Consumption Trends of the U.S. Hispanic Population from 1980–2003

By Lori Timmins

Between 1980 and 2003, the number of Hispanics in the United States increased dramatically from 14.6 million to 39.2 million. As a proportion of the national population, the share of Hispanics more than doubled from 6 percent to nearly 14 percent during this period. Projections from the U.S. Census Bureau indicate this trend will continue well into the future: Hispanics are expected to comprise 20.1 percent of the U.S. population, or 73.1 million individuals, by 2030. In addition to being a huge source of population growth, Hispanics have also been playing an increasingly important role in national consumer spending. Expenditures by Hispanics accounted for only 6.3 percent of aggregate spending in 1980, compared to 9.2 percent by 2003.¹ Notably, growth in expenditures by this group is not keeping pace with its population increase, but Hispanics are playing a growing role in national consumer spending. These data beg the question: how have expenditure patterns of Hispanic households changed over the period? Related to this, how do the expenditure patterns of Hispanics differ from those of the rest of the U.S. population, and have such differences converged or widened over the years? This article provides insight on these issues.

The Data

The data used in this study are from the Consumer Expenditure Survey (CES), which is produced by the Bureau of Labor Statistics (BLS). As Table 1 demonstrates, the proportion of Hispanic households in the CES data for any given year is comparable to that published by the Census Bureau.²

Table 1: Percentage of Hispanics in Total Sample by Source in Selected Years

Source	1980 , %	1990 , %	2000, %	2003 , %
CES	5.75	7.87	9.48	11.42
Census Data	6.45	6.53	8.74	10.43

The CES collects expenditure information from households (or "consumer units") at a very fine level of detail. The socioeconomic characteristics and income data of consumer unit members are also obtained. The data are collected in independent guarterly Interview and weekly Diary surveys of approximately 7,500 sample households. Prior to 1999, the sample size consisted of 5,000 households. The Interview survey, which is conducted over five consecutive quarters for each consumer unit, collects data on recurring expenditures (e.g., electricity/rent) and large purchases (e.g., automobiles/major appliances). The Diary survey is carried out over two weeks and is intended to collect weekly expenditures of frequently purchased items, such as food and beverages, tobacco, and personal care products. The BLS estimates that the Interview survey collects data on roughly 80 to 95 percent of household expenditures. To obtain a more complete and accurate picture of Hispanic spending, data from both the Interview and the Diary components are used in this article.

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Table 2: Selected Demographic Characteristics by Hispanic Origin (1980-2003)

	Overall		Hispanics			Non-Hispanics						
	1980	1990	2000	2003	1980	1990	2000	2003	1980	1990	2000	2003
Total (in thousands) Percentage of Total Population	226,545 100	248,709 100	281,421 100	282,910 100	14,600 6	22,354 9	35,306 13	39,195 14	211,945 94	226,355 91	246,115 87	243,715 86
Average Pre-tax Personal Income 25% 50% 75% 100%	2,348 7,563 16,204 26,396	3,430 9,419 19,128 30,611	3,775 10,453 20,441 34,843	3,620 10,334 20,652 34,283	1,214 6,068 12,318 20,692	1,451 6,274 13,007 21,423	1,568 6,969 13,175 22,096	1,359 7,065 13,654 22,826	2,427 7,737 16,626 26,729	3,596 9,908 19,415 31,007	4,065 11,035 21,487 35,564	3,913 10,870 21,739 35,768
Average Pre-tax Household Income 25% 50% 75% 100% 100%	13,350 23,739 35,559 50,214	13,925 25,647 40,719 59,550	15,026 27,875 45,720 68,348	14,690 27,582 45,478 68,429	10,684 18,704 29,126 41,453	10,283 18,795 31,762 46,103	11,324 19,862 33,449 50,196	11,413 20,109 33,804 50,924	13,607 24,272 36,165 50,934	145,603 26,566 41,760 60,673	15,796 29,164 47,292 70,643	15,679 28,943 47,281 70,782
Average Household Size	3.63	3.42	3.40	3.34	4.47	4.41	4.41	4.24	3.58	3.34	3.27	3.20
Distribution of Age 25% 50% 75% 90%	16 30 50 66	17 32 50 67	17 35 51 67	17 35 52 67	10 22 37 53	12 25 39 56	11 26 41 55	12 26 41 55	16 30 51 66	17 33 51 67	17 36 52 68	18 37 53 69
Ownership of Dwelling	72.5	67.0	69.9	70.9	53.4	42.2	47.8	50.3	73.6	69.3	72.9	74.1
Unemployed (% of Labor Force)	6.6	5.6	4.3	6.2	8.8	8.2	6.4	8.3	6.4	5.3	3.9	5.9
Welfare Recipients (%)	5.2	4.8	2.5	1.8	11.9	9.6	5.4	3.7	4.8	4.4	2.1	1.5
Food Stamps (%)			6.9	6.8			12.5	11.1			6.0	6.0
Below Low-income level (%)			12.0	12.3			21.5	21.0			10.6	10.8
Proportion in MSA (%)	26.3	24.9	24.3	24.0	46.4	45.5	38.8	38.6	25.2	23.2	22.4	21.7
Region New England Division Middle Atlantic Division East North Central Division West North Central Division South Atlantic Division East South Central Division West South Central Division Mountain Division Pacific Division	5.5 16.7 18.8 7.7 16.0 6.4 10.2 4.9 13.9	5.2 15.3 17.0 7.2 17.3 6.1 10.8 5.5 15.7	5.0 14.0 16.4 6.8 17.9 6.1 11.0 6.4 16.4	4.9 14.0 15.8 6.8 18.4 5.9 11.2 6.6 16.3	2.4 15.9 6.8 1.6 8.1 0.5 22.0 11.2 31.6	1.8 13.8 6.0 0.9 9.5 0.3 21.4 9.4 37.0	2.1 11.9 6.3 1.7 12.3 0.7 20.3 10.8 34.0	2.5 11.6 6.9 1.9 12.3 0.8 21.4 10.7 31.9	5.9 17.0 19.7 8.2 16.0 6.3 9.5 4.5 12.9	5.6 15.6 18.0 7.8 17.8 6.4 9.9 5.1 13.9	5.4 14.3 17.7 7.6 18.7 6.8 9.8 5.9 13.9	5.3 14.4 17.3 7.5 19.4 6.8 9.6 6.0 13.8
Immigrants (%)			11.6	13.0			44.0	44.5			7.2	8.0
Educational Attainment (%) Less than High school High school 1-3 years of College 4+ years of College Source: Current Population Survey March S	29.8 38.5 16.6 15.1	20.1 37.4 21.6 20.9	15.5 34.2 27.1 23.2	14.8 33.3 27.1 24.7	52.0 29.7 11.7 6.6	45.9 30.2 15.3 8.6	40.2 31.1 19.7 9.0	39.1 31.5 19.6 9.8	28.3 39.0 17.0 15.7	17.8 38.0 22.2 22.0	12.6 34.5 28.0 24.9	11.5 33.6 28.2 26.8

Demographic Characteristics

The particular demographic characteristics of a population group are important determinants of its spending patterns. Income, obviously, is a major factor in consumer spending decisions. Other demographic characteristics such as family size, household composition, and age distribution may also play important roles. For example, households with children are likely to spend relatively more on education-related items compared to households consisting mainly of older adults, just as elderly households are likely to spend relatively more on health related items.

Table 2 compares the characteristics of Hispanics to those of non-Hispanics from 1980 to 2003. The fact that Hispanic households reported lower incomes makes it likely that real (inflation adjusted) income differentials contribute to differences in spending patterns between Hispanics and non-Hispanics. The average real income levels of Hispanic households were lower than their non-Hispanic counterparts in all years. Growth in income over the period was also higher for non-Hispanic households. For example, from 1980 to 2003 the median real income of a Hispanic household increased from \$18,704 to \$20,109, a growth of 7.5 percent, while that of a non-Hispanic household increased from \$24,272 to \$28,943, or a growth of 19.2 percent.³ In 2003, 21.0 percent of Hispanic households had incomes that fell short of the poverty threshold, as defined by the Census Bureau, compared to only 10.8 percent of non-Hispanics. Similarly, a higher proportion of Hispanics received food stamps in 2003 (11.14 vs. 6.02 percent).

Other demographic characteristics outside of income may also play important roles in consumer spending. A striking contrast, shown in Table 2, is that over 44 percent of the Hispanic population comprised immigrants in 2003, compared to 8 percent of the non-Hispanic population. More than 50 percent of Hispanics lived in the Pacific and West South Central Regions in all years, primarily in California and Texas. In addition, a significant proportion of Hispanics lived in a central city; roughly 39 percent of Hispanics, versus 22 percent of non-Hispanics, resided in a central city in 2003. Although Table 2 shows there has been an overall trend of individuals moving away from the city into the suburbs, Hispanics were still primarily concentrated in Metropolitan Statistical Areas (MSAs) at the end of the period.

Table 3 shows changes in the composition of Hispanics over time. While the proportion of Hispanics of Mexican origin slowly increased, moving from nearly 60 percent in 1980 to more than 66 percent in 2003, the most significant increase came from the proportion of Hispanics of Central/South American origin. This number jumped from under 8 percent of the Hispanic population in 1980 to more than 15 percent in 2003. Also, the proportion of individuals of both Puerto Rican and Cuban origin declined over the period.

Hispanic Origin	1980 , %	1990 , %	2000, %	2003, %
Mexican	59.89	64.03	66.15	66.76
Puerto Rican	13.76	10.49	9.02	9.79
Cuban	6.28	4.88	3.96	3.64
Central/South American	7.72	13.68	14.46	15.58
Other Hispanic	12.35	6.91	6.40	4.22
Total	100 %	100 %	100 %	100 %

Table 3: Composition of Hispanics in Selected Years

Source: Current Population Survey March Supplement

Results

This section is a discussion and analysis of annual expenditure shares, defined as the amount which spending in a specific category contributes to total spending.⁴ Figures 1 and 2 show the average annual expenditure shares on specific item categories over the 1980-2003 period. As shown, spending in the major expenditure categories, such as food, housing, and transportation, made up similar proportions of the household budget for both Hispanics and non-Hispanics (78.6 vs. 75.4 percent, respectively). Apparel, health care, and education-related expenditures also contributed to the household budget in similar proportions (12.8 percent for Hispanics vs. 13.9 percent for non-Hispanics). Finally, spending in minor expenditure categories, such as personal care and services, entertainment, tobacco products, alcohol, and reading categories, accounted for slightly less of the Hispanic household budget (8.6 vs. 10.7 percent, respectively). Following is a more thorough investigation of spending patterns within each major expenditure category.



Figure 1: Average Annual Expenditure Shares on Major Categories by Hispanic Origin (1980-2003)

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Figure 2: Average Annual Expenditure Shares on

Food

Hispanics consistently allotted a higher proportion of their total expenditures to food items than non-Hispanic households (20.0 vs. 16.9 percent on average). The expenditure share on food was roughly 18 percent higher for Hispanic households over the period; the maximum difference of 25 percent occurred in 1984 (Figure 3). This divergence can be explained by Hispanics' lower income levels as poorer people generally spend relatively more of their budget on food items. Other explanations behind this trend are the larger Hispanic household sizes, as well as the important role food plays in Hispanic culture. Larger households have more mouths to feed, and not only is food seen to bring people together in Hispanic culture, but a good appetite is seen as an indication of good health.⁵ As Figure 3 shows, however, food shares declined over the period for both groups, reaching a low of 18 percent of total Hispanic expenditures in 2002. This trend could be attributed to a decline in family sizes over

Figure 3: Annual Expenditure Shares and Hispanic to Non-Hispanic Expenditure Share Ratios for Food (1980-2003)



the period, as well as higher real income levels, which have effectively freed up disposable income for non-staple items. Technological advancements in the food industry that have lowered food prices may also play a role.

Housing

Household-related expenditures, including shelter, utilities/fuels, household furnishings, and housekeeping supplies, formed 37.3 percent of Hispanic spending on average. Figure 4 demonstrates that a large proportion of Hispanic housing expenditure came from shelter and utilities/fuels spending. In particular, average Hispanic spending on shelter made up 22.2 percent of total expenditures, or 60 percent of total housing spending. Similarly, utilities/fuel expenditures made up 7.85 percent of total expenditures, or 21.0 percent of housing spending. Over the 1980-2003 period, housing expenditures rose at a steady rate.

Figure 4: Average Annual Expenditure Shares within the Housing Category by Hispanic Origin (1980-2003)



As Figure 5 demonstrates, trends in the total housing expenditure share closely mirrored the pattern of shelter expenditure shares as the latter accounted for the majority of housing related spending. Rapid increases in shelter prices likely explain the increase in the overall housing and the shelter expenditure shares over the period.⁶

In comparison to non-Hispanic households, Hispanics spent relatively more on shelter costs, as Figure 5 shows, and relatively less on utility purchases (Figure 6). Specifically, non-Hispanic households spent roughly 37.1 percent of their expenditure budget on householdrelated items, with shelter expenditures and utilities/fuels spending making up 20.6 and 7.94 percent of total spending, respectively.



Figure 5: Annual Expenditure Shares on Overall Housing and Shelter by Hispanic Origin (1980-2003)

Financial and geographic differences between these two groups can potentially explain much of this difference. With lower income levels, Hispanics are less likely to be homeowners; approximately 50.3 percent of Hispanic households owned their dwellings in 2003 compared with 74.1 percent of non-Hispanic households. Differences in rental costs versus ownership costs may account for some of the divergence in shelter expenditure shares.⁷

Another important housing issue is that Hispanics tend to concentrate in relatively expensive housing markets (a large proportion resides in high-cost MSAs), and is concentrated in regions of the nation, which are characterized by high rates of house and rental price increases. The Pacific region, for example, has had the fastest increase in house prices over the last two decades, with over a 430 percent increase since 1980⁸, compared to a national increase of 273 percent over the period. Geographic differences also explain Hispanics' relatively lower utility spending. Since a greater proportion of Hispanics is concentrated in regions with warmer climates (i.e., the Pacific and West South Central regions), heating costs make up a lower share of their expenditure budget.

Figure 6: Annual Expenditure Shares on Natural Gas and Electricity by Hispanic Origin (1980-2003)



Education

The expenditure share pattern of Hispanics in the education category is noteworthy. On average, education-related purchases accounted for 1.3 percent of total expenditures. The largest contributor to expenditures on education items was tuition for colleges and universities (43.3 percent of education expenses), followed by elementary and high school tuition and fees (26.8 percent) and schoolbooks/supplies for college (8.37 percent). Figure 7 indicates volatility in overall education expenditure shares throughout the 1980s, which is followed by a gradual upward trend. Also apparent is that the sudden movements were primarily due to changes in tuition spending. The volatility is likely caused by sample size issues.⁹





Non-Hispanic spending shares on education, primarily college and university tuition expenditure, were consistently greater than those of the Hispanic population (Figures 7 and 8). Specifically, Hispanic households had an education expenditure share that was only 70 percent than that of non-Hispanic households, on average, and their college/university tuition expenditure share was only 50 percent. There are a few possible explanations for this trend. Roughly 30 percent of Hispanic students currently drop out of high school, a rate four times that of non-Hispanic Whites.¹⁰ Due to higher rates of poverty among Hispanic households, there is a greater push toward contributing to household earnings rather than receiving post-secondary education. Also, immigrant Hispanic parents may have had little formal education in their home country and accordingly don't know how to guide their children with respect to their education. The relative spending shares between the two groups were more similar in regards to tuition for elementary and high

school spending, though the Hispanic shares fluctuated considerably.

Since Hispanic households tend to have a greater number of school-aged individuals, they are actually spending relatively less tuition on a per-student basis, and this is particularly true for college/university-aged students. This finding is of concern given that higher wages are associated with more years of schooling and the education advantage increased over the period.¹¹ Although these spending trends may not persist in the future, the current divergence may indicate that the income gap between Hispanics and non-Hispanics will grow.

Figure 8: Annual Expenditure Shares on College/ University Tuition and Elementary/ High School Tuition by Hispanic Origin (1980-2003)



Health

Among Hispanic households, 4.4 percent of total expenditures were on health care, and this group consistently allocated a smaller share of their budget on health care costs (74.6 percent of the non-Hispanic health budget share). Figure 9 shows the distribution in health spending, as well as the trends over time. On average, health insurance spending accounted for 1.8 percent of Hispanic spending (39.8 percent of health spending), compared to 2.5 percent of total spending by non-Hispanics (41.2 percent of health spending). Similarly, Hispanic households spent 1.7 percent of their budget on medical services (39.4 percent of health spending) versus 2.2 percent for non-Hispanics (36.2 percent of health spending). Prescription drugs made up 0.7 percent of Hispanics' total expenditures (17.4 percent of health spending) compared with non-Hispanics' 1.0 percent (15.8 percent of health spending).

Figure 9: Average Annual Expenditure Shares within the Health Category by Hispanic Origin (1980-2003)



Hispanic health care spending increased over the period, moving from 4.35 percent of household spending in 1980 to 4.41 percent in 2003 (Figure 10).¹² Notably, the share of expenditures on health insurance increased from 1.16 percent in 1980 to 2.52 percent in 2003. As the price of coverage increases, fewer employers are willing to provide health insurance, and households are consequently left to obtain their own or forgo health insurance. Conversely, relative expenditures on medical services declined, dropping from 2.35 percent of total expenditures in 1980 to 1.14 percent in 2003. This trend may be due to a combination of increasing medical costs, which discourages individuals from seeking medical help, and lower out-of-pocket expenses as a result of health insurance providers covering a broader range of services to those who can afford health coverage.

Figure 10: Annual Expenditure Shares Hispanic to Non-Hispanic Expenditure Share Ratios for Overall Health and Selected Health Categories (1980-2003)



Importantly, Figure 10 clarifies how the relative spending gap between the two demographic groups increased since the early 1980s in each health category, causing the overall gap in health spending to widen during the period. For example, in 1980, Hispanic expenditures on health items were 85 percent the rate of non-Hispanics. In 1990, they were 77 percent, and 67 percent in 2003. The large difference in the median age of the two populations accounts for some of the divergence in health spending as non-Hispanic households have a higher proportion of elderly people – an age group that generally spends more on health care, particularly for prescription medications. In light of the continuous flow of young Hispanic immigrants into the country, differences in the growth rates of the median age between the two populations partly explain the increasing divergence in health care spending. Also, the trend of employers reducing health coverage may impact these groups differently. Hispanics are often in employment positions that are less likely to provide health coverage, whether due to the type of job or to the specific employment sector.¹³ In particular, the widening of the health insurance spending shares may also be explained by declining union membership rates. Differences in income levels also presumably play a role here as health care costs increased rapidly over the period.¹⁴ Those with higher incomes are more able to purchase high coverage health insurance and are better able to cover out-ofpocket medical expenses.

Transportation

Hispanic households spent between 18.3 to 24.8 percent of their total expenditures on transportation costs over the period. Spending in the transportation category was primarily driven by vehicle purchases, which on average comprised 43 percent of total transportation costs for Hispanics. Public transportation was a fairly constant share of total expenditure over the period (1.31 percent of total expenditures), while gasoline/motor oil expenditure shares gradually decreased from their high of 8.5 percent of total expenditures in 1980 (when gas prices were rising steeply) to an average of 4.0 percent over the last decade of the period (Figure 11).

Figure 11: Annual Expenditure Shares Hispanic to Non-Hispanic Expenditure Share Ratios for Overall Transportation and Gasoline/Motor Oil (1980-2003)



Relative shares of Hispanic to non-Hispanic transportation expenditures varied over the period, with Hispanic households having greater overall transportation shares in the earlier and later years of the period (Figure 11). In almost all years, Hispanics spent a greater percentage of their budget on used cars and trucks (19 percent higher on average), whereas non-Hispanics had higher expenditure shares for new cars and trucks (23 percent higher). Although non-Hispanics were likely to spend a smaller share on public transportation (5.1 percent less on average), they spent relatively more on gasoline and motor oil (12.3 percent more on average), as Figure 11 shows. In the last decade of the study period, this gap generally increased, moving from 13 percent in 1990 to 19 percent in 2003. In recent years, much job growth has taken place outside of central cities. Since a greater proportion of Hispanics live in central cities, longer commutes to work combined with lower disposable incomes may explain part of this group's higher gas shares. Importantly, these

findings suggest that the Hispanic population is more affected by gasoline price fluctuations.

Figure 12: Average Annual Expenditure Shares within the Apparel and Apparel Services Category by Hispanic Origin (1987-2003)



Apparel

Hispanics spent proportionally more on apparel items than non-Hispanic households. The average annual Hispanic share on apparel was 7.2 percent, compared to slightly over 6.3 percent for non-Hispanic households.¹⁵ This result is partly driven by larger Hispanic households and, in particular, the greater number of children in Hispanic households. Differences in real incomes also presumably play a role. The average annual distribution of expenditure shares within the apparel category for the two groups can be seen in Figure 12. Hispanic households spent relatively more of their apparel budget on children's and infants' clothing and relatively less on women's clothing.

As Figure 13 shows, Hispanics spent relatively more on apparel items, infants' and children's apparel in particular, in every year of the study. Figure 13 also shows that the share of the budget spent on apparel items declined for both Hispanics and non-Hispanics in the last two decades. For example, apparel made up 8.3 percent of Hispanics' expenditures in 1986 and only 5.6 percent in 2003. This decrease may be due to a decline in the price of imported apparel goods combined with rising real incomes.

While the expenditure shares declined for both groups in almost all apparel categories, there was a gradual increase in the expenditure gap of apparel shares in the last decade of the period, as shown in Figure 13. This trend is partly explained by differences in rates of change in household size and household structure. Also, changes in the composition of the Hispanic population may contribute to the widening gap. Central/South American Hispanics are a growing portion of the Hispanic population and recorded relatively higher expenditure increases in apparel purchases in recent years.¹⁶

Figure 13: Annual Expenditure Shares and Hispanic to Non-Hispanic Expenditure Share Ratios for Overall Apparel and Apparel Services, Infants' Clothing, and Girls' and Boys' Clothing Origin (1987-2003)



Other

Finally, all other expenditure shares making up a smaller proportion of Hispanic households' expenditure budget were shown in Figure 2. These shares were fairly constant over time, with 4.54 percent of Hispanic households' expenditures on entertainment, 0.72 percent on tobacco, 1.18 percent on alcohol, 0.34 percent on reading items, and 1.81 percent on personal care and services, on average. In contrast, non-Hispanics spent relatively more in all of these smaller expenditure categories, with personal care products the only exception. On average, non-Hispanic expenditure shares on these categories were 5.94 percent for entertainment items, 1.03 percent for tobacco products, 0.64 percent for reading items, 1.32 percent for alcohol, and 1.74 percent on personal care and services. As most of these expenditure groups include items that are nonessentials, the differences in expenditure shares are likely explained by income differentials between these two groups.

Conclusion

There were considerable changes in the expenditure patterns of Hispanics throughout the 1980-2003 period. Notably, this group is gradually spending relatively more on education, shelter, housing, and health care items. Concurrently, the expenditure shares of food and apparel have experienced a downward trend, while the share of spending on transportation has been fairly steady. There are also noticeable differences between the spending shares of Hispanic and non-Hispanic households. In particular, Hispanics spend relatively more of their budget on food, apparel, and shelter items, and less on utilities, health care, and education. These results can be explained by differences in the two groups' demographic characteristics, predominately income, household size, and age differentials.

Of particular concern are the gaps in the education and health expenditure shares. The results indicate that Hispanics are spending relatively less on college and university tuition than non-Hispanic households. The expenditure share gaps on a per-student basis are wider. To the extent that the lower expenditure impacts future income levels, the long-term effects of differences could be of concern. In regard to health care expenditures, not only do Hispanics spend relatively less, but the expenditure share gap is increasing. This trend is driven by increasing differences in the expenditure shares of prescription drug, health insurance, and medical services. To prevent a further widening of the gap in health care access, future research might explore potential policies to increase Hispanic access to the American health care system.

Notes

- 1 Bureau of Labor Statistics (2005).
- 2 Herein, a Hispanic household is defined as one in which either the reference person or his/her spouse is of Hispanic origin. It should be noted that this sample excludes Black Hispanics. This is not expected to affect the results significantly as Black Hispanics represent a very small proportion of all Hispanics. The 2000 Census, for example, shows that Black Hispanics make up only 2.75 percent of the total Hispanic population. In 1980, this ratio was 2.67 percent.
- 3 The base period is 1982-84=100.
- 4 In particular, the annual expenditure share for a given item is defined as the ratio of the total annual household spending on this given item to the total annual spending that occurs on all items by this household.
- 5 Heise (2002) discusses the influence of Hispanics in the American food industry.
- 6 The Bureau of Labor Statistics' CPI data show that between 1980 and 2003, the price of shelter increased by 163 percent, compared to the increase in the overall price level of 123 percent.
- 7 The issue is more complex considering that a portion of housing prices is attributable to real estate investor activity.
- 8 Office of Federal Housing Enterprise Oversight (2005).
- 9 A few outlying households can greatly influence the spending patterns of the entire demographic group. Specifically, relatively few Hispanics face tuition costs, whether they are for private elementary/high school or postsecondary education tuition. As Reardon and Yun (2002) report, only 6 percent of Latinos attend private schools, particularly catholic schools, compared to 12 percent of Whites and 5 percent of Blacks. In our study, there were 341 Hispanic and 5,388 non-Hispanic households in the January 1987 sample. Among these households, 11 Hispanic and 96 non-Hispanic households recorded any elementary/high school tuition spending, while 13 Hispanic and 287 non-Hispanic households had college tuition expenditures. It should be noted that January is a month of high tuition spending. The median spending for Hispanics on elementary/high school tuition was \$237, and on college tuition was \$391, yet the means were \$804 and \$776. Meanwhile, non-Hispanic households spent a median \$145 on elementary/high school tuition, and \$450 on college tuition, with means of \$321 and \$730 respectively. The large difference between the median and the means for each expenditure category underscores the need to recognize the issue of small sample size throughout the analysis of education spending.

10 Martinez (2003).

11 For example, Barrow and Rouse (2006) estimate that in 2004, individuals with at least a bachelor's degree earned

2.3 times the annual earnings of an individual with only a high school diploma or equivalency degree. In 1979, the earnings advantage was only 77 percent.

- 12 The jump in Hispanic health care spending in 1988 may partly be explained by the impact of the Immigration Reform and Control Act of 1986. This Act allowed undocumented immigrants who had been living in the U.S. to apply for permanent residency. It is possible that some undocumented immigrants who had previously avoided visiting a health professional, purchasing health insurance plans, or accessing Medicaid in fear of deportation may have become less reluctant to participate in the American medical system.
- 13 The Pew Hispanic Center reports that roughly one third of the U.S. Latino population was uninsured in 2002. A significant 62 percent of Latinos were employed in jobs that did not provide health coverage. The Pew Hispanic Center/Kaiser Family Foundation 2002 National Survey of Latinos, is available at: www.kff.org/kaiserpolls/20021217a-index.cfm
- 14 Between 1980 and 2003, the overall price level rose by over 123 percent, while the price of health care rose by 297 percent.
- 15 Due to a change in the structure of CES data between 1985 and 1986, the sample for the apparel category has been narrowed to 1987 to 2003. Prior to 1986, most apparel items were captured in the Interview survey rather than the Diary survey. This makes comparison over the two periods quite difficult, because the expenditures recorded in this category are severely underreported when only using Interview data.
- 16 For example, Paulin (2003) reports that between 1994 and 2001, all Hispanic groups, with the exception of Central or South American and Cubans, reported apparel expenditures, which rose less rapidly than the CPI for all items. However, while Mexicans only increased their apparel purchases by 2.6 percent in this period, Central or South American Hispanics reported a dramatic increase of 17.2 percent. Available at www.bls.gov/opub/mlr/2003/08/art2full.pdf.

Bibliography

Barrow, Lisa, and Cecilia Elena Rouse (2006). "The economic value of education by race and ethnicity." *Federal Reserve Bank of Chicago's Economic Perspectives*, 2nd Quarter: 14-27.

Heise, Dorothy A. (2002). *Hispanic American influence* on the U.S. food industry: selected references prepared in commemoration of the USDA Hispanic heritage month celebration, September 15-October 15, 2002. Beltsville, MD, NAL, ARS, USDA. 11 leaves.

Martinez, Natalia (2003). "A Learning Crisis." Available at: www.hispaniconline.com/hh03/mainpages/education/ learning.html. Accessed on August 4, 2006.

Paulin, Geoffrey (2003). "A changing market: expenditures by Hispanic consumers, revisited." *Monthly Labor Review*, August 2003:12-35.

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