

Factors Affecting Tomato Consumption In the United States

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Abstract: Fresh and processed tomato consumption has increased significantly in the United States over the past two decades. However, little is known about the distribution of tomato consumption across different marketing sectors, geographic regions, or population groups. Using data from USDA's 1994-96 Continuing Survey of Food Intakes by Individuals, this article examines the consumption distribution of fresh and processed tomatoes in the United States. The analysis indicates that per capita fresh tomato consumption is greatest in the northeastern and western areas of the country while processed tomatoes are most popular in the West and Midwest. With the exception of catsup, the majority of tomatoes and products are consumed at home. Catsup is a teenage staple and one-third is consumed with fast foods.

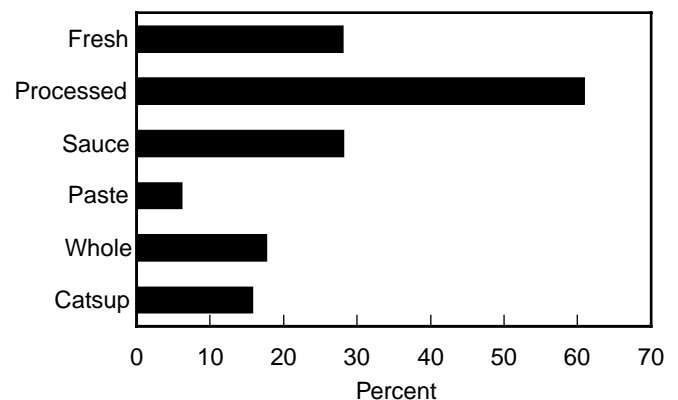
Keywords: Tomatoes, consumption, per capita use, distribution, regions, catsup, sauce, paste, juice.

There has been continuing interest in information regarding the consumption distribution of foods such as tomatoes. Although a great deal is known about the supply side of the U.S. fresh and processed tomato markets, relatively little has been published about consumer demand. According to per capita disappearance data compiled by the U.S. Department of Agriculture's (USDA) Economic Research Service (ERS), both fresh and processed tomato demand have generally trended higher over the past two decades. Processed tomato use trended higher from 1920 until leveling in the mid-1990's, while fresh tomato consumption continues to trend higher after bottoming out in 1971. During the most recent 3 years (1997-99), average fresh use increased 40 percent over the 1977-79 period (to 17.6 pounds per person annually), while average processing use has risen 20 percent to 74.1 pounds (table A-1).

A combination of factors, including immigration trends and changes in America's tastes and preferences has likely contributed to rising per capita tomato use. However, due to a lack of consumer research in this area, little is known about the demographics of fresh and processed tomato consumption. For example, what proportion of tomatoes and tomato products are purchased for at-home versus away-from-home meals? Has the increasing Hispanic population influenced fresh tomato demand? Who consumes catsup? These questions have largely gone unanswered.

The purpose of this article is to provide unique basic information about the market distribution of fresh and processed tomatoes using data from USDA's most recent individual food consumption survey. Following a short discussion of the data used in the analyses, the next sections will describe the distribution of fresh and processed tomato consumption by food source, region of the country, ethnic background, income class, and age and gender. Market distribution analyses will be presented for fresh and total processed tomatoes and also for the major tomato products, including sauces, paste, juice, canned whole, and catsup.

Figure A-1
Percent of consumers reporting tomato use on any given day



Source: Economic Research Service, USDA.

¹ Lucier is an economist with the Market and Trade Economics Division, the others are economists with the Food and Rural Economics Division, all within USDA's Economic Research Service.

Table A-1--U.S. tomatoes: Per capita use

Year	Fresh market	Processing	Total
Pounds, fresh-equivalent			
1960	12.6	45.0	57.6
1965	12.0	45.9	57.9
1970	12.1	62.1	74.2
1975	12.0	61.9	73.9
1980	12.8	63.6	76.4
1985	14.9	63.2	78.1
1990	15.5	75.4	90.9
1995	17.1	75.6	92.7
1996	17.7	74.2	91.9
1997	17.1	73.9	91.0
1998	17.9	75.7	93.6
1999	17.8	72.8	90.6
2000 f	17.8	73.9	91.7
Decade averages:			
1960's	12.2	52.1	64.3
1970's	12.2	62.9	75.1
1980's	14.6	63.5	78.1
1990's	16.7	75.2	91.9

f = ERS forecast.

Source: Economic Research Service, USDA.

Data and Methodology

USDA has conducted periodic surveys of household and individual food consumption in the United States since the 1930's (see box). The most recent survey, the 1994-96 Continuing Survey of Food Intakes by Individuals (CSFII) ², conducted by USDA's Agricultural Research Service (ARS), provided the basis for this article. Each year of this 3-year data set comprises a nationally representative sample of non-institutionalized persons residing in 50 States and Washington, D.C.

In the 1994-96 CSFII, 2 nonconsecutive days of dietary data for individuals of all ages were collected 3 to 10 days apart through in-person interviews, between January 1994 and January 1997, using 24-hour recalls. The 3-year CSFII data set includes information on food and nutrient intakes by 15,303 individuals who provided dietary data for both days.

The respondents provided a list of foods consumed as well as information on where, when, and how much each food was eaten. Standardized probes were used to collect details on food descriptions and amounts of food eaten. The location where the food was purchased was coded into several categories. For each respondent, an array of economic, social, and demographic characteristics were also collected. This rich database enables researchers to estimate the market and consumption distribution of a food by numerous delineations.

² U.S. Department of Agriculture, Agricultural Research Service, 1998. 1994-96 Continuing Survey of Food Intake by Individuals and 1994-96 Diet and Health Knowledge Survey. CD-ROM. Available from National Technical Information Service, Springfield, VA.

Tomato Markets and Use

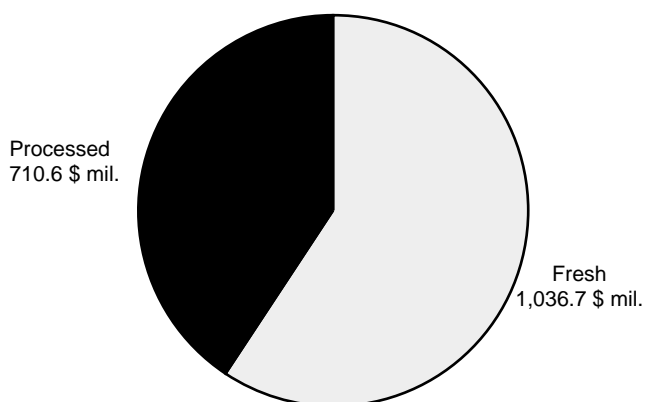
Tomatoes are second only to potatoes in both U.S. farm value and vegetable consumption. With a farm value of about \$1.8 billion, U.S. annual per capita use of tomatoes and tomato products has increased nearly 30 percent over the past 20 years, and is expected to reach a fresh-weight equivalent of 92 pounds per person in 2000. Processed tomato products, including items such as sauces, catsup, pastes, salsa, and juice, will account for about 81 percent of that total. ERS estimates suggest the largest processed use of tomatoes is for sauces (35 percent), followed by paste (18 percent), canned whole tomato products (17 percent), and catsup and juice (each about 15 percent).

Domestic use of processed tomato products surged heading into the 1990's but leveled off as the decade progressed. Domestic use averaged 75.2 pounds per capita during the 1990's—up 18 percent from an annual average 63.5 pounds during the 1980's. The increase is likely the result of continued expansion in food-service demand (food purchased in restaurants and fast-food establishments), especially for Italian and Mexican-style dishes. Some of the increase may also be due to rising public awareness of the health benefits of processed tomato products in the diet. Several medical studies in the 1990's have linked diets rich in tomatoes and tomato products to reduced risk of various diseases.

Fresh market tomato use has also increased. After remaining flat during the 1960's and 70's at 12.2 pounds, fresh use increased 19 percent during the 1980's and at least 14 percent during the 1990's to nearly 17 pounds. Because of the expansion of the domestic greenhouse, hydroponic tomato industry during the 1990's, it is likely per capita use is at least 1 pound higher than currently reported (USDA does not currently enumerate greenhouse vegetable production). Consumption of fresh-market tomatoes has likely increased over time due to the enduring popularity of salads, salad

Figure A-2

Farm value of U.S. tomato crop, 1997-99



Source: National Agricultural Statistics Service, USDA.

USDA Food Consumption Data

USDA collects and compiles two major data sets on food consumption in the United States, the Supply and Utilization or food disappearance data, compiled by USDA's ERS, and the Continuing Survey of Food Intakes of Individuals, compiled by USDA's Agricultural Research Service. Both data sets are key components of ongoing Federal efforts to monitor the nutritional health and dietary status of U.S. consumers. They were mandated by Congress under the National Nutrition Monitoring and Related Research Act of 1990. When used together, they provide a comprehensive picture of the Nation's eating habits.

Food Supply and Utilization Data, also known as food disappearance data, measures the flow of raw and semi-processed food commodities through the U.S. marketing system. They are neither a direct measure of actual consumption, nor of the quantity of food actually ingested. The total amount available for domestic consumption is estimated as the residual after exports, industrial uses, seed and feed use, and year-end inventories are subtracted from the sum of production, beginning inventories, and imports. The use of conversion factors allows for some subsequent processing, trimming, spoilage, and shrinkage in the distribution system. However, the estimates also include residual uses for which data are not available (such as miscellaneous non-food uses, and changes in retail and consumer stocks).

With data back to 1909 for most commodities, the food disappearance data are useful as indicators of trends over time. The data are most commonly used to measure the average level of food consumption in the country, to show year-to-year changes in consumption of major foods, to calculate the approximate nutrient content of the food supply, to establish long-term consumption trends, and to permit statistical analyses of effects of prices and income on food consumption. Because they include spoilage and waste accumulated through the marketing system and in the home, the data typically overstate actual consumption. A 1997 ERS study suggested that such losses may exceed 25 percent of the edible food supply.

Food disappearance data reflect the amount of major food commodities entering the market, regardless of their final use. Final product forms and consumption locations are not usually known, and little or no data exists on supplies of further processed products. In short, relatively good information exists for many food ingredients, but not for foods as actually eaten. For example, the food disappearance data provide a good estimate of the annual per capita consumption of processed tomatoes but provide no infor-

mation on how tomatoes were processed for consumption—whole, sauce, paste, catsup, juice; where the tomato products were marketed—supermarket, hospital, school, restaurant, or food manufacturer; how they were consumed—in spaghetti, on hamburgers, or on pizza; how they were prepared—cooked from scratch or reheated from a canned product; or the socioeconomic characteristics of the consumer that ultimately ate the food.

The **Continuing Survey of Food Intakes by Individuals (CSFII)** measures foods actually eaten by individuals. The survey records food intake over a specific period of time (two non-consecutive days in 1994-96 using 24-hour dietary recalls). The survey collects demographic information, such as household size, income, race, age, and sex, and information on where a food was purchased, how it was prepared, and where it was eaten, in addition to food-intake data. The CSFII provides information for use in policy formation, regulation, program planning and evaluation, education, and research. For example, data from recent surveys have been used to evaluate the impact of food fortification on nutrient intakes, to estimate exposure to pesticide residues and other contaminants from foods, and to target nutrition assistance and education programs to those who need them most. The data are particularly valuable for measuring the effect of socioeconomic and demographic characteristics on food consumption.

In addition to intake data, the Agricultural Research Service also provides technical support documents, including recipes and number of servings relative to USDA Food Guide Pyramid (Pyramid) dietary recommendations. For each food, its recipe lists all ingredients and their weights in grams. The description of the ingredients can be used to distinguish among food products (e.g., stewed tomatoes vs. spaghetti sauce). The Pyramid serving data show, for each food consumed, the number of servings from 30 food groups.

The recipe files and Pyramid serving data together show the number of servings of a product (e.g., fresh tomatoes) provided by a food (e.g., a particular meal package offered at a quick service restaurant). The intake data show where and how much of the food was consumed. The 1994-96 CSFII data include a sample weight for each respondent, indicating the number of people the sample represents. The share of a tomato product by location can be estimated by calculating the weighted sum of the product consumed in each location. Similarly, the socioeconomic and demographic characteristics of the respondents can be used to estimate the consumption share of tomatoes by these characteristics.

bars, and sandwiches such as the BLT (bacon-lettuce-tomatoes), plus the introduction of improved tomato varieties (including greenhouse, hydroponic) and expanding national emphasis on health and nutrition.

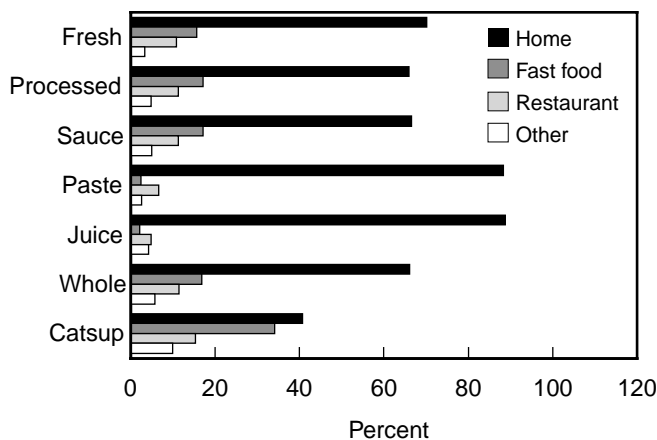
Market Share by Location

In the CSFII survey, the “at home” and “away from home” delineation is based on where a food was obtained or prepared, not where it was consumed. Food at home is generally obtained at a retail store such as a supermarket, grocery store, or a convenience store. Food away from home is generally purchased from foodservice establishments but can also be obtained in such places as school cafeterias, community feeding programs, or child/adult care centers. Both home and away-from-home food can be consumed at or away from home. For example, a bagged lunch prepared at home and consumed at work is classified as home food. A commercially prepared pizza delivered and consumed at home is classified as food away from home. Fast food places include self-service establishments and carryout places; restaurants are places that have wait staff; and school cafeterias include day care facilities and summer camps. The category “others” is a catch-all category, including such things as community feeding centers, bar/taverns, vending machines, etc.

According to the survey, the bulk of fresh and processed tomatoes were purchased at retail stores and considered as home foods (table A-2). Away from home sources accounted for about 30 percent of the fresh market during 1994-96, while 34 percent of processed products were obtained away from home. The results were somewhat surprising for fresh, as previous industry estimates have suggested away from home to be closer to 40 percent of the tomato market. One possible explanation could be the impact of home garden tomatoes. Millions of Americans enjoy backyard or community vegetable gardening, with most plots featuring tomatoes.

Figure A-3

Consumption of tomatoes by location



Source: Economic Research Service, USDA.

About one-third of tomato sauces and whole tomato products (e.g. salsa and stewed tomatoes) were purchased at retail with the remainder obtained from restaurants. The popular influence of pizza and pasta during the 1990’s was the likely driving force behind restaurant use of tomato sauces. Pizza consumption has more than tripled since the late 1970’s and is likely responsible for the lion’s share of sauces purchased in fast foods (17 percent). Meanwhile, the popularity of Mexican and Italian restaurants during the early and mid 1990’s may have been a key driving force for restaurant use of whole tomato products. Tomato paste and juice were each considered home foods, with nearly 9 out of 10 servings purchased for home use.

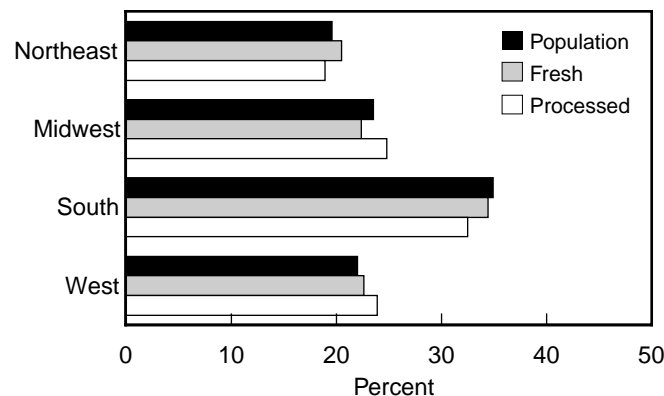
As is widely believed, catsup was the only tomato product that relied more heavily on the away from home market than the at-home market. Nearly 60 percent of consumers reported using catsup on away-from-home foods, with one-third of all catsup servings originating from fast foods. This reflects the continued popularity of the hamburger and french fry meal. With the advent of extra-large sized serving options by the leading fast food chains in the 1990’s, french fry consumption increased by one-third, which, in turn, likely increased catsup demand. The popularity of hamburgers and fries in school lunch meals was also reflected in the 7 percent of catsup servings originating from school meals. This was twice as large as any other tomato product reported in school meals.

Tomato Use by Region and Urbanization

The CSFII data show distinct regional patterns in the consumption of tomato products. There are four Census-defined regions—Northeast (20 percent of the population), Midwest (24 percent), South (35 percent), and West (22 percent). In general, per capita tomato consumption was fairly uniform across all four regions. As table A-2 shows, fresh tomatoes

Figure A-4

U.S. population and tomato consumption, by region



Source: Economic Research Service, USDA.

Table A-2--U.S. tomatoes: Consumption distribution by fresh and processed product

Item	Population	Fresh	Processed					
			All products	Sauces	Paste	Juice	Whole	Catsup
Percent								
Food sources:								
Home	97.6 1/	70.2	66.0	66.6	88.3	88.8	66.1	40.7
Away from home	54.8 1/	29.8	34.1	33.4	11.7	11.2	33.9	59.3
Fast food	30.8 1/	15.7	17.3	17.1	2.4	2.2	16.8	34.1
Other restaurant	17.3 1/	10.8	11.2	11.3	6.7	4.8	11.4	15.3
School	6.7 1/	1.1	3.1	2.7	1.5	.2	2.9	6.8
Others	12.9 1/	2.2	2.5	2.2	1.1	4.0	2.9	3.1
Census region:								
Northeast	19.6	20.5	18.9	19.3	21.1	26.0	17.2	16.1
Midwest	23.5	22.4	24.8	23.4	21.2	21.8	28.1	26.9
South	34.9	34.4	32.5	31.7	36.9	30.1	29.6	38.7
West	22.0	22.6	23.9	25.6	20.9	21.1	25.1	18.3
MSA status:								
Metropolitan	32.0	31.5	31.5	31.1	32.8	37.4	30.8	31.4
Suburban	46.9	48.3	46.7	46.9	45.5	43.9	48.7	44.2
Rural	21.1	20.2	21.7	21.9	21.7	18.6	20.5	24.4
Race/ethnic origin:								
White, non-Hispanic	72.6	73.8	74.9	75.9	72.0	79.2	73.8	73.8
Black, non-Hispanic	12.6	9.2	9.9	8.7	16.2	5.8	8.2	14.6
Hispanic	10.5	12.7	11.2	11.6	8.9	8.7	13.6	7.8
Mexican	4.9	7.0	5.3	5.5	2.6	4.5	7.0	3.7
Puerto Rican	1.0	.5	1.2	1.5	1.4	.3	.8	.7
Other Hispanic	4.6	5.2	4.7	4.6	4.9	3.9	5.7	3.3
Others	4.4	4.3	4.0	3.8	2.9	6.3	4.4	3.9
Asian	2.9	2.8	2.5	2.6	1.6	1.6	3.1	1.9
Household income as a percentage of poverty:								
0 - 130 percent	19.2	15.9	18.1	17.0	21.7	16.1	18.5	19.6
131-349 percent	41.8	40.1	40.2	41.4	38.5	34.4	38.1	43.2
350 percent and above	39.0	44.0	41.7	41.5	39.8	49.5	43.4	37.2
Gender and age:								
Male, all	48.9	52.7	58.7	58.2	59.3	56.8	56.9	64.3
Male, 2-5	4.8	1.8	2.5	2.5	2.6	1.2	2.0	3.9
Male, 6-11	4.6	2.6	4.3	4.3	4.0	1.4	4.0	6.4
Male, 12-19	5.8	4.8	9.4	9.3	6.6	2.7	8.9	15.2
Male, 20-39	15.5	19.5	23.3	23.4	26.0	15.9	22.2	26.0
Male, 40-59	11.5	14.7	13.6	13.5	15.5	22.0	13.6	9.9
Male, 60 and over	6.8	9.3	5.5	5.1	4.7	13.7	6.1	2.9
Female, all	51.1	47.3	41.3	41.8	40.7	43.2	43.1	35.7
Female, 2-5	4.6	1.9	2.1	2.0	2.2	1.3	1.8	3.4
Female, 6-11	4.4	1.7	3.6	3.7	3.6	1.0	3.4	4.9
Female, 12-19	5.6	3.6	6.2	6.4	6.7	2.3	5.1	8.5
Female, 20-39	15.7	14.6	14.5	15.4	12.5	15.5	15.0	11.5
Female, 40-59	12.0	15.0	9.3	9.4	10.3	10.2	11.0	5.2
Female, 60 and over	8.9	10.7	5.5	4.9	5.5	12.8	6.8	2.2

Totals may not sum due to rounding. 1/ Percent of population consuming at least one food at the specific location.

Source: U.S. Department of Agriculture, Agricultural Research Service, 1998. 1994-96 Continuing Survey of Food Intakes by Individuals and 1994-96 Diet and Health Knowledge Survey. CD-ROM. Available from National Technical Information Service, Springfield, VA.

were favored slightly more in the Northeast and the West and slightly less in the Midwest and South.

Consumption of processed tomato products was strongest in the West and Midwest and weakest in the South. For tomato sauce, consumption was reported to be strongest in the West and weakest in the South, while people in the Midwest and South tend to consume proportionately more catsup than the Northeast and West. These likely reflect regional dietary preferences such as the use (or nonuse) of catsup on foods such as scrambled eggs and hotdogs. One of the largest regional differences was in tomato juice. The Northeast,

consisting of New York, New Jersey, Pennsylvania, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, and Maine, contains 20 percent of the Nation's population but accounts for 26 percent of tomato juice consumption. Each of the other regions consumes proportionately less juice than their share of the national population.

About 47 percent of American consumers resided in suburban areas, 32 percent live in metropolitan cities, and 21 percent live in rural areas. Fresh tomato consumption was slightly stronger in suburban areas, while overall processed tomato consumption was proportional to the population

shares. The greatest variation from the population shares occurred in tomato catsup and juice. Per capita use of catsup was strongest in rural America, while tomato juice was most popular in Metropolitan areas.

Racial/Ethnic Makeup of Tomato Consumers

Non-Hispanic white consumers represented 73 percent of the U.S. population and slightly favored consumption of both fresh and processed tomatoes. On a per capita basis (market share divided by population share), whites had consumption ratios greater than 1 for all products except tomato paste which was 0.99. Whites led in the consumption of tomato juice and were the second-leading consumer group for all other categories except processed whole tomatoes (third).

Hispanic consumers were the strongest consumers of fresh-market tomatoes. Hispanics accounted for nearly 11 percent of the population and reported consuming 13 percent of fresh tomatoes. Hispanics of Mexican descent represented 5 percent of the U.S. population but consumed 7 percent of fresh tomatoes—a general reflection of diets steeped in fresh produce.

Compared with other consumers, tomatoes were discovered to be less important in the diets of non-Hispanic black consumers. Blacks represented 13 percent of the U.S. population yet only accounted for 9 percent of fresh tomato consumption and 10 percent of processed tomato products. Among processed products, blacks had the highest per capita consumption of tomato paste and catsup but were the lightest consumers of tomato sauces, whole tomato products, and juice.

Tomato Use and Income

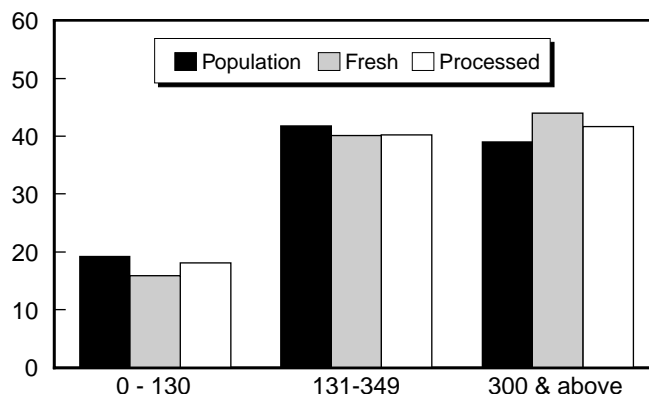
According to the survey, per capita consumption of fresh and processing tomatoes increases as incomes rise. Households were classified into three income brackets using the Federal poverty guidelines. The poverty guideline was developed by the U.S. Department of Health and Human Services for the implementation of Federal food programs. Some Federal food programs, such as the Food Stamp Program, have used 130 percent of the poverty level to determine eligibility for participation. It is used in this study as the top end of the low-income category. About 39 percent of households had income exceeding 350 percent of the poverty level (called high-income households); 42 percent of households had income falling between 130 and 350 percent of the poverty level (middle-income group); and 19 percent of households had income below 130 percent of the poverty level (low-income).

Households in the highest income bracket, with income greater than 350 percent of the poverty level, represented 39 percent of the U.S. population and consumed 44 percent of

Figure A-5

Tomato consumption and income

Percent



Source: Economic Research Service, USDA.

all fresh tomatoes. This may reflect uneven growth in retail tomato sales spurred by the introduction of high quality, high-priced tomatoes—products more likely to be purchased by financially better-off consumers. At the other end of the income spectrum, low-income consumers account for 19 percent of the population and consume just 16 percent of fresh tomatoes.

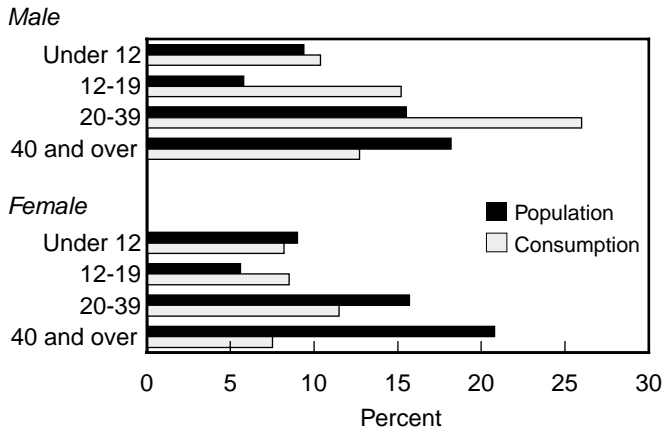
For processed tomatoes, results were similar but the range from low to upper income consumers was narrower. For tomato sauces, the largest and broadest processed product category, per capita use increased with income, reflecting the prevalence of specialized spaghetti, pizza, and other prepared sauces in supermarkets. In some cases, these “luxury” items may be more likely to be purchased by those who can afford them while those of lesser means may be more likely to prepare sauces from scratch to save money. Tomato juice was the most income-sensitive product, with nearly half of consumption by upper income consumers. This may reflect the use of tomato juice for parties and other social occasions rather than just as a breakfast drink. Catsup was the closest to being negatively correlated with income as the middle income and lower income groups had a higher per capita consumption than upper income consumers. This may reflect lower consumption of fast foods by upper income consumers.

Consumption by Age and Gender

There are distinct tomato consumption patterns by age. As shown in table A-2, male consumers (perhaps because of their larger caloric intake) had higher per capita consumption of all fresh and processed tomato products than females. Men consumed 53 percent of fresh tomatoes and 59 percent of processed tomato products. Males and females under the age of 20 consume proportionately fewer fresh tomatoes than more mature people, with per capita use falling dramatically for youths under the age of 12. Children under the age of 12 account for 18 percent of the population

Figure A-6

U.S. tomato catsup consumption by age and gender



Source: Economic Research Service, USDA.

but consume just 8 percent of fresh tomatoes. Children begin to consume tomatoes in greater volume once they reach the teen years. Teens (defined here as ages 12-19) account for 11 percent of the population and consume 8 percent of the fresh tomatoes. Men between the ages of 20 and 39 were the largest consumers of fresh tomatoes, representing 16 percent of the population and consuming 20 percent of all fresh tomatoes. Interestingly, women in this same age group lag men in terms of per capita consumption. Men and women over the age of 39 appear to pay greater attention to the nutritional aspects of their diets than younger consumers (at least with regard to fresh tomatoes). This group represents 39 percent of the population, yet they consume 50 percent of all fresh tomatoes.

For processed tomatoes, the consumption patterns are more complex. Tomato product consumption becomes more important at an earlier age than for fresh tomatoes, with children between the ages of 6 and 11 consuming nearly twice as many servings of processed tomato products as fresh. This reflects the earlier acceptability of foods such as spaghetti, salsa, and most importantly, catsup. Children under the age of 12 consume 19 percent of catsup but they are not the leading catsup consumers. Teenage boys (12-19) have the highest per capita consumption of catsup. This group represented 6 percent of the population yet consumed

15 percent of the catsup—the most dominant share of any tomato product category. Teenage girls are also important catsup consumers, but their per capita consumption lags that of boys by about 40 percent.

Tomato juice appears to be a product largely avoided until adulthood. In general, juice consumption increases with age, particularly for men. Men over 39 represent 18 percent of the population and consume 36 percent of tomato juice. Men and women over age 60 were 16 percent of the population but consumed 27 percent of tomato juice.

Conclusion

While much is known about the supply side of the U.S. tomato markets, little is known about the consumer side of the market. In this paper, using data from USDA's CSFII survey we show where and how much fresh and processed tomato products are consumed and link this consumption to consumer's economic, social, and demographic characteristics. The important findings in this article include;

- The bulk of fresh and processed tomatoes were purchased at retail stores and considered as home foods. Catsup was the only tomato product that relied more heavily on the away-from-home market than the at-home market;
- Fresh tomatoes were favored slightly more in the Northeast and the West and slightly less in the Midwest and South. Consumption of processed tomato products was strongest in the West and Midwest and weakest in the South.
- Hispanic consumers were the strongest consumers of fresh-market tomatoes. Compared with other consumers, tomatoes were discovered to be less important in the diets of non-Hispanic black consumers.
- Per capita consumption of fresh and processing tomatoes increases as incomes rise. Households in the highest income bracket, with income greater than 350 percent of the poverty level, represented 39 percent of the U.S. population and consumed 44 percent of all fresh tomatoes.
- Men and women over the age of 39 represent 39 percent of the population, yet they consume 50 percent of all fresh tomatoes. Teenage boys (12-19) have the highest per capita consumption of catsup.