 lb	49,956	1.27 lb	63,444 lb	21,416
Atol de elote	20,965	1.46 lb	30,609 lb	39,474	1.41 lb	55,658 lb	-25,049

Note: The 2000 Salvadoran population is 655,165, or 163,791 households. The estimated Salvadoran population of 2000 is based on "The Hispanic Population" Census 2000 Brief (U.S. Bureau of the Census 2001a).

large families that have children living at home. The largest proportion of the respondents had not received a high school diploma and had two family members earning a salary.

The most popular Salvadoran foods in each of the six food categories were tortilla flour, red beans, *loroco*, *semita*, *queso duro*, and *horchata*. In general, Salvadoran people have a positive attitude toward their ethnic foods. The reason respondents did not consume Salvadoran foods was because many foods were not available in the market, some were of poor quality, and many were expensive. The Houston market is less developed relative to Los Angeles mainly because the majority of Salvadoran products included in this study are not available in Houston.

Statistical tests indicated some differences between Houston and the Los Angeles markets, particularly for vegetables such as *loroco*, and bread and candy such as *semita* and *quesadilla de queso*. Products with the highest potential for import opportunities are vegetables and fruit, bread and candy (excluding *semita* and *quesadilla de queso*), and beverages such as *cebada*, *chilate*, and *atol chuco*.

The Hispanic market is growing rapidly both from immigration and from relatively high birth rates. The growth in ethnic food consumption has spurred a number of large corporations (e.g., Kellogg and General Mills) to broaden their product mix. This study explores one segment of this market, the Salvadoran food market for the Salvadoran community. The results indicate that staple foods (beans and corn products) are consumed widely from Salvadoran sources and there is opportunity for introduction and growth in meeting consumer demand for specialty products.

Appendix

Salvadoran Food Description

Food Category	Food Description
Corn products	
Tortilla flour	Corn flour mainly used in the preparation of tortillas, tamales, and pupusas (corn tortilla stuffed with cheese, loroco, beans, and pork).
Tamal enlatado	Canned tamale made of corn flour and stuffed with chicken or pork.
Bean products	
Red beans	Dry red beans.
Canned beans	Canned red or black beans.
White beans	Smaller variety of navy beans.
Processed vegetables and fruits	
Loroco	Vegetable used in soups and pupusas.
Chipilin	Vegetable used in soups, rice, and pork.
Hoja de mora	Vegetable used in soups.
Verdolaga	Vegetable used in soups and salads.
Flor de izote	Flowers from a bush similar to yucca used as a side dish.
Pito	Flowers from a tree used in soups and side dishes.
Semilla paterna	Seeds from a Salvadoran fruit.
Bread and candy	
Semita	Bread made of wheat flour, eggs, molasses, and preserved pineapple.
Quesadilla de queso	Bread made of rice flour, cheese, sugar, and spices.
Torta de yema	Bread made of wheat flour, yeast, egg yolks, sugar, and spices.
Salpor	Bread made of wheat flour, sugar, and spices.
Dulce de mazapan	Candy made of sugar and spices.
Quiebra dientes	Candy made of molasses, sesame seeds, peanuts, and spices.
Conserva de coco	Candy made of coconut and sugar.
Dulce de panela	Candy derivative from sugar cane processing.
Cheese	
Queso duro	Hard white cheese.
Queso blando	Soft white cheese.
Queso capita	Soft layered cheese.
Queso morolique	Hard cultured cheese.
Quesillo (achiclado)	Soft white, fresh, mozzarella-type cheese.
Beverages	
Horchata	Cold drink made of rice, other seeds, and spices.
Cebada	Cold drink made of corn flour and spices.
Chilate	Hot drink made of corn flour, ginger, and spices.
Atol chuco	Hot drink made of dry blue corn and spices.
Atol de elote	Hot drink made of fresh corn, milk, and spices.

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