

THE STORE NEXT DOOR:

HOW ETHNIC GROCERY STORES CONTRIBUTE TO NEIGHBORHOOD LIFE & CROSS-CULTURAL FOOD CONSUMPTION IN CHICAGO

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ABSTRACT

Despite having great prominence in many Chicago neighborhoods, ethnic grocery stores have gone largely unstudied among urban researchers. To fill this gap, this study examines the inventory, locations, prevalence of these stores, and consumer attitudes about the roles they serve. The study considers both *conventional ethnic grocery stores* and *hybrid ethnic grocery stores* (defined as stores that supplement their ethnic-oriented offerings with substantial “non-ethnic” food choices). The results show that:

- **The city has an estimated 222 ethnic grocery stores that are dispersed throughout 53 of its 77 neighborhoods.** Albany Park, Chinatown, Brighton Park, West Rogers Park, Bridgeport, and Uptown all have 11 or more of these types of stores.
- **Hybrid ethnic stores are a veritable cornucopia of hard-to-find fruits and vegetables.** These stores carry an average of 98 different kinds of fruit, compared to 75 at traditional grocery stores. Vegetable varieties outnumber those of traditional stores at 121 to 81.
- **The neighborhood role of ethnic grocery stores extends far beyond just providing food to a particular ethnic group.** These types of stores promote cross-cultural food consumption among more than three-fourths of their customers, often in the form of spontaneous purchases of unfamiliar foods.
- **The cross-cultural food consumption attributable to ethnic grocery stores is pervasive among both foreign born and United States (U.S.) born consumers.** Whether born in this country or elsewhere, more than three quarters of consumers who use ethnic and hybrid ethnic grocery stores have tried new and different foods as a result of their visit.

The results of this study suggest that ethnic grocery stores are unappreciated treasures that both add to the appeal of urban neighborhoods and expand the culinary choices of the shoppers who use them.

Introduction

Ethnic grocery stores are a dynamic part of neighborhood life in many American cities. These retailers serve immigrants seeking culturally-appropriate foods, adventurous urbanites wanting diverse culinary experiences, commuters looking for convenient places to buy household staples, and a number of other types of consumers. In short, ethnic grocery stores do much more than service narrowly-defined demographic segments.

Unlike ethnic restaurants—the focus of guidebooks, directories, and extensive analysis—relatively little is known about the characteristics of ethnic grocery stores. No formal analysis is apparently available to evaluate their contributions to food supply and cultural life, either in Chicago or elsewhere in the United States. Even basic questions about this sector have gone unanswered, including: *How many ethnic grocery stores do cities have? How do ethnic stores affect the food supply (and the diversity of food available) in the city? How do ethnic stores change the way residents buy and consume food?*

This study seeks to answer these questions by exploring the role of ethnic grocery stores in Chicago, an extraordinarily rich cultural environment. The city is home to significant populations of immigrants speaking over two dozen languages.ⁱ Many immigrant groups are concentrated in neighborhoods in which ethnic grocers are commonplace, such as Albany Park, Little Village, Pilsen, and Uptown.

This paper answers these questions using newly collected data and geographic analysis of Chicago's ethnic grocery stores. *Section I* provides background perspective on ethnic stores. *Section II* describes the number, locations, and types of ethnic grocery stores in Chicago and well as how these stores augment cultural life and cross-cultural food consumption. Together, the results provide a colorful portrait of this largely unstudied sector.

Section I: Background on Ethnic Grocery Stores

Ethnic grocery stores, for the purposes of this report, are divided into two categories:

Conventional ethnic stores: This category of store sells food almost entirely for one or more specific ethnic group and limited American food brands. Such stores often have less than three cash registers and checkout lines.

Hybrid ethnic stores: This category of store sells ethnic food but also a substantial amount of non-ethnic, American food, such as standard American brands. These stores tend to be larger in square footage than conventional ethnic stores. It is also more common for these stores to have a relatively extensive inventory of food from several different ethnic groups.

Conventional ethnic and hybrid ethnic stores generally differ from traditional grocery stores (i.e. Jewel-Osco or Dominick's) in significant ways. Many are run by families that spend long hours behind the counter. Ethnic stores tend to be smaller in size and devote a much higher share of their space to fresh fruits and vegetables than most traditional stores.

Ethnic stores, like virtually all stores in the “small grocery” sector, face heavy competition with ever-increasing competitors. They are dwarfed by supermarkets and superstores, some of which span more than 50,000 square feet. Additionally, food discounters, such as Food-4-Less, Meijer, and Walmart, are expanding their presence in urban neighborhoods and luring consumers away with low-cost, one-stop shopping, generous store hours, and enormous inventories.

Small grocery stores tend to find their prices undercut by larger retailers on many items, in part due to their propensity to purchase food in smaller volumes, which reduces their purchasing power. As a result, consumers in low-income urban environments, where small stores are more prevalent than in other areas, face higher food costs than in higher-income environments.ⁱⁱ

Despite the plethora of research on small grocery stores, however, remarkably little focuses exclusively on ethnic stores. The shortfall is noteworthy, considering that a gap exists between the food supply and cultural needs in many neighborhoods. A study by Grigsby-Toussaint et al. (2010), for example, found that only one out of 16 of the culturally traditional foods for African-Americans are available at the majority of the grocery stores and other food retailers on Chicago’s southwest side. Just three out of 18 of the culturally appropriate foods for Latinos could be found in the majority of the food stores surveyed (*ibid*, 749). This study, like most others, does not delineate ethnic stores as a separate category. A more comprehensive list of previous studies can be found in *References*.

In *Section II*, Findings 3 – 5 evaluate the food inventory of 30 different conventional ethnic, hybrid ethnic, and traditional grocery stores. The 30 stores assessed in these three findings are considered grocery stores because they have the primary Standard Industrial Classification (SIC) code of 5411 (Grocery Stores). Any stores with a different SIC code were excluded from this study. For more information on the types of stores excluded from the analysis, please refer to Largent (2012, 17-18).

Section II: Findings

This section offers new insights about ethnic grocery stores through data collection and analysis in three areas, as noted below:

Location analysis: Spatial analysis of ethnic stores in Chicago using published business listings and Geographic Information System (GIS).

Inventory analysis: Evaluation of the inventory of 30 stores in 18 community areas of the city, including 20 ethnic stores and 10 traditional stores (supermarkets).ⁱⁱⁱ

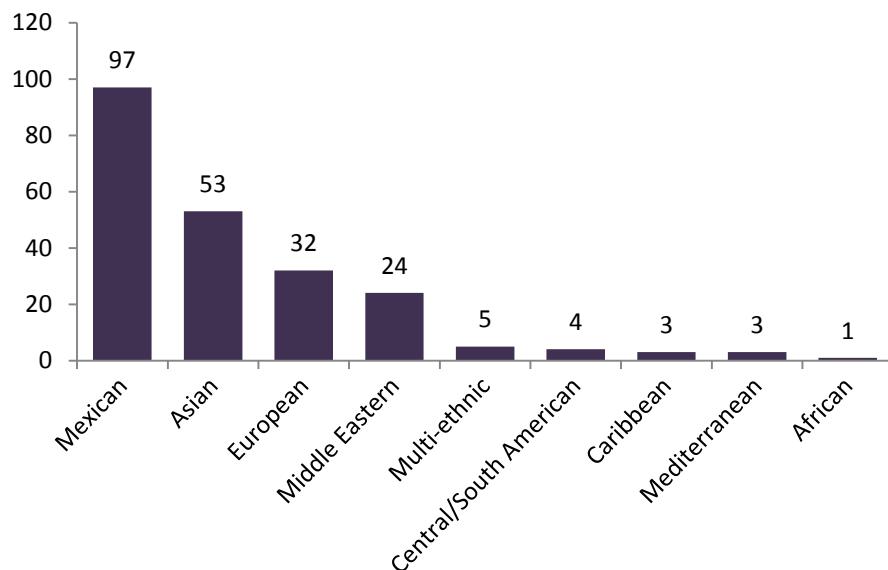
Consumer assessment: Surveys of 259 individuals, shopping in neighborhoods in which both ethnic and traditional grocery stores are available.

Additional details about the data collection method can be found in the *Appendix*.

Finding 1: The City of Chicago has an estimated 222 ethnic grocery stores. This count includes both conventional ethnic and hybrid ethnic stores.

Our analysis identified 222 ethnic grocery stores within the city limits (see *Appendix A* for a summary of our tabulation methods). The tally includes both conventional ethnic and hybrid ethnic stores (defined as stores that carry a substantial amount of both ethnic and non-ethnic food). Although this tally is an estimate, and is therefore not exact—it likely includes some stores that have recently closed while omitting others that have only recently opened.^{iv}

Figure 1
**Number of Ethnic Grocery Stores
By General Type**



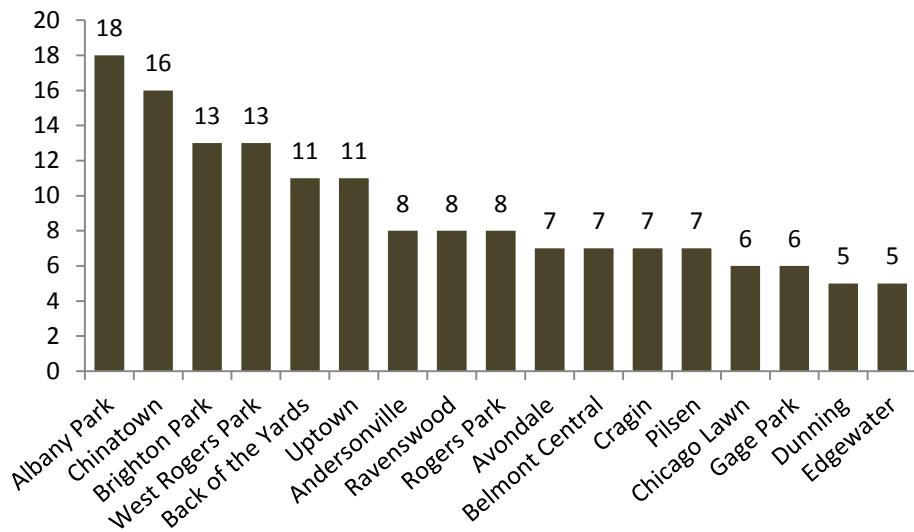
Based on available information about these stores, we estimate the city has 97 Mexican, 53 Asian, 32 European (non-Mediterranean), 24 Middle Eastern, and more than a dozen other stores divided between five categories. Within these categories, we have recorded additional subgroups. For example, in the Asian category, we observed seven Indian, five Filipino, two Korean, two Vietnamese, and one Thai store. In the European category, we observed 10 Italian; eight Polish; and one Romanian, Slavic, Swedish, and Ukrainian store. We also observed five multi-ethnic stores.

Finding 2: Ethnic grocery stores can be found in 53 of the city's 77 neighborhoods. Albany Park, Chinatown, Brighton Park, West Rogers Park, Bridgeport, and Uptown each have eleven or more of these stores, followed by Andersonville, Ravenswood, and Rogers Park, which have eight or more.

The number of ethnic stores throughout Chicago ranges from 18 in Albany Park (10 Middle Eastern, four Mexican, two Filipino, one Slavic, and one Asian); 16 in Chinatown (all Chinese); 13 in Brighton Park (all Mexican); and 11 in West Rogers Park (six Middle Eastern, four Indian, and one Eastern European, Korean, and Mexican). Five other neighborhoods have at least six stores.

The *Appendix* provides a breakdown of the types of ethnic grocers in the top 25 neighborhoods, ranked by the number of stores.

Figure 2
Neighborhoods with the Most Ethnic Grocers

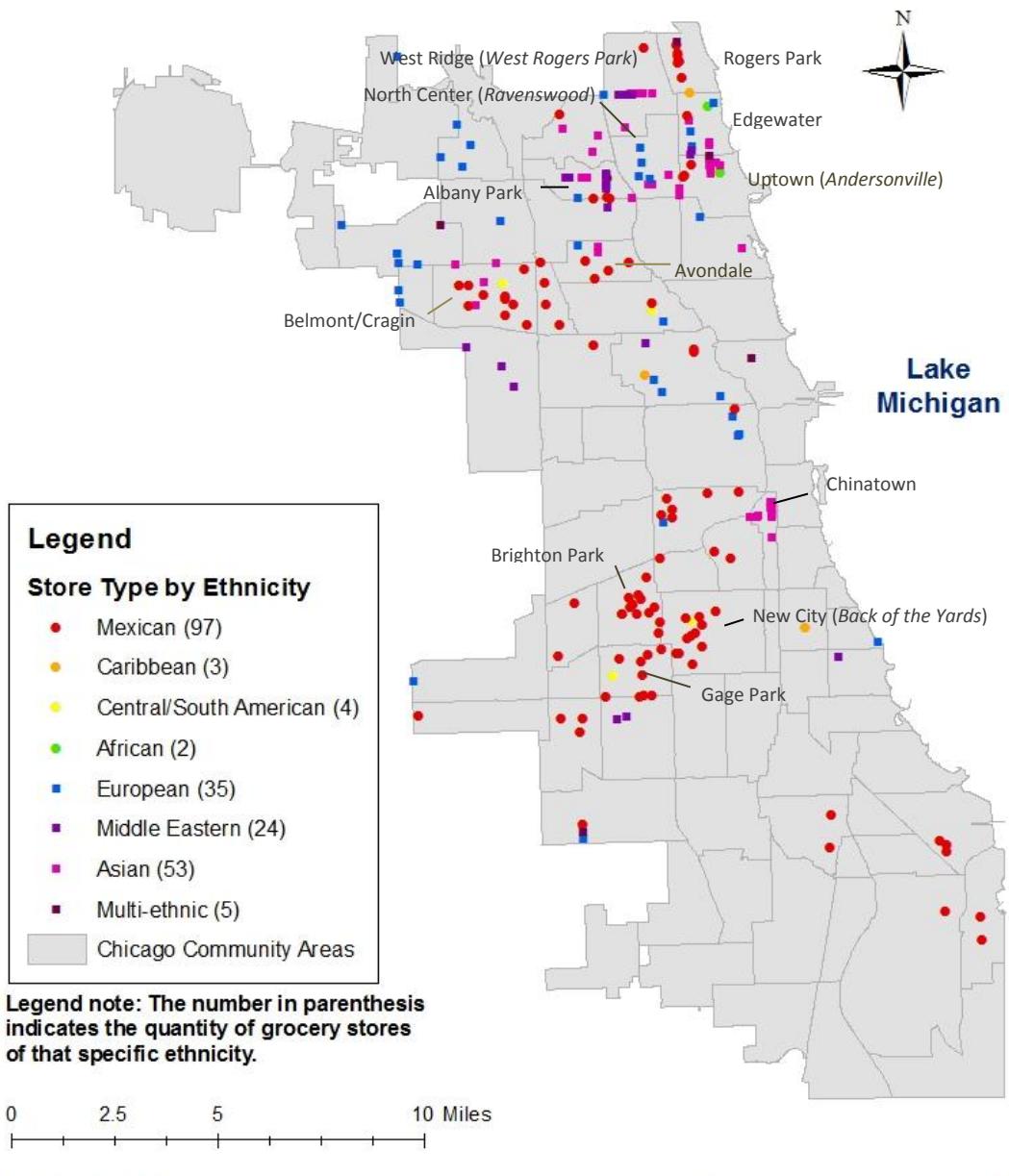


Ethnic stores, as would be expected, tend to be heavily concentrated in neighborhoods with large immigrant populations. Our analysis suggests that significant competition exists between grocery stores and that ethnic stores tend to be less geographically dispersed than ethnic restaurants, which are often located in areas most convenient for consumers who do not consider themselves part of an ethnic group. For example, Chinese restaurants can be found downtown and in many other parts of the city, while Asian grocery stores tend to be largely concentrated in neighborhoods with large Asian populations. There are several Asian groceries, for example, on West Argyle Street (a.k.a. “New Chinatown”), but none located in the affluent and mostly-white Gold Coast neighborhood, which is home to several Chinese restaurants.

GIS analysis shows clustering of ethnic grocery stores in the Far North Side are heavily Middle Eastern and Asian. This is not surprising due to the relatively large population of Middle Eastern and Asian residents living in communities such as Uptown, Edgewater, and West Rogers Park.^v There is an expected clustering of Asian stores in Amour Square (Chinatown) and on the boarder of Bridgeport.

There is also a substantial concentration of Mexican grocers on the Northwest Side and Southwest Side. The community areas of Avondale to Belmont Central/Cragin (Northwest Side) and Pilsen to West Elston (Southwest Side) have rather large Hispanic populations; in addition to South Chicago and East Side, where there is small smattering of Mexican stores. Therefore, as GIS mapping indicates, it is expected that there will also be a substantial concentration of Mexican grocers in these areas.

Ethnic Grocery Stores by Ethnicity in Chicago, Illinois



Finding 3: Both conventional ethnic and hybrid ethnic stores carry a wide range of products rarely found at traditional stores. Much of their ability to stock such products appears to be a result of their capacity to buy and sell foods in smaller quantities.

Our review of the inventory of 22 ethnic stores identified more than 100 foods that are prominent in these types of stores but generally unavailable in traditional stores. Fresh fruits such as bittermellon, chickoo, and green papaya are common in many Asian, Hispanic, and Indian grocery stores, but rarely found in traditional stores, including specialty stores such as Trader Joes and Whole Foods. Similarly, banana flower, choyote, and taro root are often available exclusively in ethnic stores (*Table 1*). Many ethnic stores have a substantial selection of dry goods that are a rarity in traditional stores, such as egusi seed, cassava fufu, and farina.

Table 1
Examples of Food Typically Found in an Ethnic Grocery Store
But Often Unavailable in Traditional Stores

Fresh Fruit	Fresh Vegetables	Dry Goods
Bittermelon	Banana flower	Cassava fufu/Oats foo foo
Chikoo	Black radish	Egusi seed
Guavas	Cassava or Yucca	Farina
Green papaya	Choyote	Tapioca pearls
Jack fruit	Dosakai	
Persimmon	Green vatana	
Pomelo	Taro root	

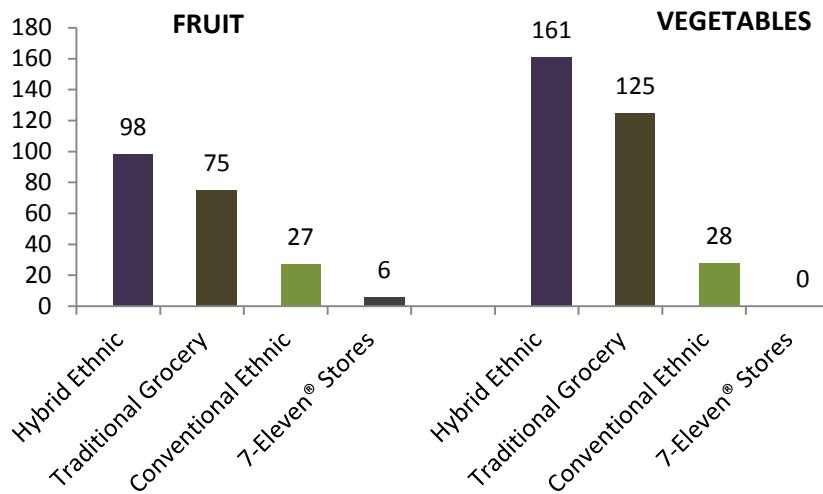
Ethnic stores can offer so many otherwise-unavailable fruits and vegetables for several reasons. First, these stores attract customers searching out these foods. Second, they appear to be more attuned to the nuances of consumer demand within particular ethnic groups. Third, they also appear to be better able (or more willing) to buy and sell produce in smaller quantities than larger stores. Many have little choice but to do so due to their limited shelf space. During fieldwork, in fact, it was uncommon to notice any “sold-out” produce item at ethnic stores.

Additional details on hard-to-find items at ethnic stores can be found in the research paper, *Cross-cultural food consumption in Chicago: The impact of ethnic grocery stores on the availability of a healthy, affordable, and quality food supply*, available from the Chaddick Institute upon request.

Finding 4: Hybrid ethnic stores offer a veritable cornucopia of hard-to-find fruits and vegetables. These multipurpose stores carry an average of 98 different kinds of fruit, compared to 75 at traditional grocers and 27 at ethnic grocers. Hybrid ethnic stores also offer a greater variety of vegetables than traditional stores.

The number of different fruits and vegetables available in conventional ethnic, hybrid ethnic and traditional stores appears in *Figure 3*. Hybrid ethnic stores stand out for their abundant selections of both fruit and vegetables, despite having considerably less retail space than the average supermarket. On average, hybrid ethnic stores sell 98 types of fruit and 161 types of vegetables, compared to 75 and 125 at traditional stores, respectively.

Figure 3
Fruit/Vegetable Varieties by Store Type



Sample of stores: standard ethnic stores (n=9); hybrid ethnic (n=13); traditional (n=8), 7-Eleven® (n=3). 7-Eleven convenience stores carried lemons, limes, oranges, bananas, and apples (red and green). The conventional ethnic stores averages shown here do not include small convenience oriented stores and meat markets that carry limited grocery offerings, which do not meet the SIC criteria discussed in Largent (2012).^{vi}

The enormous inventory of hybrid ethnic grocery stores can also be illustrated by example. This study evaluated the difference between 10 different types of produce available in a Mexican hybrid ethnic store (Store A) and a traditional store (Store B) both located on the Far North Side (Table 2). The hybrid ethnic store had six types of bananas while a nearby traditional store had

Table 2
Comparison of Fresh Produce Variety in Two Representative Stores
 Number of Each Produce Variety

<u>Fresh fruit type</u>	<u>Hybrid ethnic (Store A)</u>	<u>Traditional (Store B)</u>	<u>Vegetable Type</u>	<u>Hybrid ethnic (Store A)</u>	<u>Traditional (Store B)</u>
Bananas	6	5	Carrots	1	1
Apples	7	7	Tomatoes	8	6
Oranges	7	6	Sweet peppers	4	4
Grapes	3	2	Broccoli	2	2
Cantaloupe	1	1	Lettuce	7	8
Peaches	3	2	Corn	2	1
Strawberries	1	1	Celery	1	1
Honeydew melon	1	1	Cucumbers	4	3
Watermelon	4	2	Cabbage	7	5
Pears	7	5	Cauliflower	3	2
Total varieties:	40	32		39	33

five. The hybrid store had eight varieties of tomatoes while the traditional store had six. Altogether, the hybrid ethnic grocery store had eight more varieties of fruit and six more varieties of vegetables than the conventional store.

Conventional ethnic stores generally have far fewer varieties of produce, but nonetheless should not be compared to typical convenience stores on the basis of their fresh-food offerings. These stores have nearly five times the fruit choices than 7-Eleven® stores and an average of 28 vegetable types, whereas the *typical* 7-Eleven store has none.

We also evaluated the nutritional characteristics of the three types of stores using the Nutritional Environment Measures Survey in Stores (NEMS-S) score system, which measures the affordability, availability, and price of individual grocery stores and tallies these points into a final Total Summary Score. This Total Summary Score is used to determine if the grocery store has a low, moderate, or high HAAQ (healthy, available, affordable, and quality). Traditional grocery stores had the highest score (32.0 points); hybrid ethnic stores had a similar score (31.6); and ethnic stores had the lowest score (18.9 points).^{vii} For additional discussion of this issue, see the *Endnote* section and Largent (2012).

Finding 5: Ethnic and hybrid ethnic grocery stores offer competitive prices for milk, fresh produce, ground beef, and certain other household staples. The revenue generated by these items from non-ethnic customers appears to be critical to their success.

Most ethnic stores cater to convenience-oriented shoppers by carrying commonly bought foods such as bread, cereal, and milk. Although ethnic grocery stores, like most small grocery stores, have higher prices (and less selection) for many food items, the prices they charge for milk, fresh fruit, fresh vegetables, and ground beef were found to be nearly identical to those of traditional grocery stores.^{viii} Ethnic and hybrid ethnic stores also carry hot dogs and baked goods at prices comparable to traditional stores.

Our data reveals, however, that traditional stores have a significant price advantage on many (if not most) other products. These include goods such as baked potato chips, diet soda, whole wheat bread, and plain O's cereal. By providing consumers with more whole-grain options, ethnic stores appear to lessen the dietary problems facing many neighborhoods with low socioeconomic status. For more information, see Largent (2012).

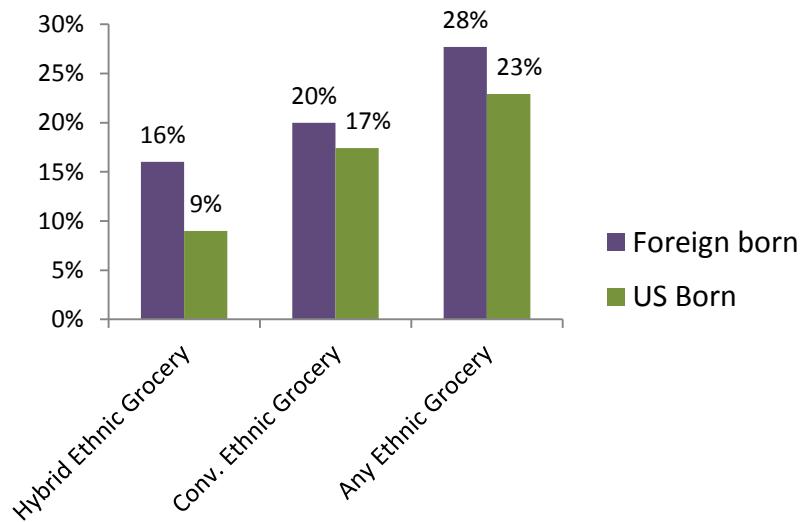
Finding 6: Approximately a quarter of residents surveyed in neighborhoods with ethnic grocery stores use these stores, regardless of whether or not they were born in the United States. Most of these residents, however, shop at a complex blend of stores to meet their food needs.

Among foreign born residents in neighborhoods where ethnic stores are available, 20% shop at hybrid ethnic stores; another 16% shop at conventional ethnic stores; and 27.7% shop at least one of these types of ethnic stores. Among U.S. born residents in these neighborhoods, 17% shop at hybrid ethnic stores; another 9% shop at conventional ethnic stores; and 22.9% shop at least one of these store types (*Figure 4*).

The idea that large numbers of immigrants are almost entirely dependent on ethnic stores near their home, however, is an oversimplified conception of neighborhood buying habits. Among

foreign born residents surveyed, we found that just over 1% shop exclusively at conventional ethnic stores. In addition, a little over 5% of the foreign born residents surveyed shop exclusively at hybrid ethnic stores. However, a small percentage of respondents (9%) do not regularly shop at traditional stores, choosing instead a blend of ethnic stores with more specialized stores, including gourmet shops and convenience stores. These results are based on responses from 259 surveys administered in eleven different retail corridors in which consumers had a choice of store types.

Figure 4
Share of Neighborhood Residents
Shopping Regularly at Ethnic Grocery
Stores

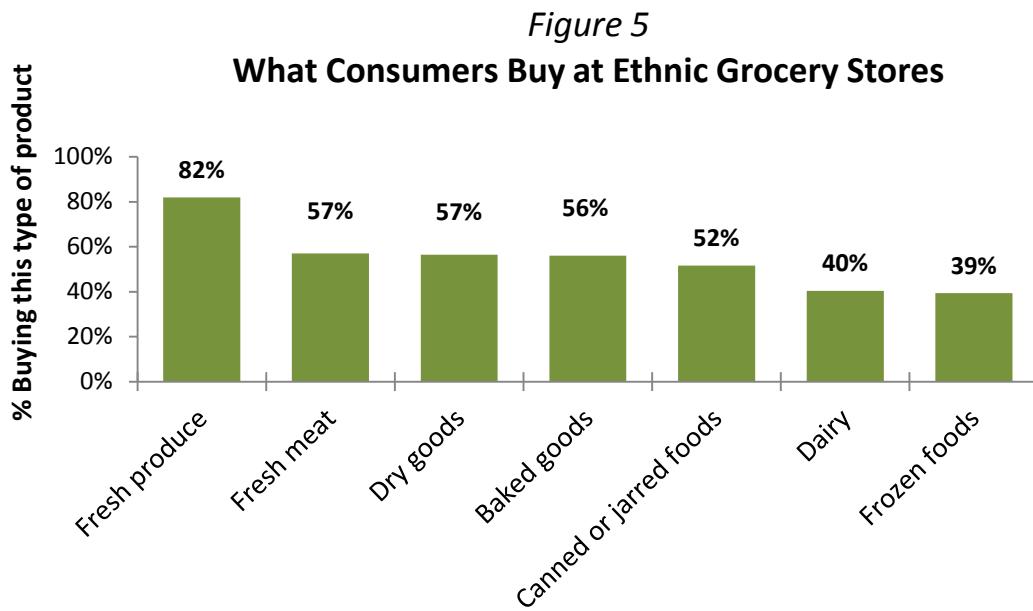


Finding 7: Ethnic grocery stores have a far greater impact on communities than just providing food to a particular ethnic group. Consumers at these stores engage in extensive cross-cultural food consumption and have different food purchasing habits than those who only shop at traditional stores. This is true for residents from various ethnic backgrounds.

The nearly half of customers who visit ethnic stores – 49% –at least occasionally purchased foods from ethnicities other than their own when in these stores. The majority of these consumers, regardless of where they were born, shop at conventional ethnic and hybrid ethnic stores because they wanted to try a new recipe (57%) or to buy ethnic foods they like to eat (57%). Many consumers evidently shop at ethnic stores to find an ethnic food item that may not be available in mainstream traditional stores.

Buying fresh produce is the most common reason people shop at ethnic stores (accounting for 82% of responses). More than half of all respondents, however, also visited these stores to buy fresh meat, dry goods, baked goods, and canned or jarred foods (*Figure 5*). These results can be partially attributed to the fact that ethnic stores have competitive prices for fresh fruits,

vegetables, and ground beef. By comparison, far fewer respondents (39%) shop at ethnic stores for frozen food.



Finding 8: Ethnic grocery stores serve to diversify their food choices and promote cross-cultural food consumption. More than three-quarters of consumers who use ethnic and hybrid ethnic stores have been tempted to try new and different foods. Almost as many consumers report having bought a food offering previously unfamiliar to them.

Chicagoans have an appreciation for diverse types of foods. The pleasure consumers derive from conventional ethnic and hybrid ethnic stores is evident in their responses to questions about the role of these stores in their lives.

Appreciating different cultures: More than seven in 10 (71.9%) report that ethnic stores have greatly increased their appreciation for a different culture.

“Fun” of Shopping: More than seven in 10 (71.8%) indicate that seeing all the interesting food that is available is part of the “fun of shopping at groceries run by different ethnic groups.” Fewer than 10% strongly disagreed.

Temptations: More than three-quarters (76.0%) indicate that they are tempted to try new foods when in ethnic stores. Less than 10% strongly disagreed.

Trying something new: More than two-thirds (69.3%) have, on occasion, bought a food item at an ethnic grocery store that was previously unfamiliar to them.

Wanting to save their neighborhood store: More than six in 10 (61.3%) fear that ethnic grocery stores might disappear due to competition from bigger stores.

The percentage of affirmative responses is tabulated based on the share either agreeing or strongly agreeing with the survey statements (*Table 3*). Based on these results, respondents view conventional ethnic and hybrid ethnic grocery stores as an integral part of their food experience.

Table 3
**Attitudes about the Role of Ethnic Grocery Stores
 among Consumers Who Shop at Ethnic Grocers**

Survey Statement	Strongly agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly disagree (%)
"I find that when I visit an ethnic or hybrid ethnic grocery, I am tempted to try new foods."	44.3	30.7	16.1	4.7	4.2
"I have on at least one occasion bought a food item at an ethnic or hybrid ethnic grocery that was previously unfamiliar to me."	40.1	29.2	14.1	7.3	9.4
"Seeing all the interesting food that is available is part of the 'fun' of shopping at grocers run by different ethnic groups."	37.7	24.1	18.8	10.5	8.9
"I often buy ethnic foods at an ethnic grocery that I would never consider buying at a major supermarket."	37.7	33.5	20.4	6.3	2.1
"Ethnic grocers have greatly increased my appreciation for a different culture."	44.8	27.1	16.7	8.3	3.1
"I fear ethnic grocers may disappear due to competition from bigger stores."	30.9	30.4	17.8	10.5	10.5

Sample size: 259 consumers in public areas in neighborhoods with ethnic grocers

Section III: CONCLUSION

When interpreted broadly, these findings suggest the following about ethnic groceries.

An estimated 222 ethnic grocery stores in Chicago promote cross-cultural food consumption patterns by encouraging shoppers to experiment with foods in which they are otherwise unaccustomed. These establishments encourage customers to explore new food options and to exercise a degree of spontaneity in their culinary lives.

Ethnic stores provide foods (particularly fresh fruits and vegetables) that would otherwise be completely unavailable, while hybrid ethnic stores provide a particularly abundant assortment of fresh fruit and vegetables. Regardless of whether consumers buy these foods, many find

their presence and availability to be an enriching part of the urban scene.

Regardless of their size or ethnic orientation, ethnic stores offer highly competitive prices on many staples, such as bread, produce, and milk. These stores offer a colorful and convenient alternative to convenience stores and other retail outlets for everyday food items.

Ethnic stores are important contributors to a neighborhood's wellbeing by providing fresh food and contributing to the character and dynamism of the area. These stores can be accurately described as being part of the "cornucopia of culture" in many urban neighborhoods.

Understanding more about the role of conventional ethnic and hybrid ethnic grocery stores can help community leaders, retailers, and entrepreneurs in urban areas better meet the food needs of residents and their unsatisfied food "wants," while shedding light on complex cross-cultural food consumption and ethnic food preferences.

Appendices

A) Inventory of Locations of Ethnic Grocery Stores

No database existed prior to the completion of this study on the locations or number of ethnic stores in the city. The present study collected this information using a three-step process: i) reviewing online information and consumer reviews about potential stores; ii) supplementing this list with other stores identified in research conducted by Largent (2012); and iii) Geographic Information System (GIS) analysis conducted using ArcView.

B) Inventory of Items in Ethnic Grocery Stores

The research team evaluated a total of 30 stores in 18 communities to better understand the range of inventory of conventional ethnic and hybrid ethnic stores. Nine conventional ethnic stores (all relatively small) were considered. Eleven were average in size and considered hybrid ethnic stores, and nine were traditional stores, which tended to be larger than both ethnic and hybrid ethnic stores. For more detail on the methods of inventory tabulation, see Largent (2012). A link to that study is available in the *Research & Publications* section of the Chaddick Institute website: <http://las.depaul.edu/chaddick/>

C) Commonly Available Foods in Ethnic Grocery Stores

The types of food items that can be found in ethnic grocery stores, of course, differ sharply between those serving different ethnicities. For example, Asian stores have markedly different inventories than Mexican stores. Many foods, however, are common to stores of various types. We provide a list below of approximately 180 different foods that were prevalent in various conventional ethnic and hybrid ethnic stores. The list is divided into categories similar to those found in the NEMS-S. While the list is not exhaustive and a small percentage of these foods can be found in most traditional grocery stores, it provides perspective on the enormous range of ethnic foods that can be found in stores. This list of foods can be used in future research on ethnic food retailers as a starting point to creating a HAAQ food measurement index for the most-consumed ethnic foods in the U.S.

Table 4
List of Commonly Available Foods in Ethnic Grocery Stores

Fruits			
Banana peppers	Coconuts (peeled/unpeeled)	Guajillo chiles	Plantains
Bittermelon	Cubanelle (sweet pepper)	Guavas	Poblano peppers
Chikoo	Finger hot peppers	Indian bittermelon	Pomelo
Chilaca pepper	Green finger peppers	Jack fruit	Pulla chiles
Chile de arbol	Green Jamaican peppers	Jamaican peppers	Serrano peppers
Chile guajillo	Green long peppers	Long hot peppers	Tamarind
Chile hananero	Green papaya	Manila mangos	Thai hot peppers
Chile manzano	Green plantains	Papaya	Xoconostle
Cobanella peppers		Persimmon	

Vegetables & Plants (including grasses)			
Baby lima beans	Fava beans	Lupini beans	Taro leaves
Banana flower	Flat valor beans	Malanga	Taro root
Black beans	Fresh ratalu	Moong beans	Thai chiles
Black eyed peas	Ghana yam	Navy beans (canned/dried)	Thai eggplants
Black radish	Ghanaian beans	Okra	Tindora
Bola roja beans	Great northern beans	Oloyin honey beans	Tomatillo
Boniatos	Green chana	Opo squash	Turiya
Calabacitas	Green chickpeas	Papa blanca	Turnips
Canary beans	Green vatana	Parval	Various pickled vegetables
Cassava leaves	Indian eggplant	Persian cucumber	Vautia
Cassava or Yucca	Jicana	Pigeon peas	Winter melon
Chayote	Jimaca	Pinto beans (with/without husk)	Yampi
Chickpeas	Large white fava beans	Pole beans	Yautia lila
Chinese eggplant	Long beans (16")	Red beans (kidney and small)	Yellow wax beans
Choyote	Long egg plant	Round eggplant	
Cow beans	Long squash	Round valor	
Daikon	Long valor beans	Savilla	
Dominican reds	Loose beets	Sinqua	
Dosakai	Loose turnips		<u>Plants & Grasses</u>
			Aloe vera plant
			Amба haldi
			Arvi or taro
			Guajes
			Lemongrass (grass)
			Whole sugarcane (grass)

Dry Goods		
Barley	Red lentils	White beans
Brown and white rice	Semolina	White cargamanto beans
Bulgur wheat	Shelled wheat	White corn mote pelado
Chinese pine nuts	Small African beans	Yellow corn meal
Cracked wheat	Small edo	
Egus seed (ground/whole)	Split peas	
Farina	Tapioca	
Oats foo foo or cassava fufu	Various packaged dried herbs and spices	

Meat	
Beef liver	Chicken livers
Beef soup bone	Cows feet
Beef tongue	Oxtail
Beef tripe "book"	Pork bellie
Beef tripe "honeycomb"	Pork stomach
Chicken feet	Pork tail

Bread
Bolliolos (white and wheat)
Naan (white/wheat)
Pita (white/wheat)
Roti (White/wheat)
Tortilla (white/wheat-various sizes)

Baked Goods		
Biscuits (assorted flavors)	Halwasan	Peda
Cakes (assorted flavors)	Jalebi	Petit fours (tea or coffee cookies)
Chikoo barfi	Jelly molds (assorted flavors)	Pizzelle (large circle wafers)
Coconut treats	Jelly rolls	Rava laddu
Coffee cake	Kaju katli	Traditional Mexican baked goods
Cookies (assorted flavors)	Laddu	Tulumba
Cookies (various flavors)	Macaroons	Usmania cookies
Date kleche	Mamool	Wafers (assorted flavors)
Ghari	Mithai	
Haiva w/ chocolate	Nazooke (various flavors)	

Dairy & Beverages	
Yogurt drink	Coconut water
Greek yogurt (various flavors)	Fruit juice box
Plain yogurt	Fruit nectar
Kefir	Fruit soda
Soy milk (milk substitute)	Sabila (aloe drink)

D) Nutrition Environment Measures Survey in Stores (NEMS-S)

The NEMS-S^{ix} is an observational measure designed to evaluate and provide a consistent methodology to score the HAAQ of grocery stores and supermarkets in a community. For a discussion of the value of these tools in evaluating ethnic stores, see Largent (2012).

E) Definition of “Ethnic”

It is important to elaborate on what is meant by “ethnic” foods in this paper. America is comprised of so many different ethnicities, nationalities, and cultures that many so-called “ethnic” foods are now considered to be a part of the mainstream American diet. Therefore, distinguishing between foods that are considered non-ethnic and those that are considered ethnic is often subjective. Glanz et al. (2007, 283) uses eleven food indicator categories based on national food sales and federal/industry data to identify the most-consumed foods in the U.S. In addition, all of the brands that are part of the NEMS-S are popular non-ethnic American brands found in many supermarkets across the U.S.

F) Distribution of Survey Respondents

Table 5 (below) shows the size of the sample of the 259 survey respondents by neighborhood.

Table 5
Number of Survey Respondents by Retail Corridor

Retail Corridor Location	Chicago Community Area (neighborhood)	# of Surveys Conducted	% of Surveys Conducted
West Devon Avenue	West Ridge (West Rogers Park)	4*	1.5%
North Western Avenue	North Center (North Center, Roscoe Village) Lincoln Square (Ravenswood Gardens)	10	3.9%
West Lawrence Avenue	Albany Park (Albany Park) Uptown (Little Vietnam)	11	4.2%
North Milwaukee Avenue	Logan Square (Logan Square, Bucktown) West Town (West Town, East Ukrainian Village, Wicker Park)	11	4.2%
West 26 th Street	South Lawndale (Little Village)	17	6.6%
West Fullerton Avenue	Lincoln Park (Lincoln Park, Wrightwood Neighbors, Sheffield Neighbors)	17	6.6%
North Broadway Street	Edgewater (Edgewater Glen, Magnolia Glen, Andersonville)	33	12.7%
West Cermak Road	Armour Square (Chinatown, East Pilsen, Heart of Chicago, Heart of Italy)	34	13.1%
North Lincoln Avenue	Lincoln Square (Ravenswood)	39	15.1%
North Kedzie Avenue	Albany Park (Albany Park, Ravenswood Manor)	40	15.4%
Chicago Loop	Loop	43	16.6%
Total	12 (26)	259	100%

Approximately 20 surveys were attempted on West Devon Avenue. Due to language barriers, only four surveys were administered.

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ⁱ The range of languages spoken is tabulated in recent U.S. Census data. See <https://data.cityofchicago.org/Health-Human-Services/Census-Data-Languages-spoken-in-Chicago-2006-2010/a2fk-ec6q>

ⁱⁱ See Raja et. al. 2008, 470; Ver Ploeg 2010, 24)

ⁱⁱⁱ Our analysis looked at the inventory of major supermarket chains, such as Jewel Food Stores and Dominick's outlets. We did not consider superstores or gourmet groceries.

^{iv} No dataset of ethnic grocery stores in the city of Chicago exists. This study estimated the number and types of stores by compiling the names and addresses of stores categorized as being ethnic grocery stores on online sites, such as Yelp!.com. Please contact Joe Schwieterman at chaddick@depaul.edu for additional details of the data set.

^v U.S. Census, op. cit., page 1.

^{vi} The fruit and vegetable counts for traditional ethnic grocery stores reflect those sampled in Largent (2012) and do not include stores in other SIC categories that might carry a limited stock of groceries, such as meat markets and small convenience stores..

^{vii} The Availability, Price, and Quantity Scores for hybrid ethnic and traditional grocery stores were relatively close to each other, resulting in the Total Summary Score for hybrid ethnic grocery stores to be less than half a point lower than traditional grocery stores. Hybrid ethnic grocery stores scored slightly higher in food Price (1.69 points) and Quality (6.00 points) and slightly lower in food Availability (23.92 points) when compared to traditional grocery stores. The HAAQ score was High for both hybrid ethnic and traditional grocery stores.

^{viii} See Largent (2012) p.30

^{ix} Based on the NEMS-S, healthful is defined "based on publications of federal agencies and health professional organizations and researchers" (Glanz et al. 2007, 283). Affordability is defined as the lowest possible cost for an item of food (*ibid*, 282-98). The definition of quality is as follows: "A" for acceptable and "UA" for unacceptable. Acceptable means the "food item is in peak condition, top quality, good color, fresh, firm, and clean. Unacceptable means that the food item is bruised, old-looking, mushy, dry, overripe, dark sunken spots in irregular patches, cracked or broken surfaces, signs of shriveling, mold or excessive softening" (Glanz et al. NEMS-S appendix 2007 19).