ECONOMIC AND DEMOGRAPHIC FACTORS AFFECTING THE CONSUMER DEMAND FOR SUPERFRUIT BEVERAGES IN THE UNITED STATES

An Undergraduate Research Scholars Thesis

by

RACHEL VICTORIA

Submitted to the Undergraduate Research Scholars program
Texas A&M University
in partial fulfillment of the requirements for the designation as an

UNDERGRADUATE RESEARCH SCHOLAR

Approved by
Research Advisor: Dr. Senarath Dharmasena

May 2016

Major: Agribusiness

TABLE OF CONTENTS

ABSTRACT

Economic and Demographic Factors Affecting the Consumer Demand for Superfruit Beverages in the United States

Rachel Victoria
Department of Agricultural Economics
Texas A&M University

Research Advisor: Dr. Senarath Dharmasena
Department of Agricultural Economics

There are many different types of nonalcoholic beverages available in the United States today compared to decade ago. Functionality and health dimensions of beverages have changed over the years. Currently, exotic superfruit beverages are serving as a healthier alternative to more traditional fruit juices, such as orange juice and apple juice, which contain high levels of sugar. Superfruit beverages strong emergence in the marketplace has created a major competition with traditional beverages and is providing consumers an alternative. Data from U.S. households for calendar year 2013 were used in examining demographic and economic factors affecting conditional demand for superfuit beverages through the estimation of simple demand functions. Price, age of household head, education, and region were significant drivers of consumption of superfruit beverages. Orange juice was found to be a substitute in consumption for superfruit juice. All of these results can be used to help beverage companies better understand their competition and allow them to develop more effective beverage marketing strategies in the United States. Traditional fruit juice suppliers can now know where they stand in comparison to the emerging superfruit juice market that continues to grow.

CHAPTER I

INTRODUCTION

There are a variety of beverages offered in the United States beverage market in both alcoholic and non-alcoholic form. In response to a growing health trend brought on by both millennial and boomer generations, the beverage market has responded by providing an increasing amount of beverage options that have been functionally altered in terms of health dimensions (Landi). Some of these health dimensions include beverages rich in antioxidants, vitamins, minerals, and beneficial omega-3 fatty acids (Eaton).

Superfruit is defined as any fruit supposed to confer remarkable health benefits (Gross).Currently, exotic superfruit beverages are serving as a healthier alternative to more traditional fruit juices, such as orange juice and apple juice, which contain high levels of high fructose corn syrup and calories ("Fruit and Vegetable…"). Superfruit beverages strong emergence in the marketplace has created a major competition with traditional beverages and is providing consumers an alternative. To strengthen the position of this, a large decline in the consumption of liquid and frozen orange juice occurred between 2007 and 2012 ("Fruit and Vegetable…"). At the same time, Superfruit juices, such as POM Wonderful pomegranate juice, filled up an increasing amount of retail shelf space at a rapid rate throughout the United States ("Fruit and Vegetable…"). As a result of this new competitive beverage category, producers of more traditional beverages including alcoholic beverages have begun to incorporate small amounts of superfruits into their products creating a variety of new flavors for consumers (Landi). Some producers have even gone as far as falsely advertising their beverages in the same

light as their competitors in terms of health benefits and ingredients. For example, Purely Juice was found guilty of deceiving customers with adulterated pomegranate juice and falsely advertising that their product was made from 100 percent pomegranate juice even though the formulation primarily consisted of cane sugar and corn sweeteners ("POM Wonderful Announces…"). This increase in demand for superfruit beverages could probably be due to change in consumer perception as well as the presence of a wide array of fruit juice alternatives and new exotic flavors now available in the market.

The change in consumer demand pertaining to the beverage market as a whole has caused institutions, such as schools, to alter their retailed beverage option s. For example, in early 2010, the Alliance School Beverage Guidelines Final Progress Report was issued mandating the elimination of high in sugar and full- calorie drink options in schools ("Alliance School Beverage…"). This mandate is a response to parents concerns for their children's' health and bad dietary practices while at school ("Alliance School Beverage…"). The mandate has successfully altered the beverage landscape in schools across the country, which is notable by the 90 percent decrease in beverage calories shipped to schools ("Alliance School Beverage…"). Soft drinks, energy drinks, and high in added sugar fruit juices are now either offered in smaller quantities and proportions and or substituted with 100 percent fruit juices and water ("Alliance School Beverage…"). These actions in turn create a massive market share loss in schooling institutions.

In response significant market share losses, competitors of superfruit beverages are altering their business practices to stay afloat. These competitors are doing so by investing in superfruit

beverage companies and buying a hefty amount of their stocks (Nunes). Drink Maple, Concord, Mass., is one such company trying to make a splash in the plant water category (Nunes). Also, the Coca-Cola Co. took a minority stake in Suja Life L.L.C., San Diego, a manufacturer of organic, cold-pressed juice products (Nunes). The transaction is expected to increase distribution of Suja's products and improve operational efficiencies (Nunes). In addition to these investment practices, competitors of superfruit beverages are starting to offer "clean" versions of their popular beverage products, meaning that they are free of artificial colors, flavors, sweeteners and preservatives (Nunes). The clean beverage movement's goal is to reduce the negative health impacts that occur from consuming unclean products in an effort to be stronger competition against superfruit beverages.

Some of the top superfruit beverages that are gaining rapid growth in the market are acai berry, cranberry, coconut, elderberry, and goji berry (Reuteman). Additionally, Pomegranate continues to maintain the superfruit market share, "… account[ing] for more than 40 percent of tracked beverage launches featuring superfruit flavors from June 2008 to May 2013, ahead of açai and lychee with 12.5 percent and 12 percent, respectively, according to Innova data" ("Healthy Flavors Boom…"). Aside from overall market share data, there is a lack of data and analysis that suppliers consider necessary for making effective business decisions. In other words, superfruit's new emergence in the beverage market has led to a marketplace that is operating blindly do to a lack of economic and quantitative data for competitors to access.

By the same token, it is crucial for fruit beverage producers to understand the economic impacts of emerging superfruit beverages in the marketplace. Growth in fruit juice alternatives has been

attributed to improved health-related claims and consumer perceptions, a flurry of brands, appealing and convenient packaging, and a plethora of flavors available. This increasing demand for fruit alternative beverages and declining demand for traditional high-in-sugar beverages in the United States could negatively affect non-superfruit beverage producers in terms of low prices for more traditional fruits juices as well as reduced income. Therefore, it is of interest for non-superfruit beverage producers in the United States to know the competitiveness and elasticities of fruit drink alternatives in the beverage marketplace and their implications on fruit drink prices and supplier income.

CHAPTER II

OBJECTIVES

The general objective of the study is to determine socio-economic-demographic factors affecting consumer demand for superfruit beverages in the United States. The specific objectives are to (1) determine own-price, cross-price and income elasticities of demand for superfruit beverages; and (2) determine demographic factors affecting demand for superfruit beverages in the United States.

CHAPTER III

DATA AND METHODS

This data on the price, quantity, income, education, and demographics, provided by Neilsen Homescan, consist of 61,098 observation points of single-family households' purchases of orange, apple, and Pom Wonderful juice (this is the most widely consumed superfruit beverages in the United States). The data span 12 months from January 1, 2013 through December 31, 2013. Available data include the quantity in ounces per household per month of fruit juice consumed, price of fruit juice, measured in dollars per ounce, and income, measured in dollars. The demographic variables consist of race, region, number of children, and education. Summary statistics of the data as a whole are presented in table 1. These statistics were calculates using SAS 9.3.

CHAPTER IV

RESULTS

The variables used in calculating the summary statistics have also been used as variables in the empirical demand model for apple juice, orange juice, and superfruit juice. Before the demand models were estimated, an auxiliary regression was run to estimate price for those households that did not buy each beverage. The price models are regressed using natural log based on income, region, and household size. These models are shown below. As for the summary statistics, Table 2 has been provided in the appendix to illustrate the average price in dollars per ounce and the average quantity demanded in ounces of apple juice, orange juice, and superfruit juice.

Price Model for Apple Juice:

$$lnP_{AJ,i} = \propto_0 + \propto_1 Income_i + \propto_2 Region_i + \propto_3 HHSize_i + e_i$$

Price Model for Orange Juice:

$$lnP_{OJ,i} = \propto_0 + \propto_1 Income_i + \propto_2 Region_i + \propto_3 HHSize_i + e_i$$

Price Model for Superfuit Juice:

$$lnP_{SJ,i} = \propto_0 + \propto_1 Income_i + \propto_2 Region_i + \propto_3 HHSize_i + e_i$$

Where $i = 1,2,3, \ldots \ldots n$, n is total number of households. After generating price for missing price values for those households who did not buy a beverage, the demand models were derived as

shown below. These models estimate the demanded quantity for each juice based on own price, competitor's price, and other demographic variables listed in Table 1.

Theoretical Equations:

Demand Model for Apple Juice:

$$Q_{AJ} = \propto_0 + \propto_1 P_{AJ} + \propto_2 P_{OJ} + \propto_3 P_{SJ} + \propto_4 I + e$$

Demand Model for Orange Juice:

$$Q_{OJ} = \propto_0 + \propto_1 P_{OJ} + \propto_2 P_{AJ} + \propto_3 P_{SJ} + \propto_4 I + e$$

Demand Model for Superfruit Juice:

$$Q_{SJ} = \propto_0 + \propto_1 P_{SJ} + \propto_2 P_{OJ} + \propto_3 P_{AJ} + \propto_4 I + e$$

Empirical demand models were then derived using the same variables, but in natural log form. These equations are shown below and the regression analysis can be found in tables 4-6 in the appendix.

Empirical Equations:

Demand Model for Apple Juice:

$$lnQ_{AJ} = \propto_0 + \propto_1 lnP_{AJ} + \propto_2 lnP_{OJ} + \propto_3 lnP_{SJ} + \alpha_4 lnI + \propto_i D + e$$

Demand Model for Orange Juice:

$$lnQ_{OJ} = \propto_0 + \propto_1 lnP_{OJ} + \propto_2 lnP_{AJ} + \propto_3 lnP_{SJ} + \alpha_4 lnI + \propto_i D + e$$

Demand Model for Superfruit Juice:

$$lnQ_{SJ} = \propto_0 + \propto_1 lnP_{SJ} + \propto_2 lnP_{OJ} + \propto_3 lnP_{AJ} + \alpha_4 lnI + \propto_i D + e$$

Once the demand was calculated, elasticities were derived in an effort to better understand the relationship between superfruit juice and its competitors, as well as to determine the relationship of consumption of superfruit beverages with respect to varying demographic characteristics. The "D" in the above equation represents the demographic variables listed in Table 1.These calculations were performed through SAS 9.3 and are displayed in Table 3 of the appendix.

Level of significance considered in this study is set at 95% level (or p-value 0.05). Elasticity simply measures the sensitivity level of consumers demand to a change in price or income of a variable. The own-price elasticity of demand for apple juice is -0.87, meaning that a 1% increase in price of apple juice leads to 0.87% decrease in quantity of apple juice demanded. The own-price elasticity of demand for orange juice and Superfruit juice are -0.83 and -0.3 respectively and can be interpreted in the same manner. Additionally, if the elasticity is less than one in absolute terms, the product is considered inelastic. The cross-price elasticities for apple juice are -0.08 when compared to orange juice and 0.09 when compared to Superfruit juice, which means that a 1% increase in price of orange juice leads to 0.08% decrease in quantity demanded of apple juice. Since the elasticity is negative, orange juice is considered a complement to apple juice. Superfruit juice are found to be substitute for apple juice (cross-price elasticity is 0.09). This interpretation can be applied to all other cross-price elasticities. The cross-price elasticity of orange juice for apple juice is -0.06 and the cross-price elasticity of orange juice for Superfruit juice is 0.21. Also, the cross-price elasticities of Superfruit juice are -0.09 when compared to apple juice and 0.03 when compared to orange juice. As for income elasticities, apple juice, orange juice and Superfruit juices income elasticities are -0.01, 0.12, and 0.01 respectively.

As for demographic factors, a base variable was used in each of the three regressions used in Tables 4-6 in the appendix for each demographic category considered. The other variables were compared to the base variable. Therefore, if a parameter estimate is negative, this equates to that specific variable equating to less product demanded than for the base variable. For example, the Pacific region was used as the base variable for all regions in the United States in the apple juice empirical demand equation. In comparison, the Mid-Atlantic regions parameter estimate is -0.11. This means that the Mid-Atlantic region's consumers demand less apple juice than the consumers in the Pacific region.

Consumers in New England region consumed more superfruit beverages that those in Pacific region. Households living in Mid Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, and Mountain consume less superfruit beverages than those live in Pacific region. Households with children consumed less superfruit juice compared to ones with no children. Black, Asian and Other households consumed more superfruit juice than Whites. Hispanic households consumed less superfruit beverages than those who are categorized as non-Hispanic. College and post college educated households consumed more superfruit beverages than those are less educated. Households with household heads 51 years and older consumed more superfruit beverages than those are less than 50 years of age.

CHAPTER V

CONCLUSIONS

Data from U.S. households for calendar year 2013 were used in examining demographic and economic factors affecting conditional demand for superfuit beverages through the estimation of simple demand functions. Price, age of household head, education, and region were significant drivers of consumption of superfruit beverages. Orange juice was found to be a substitute in consumption for superfruit juice. All of these results can be used to help beverage companies better understand their competition and allow them to develop more effective beverage marketing strategies in the United States. Traditional fruit juice suppliers can now know where they stand in comparison to the emerging superfruit juice market that continues to grow.

REFERENCES

Alliance School Beverage Guidelines Final Progress Report. (2010). American Beverage Association. Retrieved November 10, 2015, from http://www.ameribev.org/files/240_School Beverage Guidelines Final Progress Report.pdf

Eaton, C. (2012). Superfoods to the Rescue. Healthy UNH. Retrieved November 11, 2015, from https://www.unh.edu/healthyunh/blog/2012/09/superfoods-rescue.

Fruit and Vegetable Juices: U.S. Market Trends - Market Research Report. (Rep.). (2013, April). Retrieved November 11, 2015, from Report Linker website: http://www.reportlinker.com/p01172039-summary/Fruit-and-Vegetable-Juices-U-S-Market-Trends.html

Gross, P., Dr. (n.d.). Superfruits: Defining an Emergent Category. Chet Day's Tips, Rants, and Conclusions about Life. Retrieved November 10, 2015, from http://www.chetday.com/superfruitsdefining.htm

Healthy Flavors Boom in US. (2013). Beverage Industry. Retrieved November 10, 2015, from http://www.bevindustry.com/articles/86523-healthy-flavors-boom-in-us

Landi, H. (2015). Beverage Brands Innovate with Super Fruits. Beverage World. Retrieved November 12, 2015, from http://www.beverageworld.com/articles/full/17222/beverage-brands-innovate-with-super-fruits

Nunes, K. (n.d.). State of the Industry: Beverages. Food Business News. Retrieved November 10, 2015, from http://features.foodbusinessnews.net/corporateprofiles/2015/beverage-index.html

POM Wonderful Announces Purely Juice Found Guilty of Deceiving Customers With Adulterated Pomegranate Juice and False Advertising. (2008, July 22). Retrieved November 12, 2015, from http://www.prnewswire.com/news-releases/pom-wonderful-announces-purely-juice-found-guilty-of-deceiving-customers-with-adulterated-pomegranate-juice-and-false-advertising-64945952.html

Reuteman, R. (2011, May 20). Superfruits — Super Sales and Super Claims. Retrieved November 12, 2015, from http://www.cnbc.com/id/42933056

APPENDIX A

Table 1

Summary Statistics of Data Considered in the Study:

Variable	N	Mean	Std Dev	Minimum	Maximum
Total_Apple_Q	19593	354.8194	659.2620	4.0000	22900.0000
Total_Orange_Q	36754	666.0360	955.3456	4.0000	18147.5000
Total_Super_Q	3792	77.2257	171.7215	8.0000	3420.0000
Poz_Apple	19590	0.0419	0.0375	0.0044	1.8960
Poz_Orange	36746	0.0491	0.0222	0.0002	2.0190
Poz_Super	3789	0.1914	0.0513	0.0547	0.4975
income	61097	57246.8534	29076.0219	2500.0000	100000.0000
NewEng	61097	0.0472	0.2120	0.0000	1.0000
MidAtl	61097	0.1278	0.3339	0.0000	1.0000
EaNCen	61097	0.1785	0.3829	0.0000	1.0000
WeNCen	61097	0.0847	0.2785	0.0000	1.0000
SouAtl	61097	0.2011	0.4008	0.0000	1.0000
EaSCen	61097	0.0613	0.2400	0.0000	1.0000
WeSCen	61097	0.1018	0.3023	0.0000	1.0000
Mount	61097	0.0736	0.2612	0.0000	1.0000
Pacif	61097	0.1240	0.3295	0.0000	1.0000
child	61097	0.2093	0.4068	0.0000	1.0000
White	61097	0.8262	0.3789	0.0000	1.0000
Black	61097	0.1007	0.3010	0.0000	1.0000
Asian	61097	0.0303	0.1714	0.0000	1.0000
Other	61097	0.0428	0.2023	0.0000	1.0000
hispanic	61097	0.0531	0.2242	0.0000	1.0000
less_hs	61097	0.0118	0.1081	0.0000	1.0000
hs_grad	61097	0.1608	0.3673	0.0000	1.0000
some_college	61097	0.2880	0.4528	0.0000	1.0000
college_grad	61097	0.5394	0.4984	0.0000	1.0000

Variable	N	Mean	Std Dev	Minimum	Maximum
Age35Under	61097	0.0341	0.1815	0.0000	1.0000
Age36to50	61097	0.2042	0.4031	0.0000	1.0000
Age51to75	61097	0.6575	0.4745	0.0000	1.0000
Age75plus	61097	0.1042	0.3055	0.0000	1.0000
household_size	61097	2.3418	1.2627	1.0000	9.0000

Variable Definition Key:	
Total_Apple_Q	Total Apple Juice Quantity
Total_Orange_Q	Total Orange Juice Quantity
Total_Super_Q	Total Superfruit Juice Quantity
Poz_Apple	Price per ounce of apple juice
Poz_Orange	Price per ounce of orange juice
Poz_Super	Price per ounce of superfruit juice
Income	Income per head of household
U.S. Regions:	
NewEng	New Egland
MidAtl	Mid-Atlantic
EaNCen	East North Central
WeNCen	West North Central
SouAtl	South Atlantic
EaSCen	East South Central
WeSCen	West South Central
Mount	Mountain
Pacif	Pacific
Other Demographic Variables:	
Child	Number of children per household
Race:	
White	White
Black	Black
Asian	Asian
Other	Other
Hispanic	Hispanic
Education Level:	
less_hs	less than high school
hs_grad	high school graduate
some college	some college
college_grad	college graduate
Age of Head of Household:	
Age35Under	ages 35 years and under
Age36to50	ages 36 to 50 years
Age51to75	ages 51 to 75 years
Age75plus	ages 75 years and older
household_size	number of members per household

Table 2: Average Price and Quantity for Apple Juice, Orange Juice, and Superfruit Juice

	AJ	OJ	SJ
Price ($/ ounce)	$0.04	$0.05	$0.19
Quantity (ounces)	354.82	666.04	77.23

Table 3

Own Price, Cross Price, and Income Elasticities for Apple Juice, Orange Juice, and Superfruit Juice

Elasticities:					
		Price			
		AJ	OJ	SJ	Income
Quantity	AP	-0.87	**-0.08**	**0.09**	**-0.01**
	OJ	**-0.06**	-0.83	0.21	0.12
	SJ	**-0.09**	**0.03**	-0.3	**0.01**

Note: Bold values are statistically significant at p-value 0.05

Table 4

Regression Analysis for Apple Juice

Dependent Variable: ln_total_apple_q

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	**1**	**2.49615**	0.74306	3.36	0.0008
ln_poz_apple_imp	**1**	**-0.87256**	0.06872	-12.70	<.0001
ln_poz_orange_imp	**1**	-0.06270	0.10095	-0.62	0.5346
ln_poz_super_imp	**1**	-0.09134	0.10672	-0.86	0.3922
ln_income	**1**	**-0.09887**	0.05171	-1.91	0.0561
NewEng	**1**	-0.12819	0.14868	-0.86	0.3888
MidAtl	**1**	-0.11124	0.11719	-0.95	0.3427
EaNCen	**1**	-0.19000	0.10908	-1.74	0.0818
WeNCen	**1**	-0.06954	0.16001	-0.43	0.6639
SouAtl	**1**	-0.12360	0.10491	-1.18	0.2389
EaSCen	**1**	-0.05198	0.14291	-0.36	0.7161
WeSCen	**1**	-0.26852	0.14323	-1.87	0.0611
Mount	**1**	-0.04860	0.13873	-0.35	0.7261
child	**1**	0.13173	0.09222	1.43	0.1534
Black	**1**	**0.23917**	0.08142	2.94	0.0034
Asian	**1**	-0.28396	0.15551	-1.83	0.0681
Other	**1**	-0.08349	0.13325	-0.63	0.5310
hispanic	**1**	**0.27393**	0.12559	2.18	0.0294
hs_grad	**1**	0.02154	0.38539	0.06	0.9554
some_college	**1**	0.24501	0.38114	0.64	0.5205
college_grad	**1**	0.25495	0.38131	0.67	0.5039
Age36to50	**1**	-0.10840	0.13372	-0.81	0.4177
Age51to75	**1**	-0.08751	0.13043	-0.67	0.5024

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Age75plus	**1**	0.17876	0.18392	0.97	0.3313
household_size	**1**	**0.16425**	0.02963	5.54	<.0001

Note: Bold values are statistically significant at p-value 0.05

Table 5

Regression Analysis for Orange Juice

Dependent Variable: ln_total_orange_q

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	**1**	**1.81182**	0.86155	2.10	0.0357
ln_poz_apple_imp	**1**	-0.07578	0.07968	-0.95	0.3417
ln_poz_orange_imp	**1**	**-0.82718**	0.11704	-7.07	<.0001
ln_poz_super_imp	**1**	0.03124	0.12374	0.25	0.8007
ln_income	**1**	**0.12035**	0.05995	2.01	0.0449
NewEng	**1**	0.22342	0.17239	1.30	0.1952
MidAtl	**1**	0.23610	0.13587	1.74	0.0825
EaNCen	**1**	0.09529	0.12647	0.75	0.4513
WeNCen	**1**	0.00059976	0.18553	0.00	0.9974
SouAtl	**1**	0.14803	0.12163	1.22	0.2238
EaSCen	**1**	-0.15725	0.16569	-0.95	0.3428
WeSCen	**1**	-0.14417	0.16607	-0.87	0.3855
Mount	**1**	0.07536	0.16085	0.47	0.6395
child	**1**	0.08518	0.10692	0.80	0.4258
Black	**1**	**0.17866**	0.09440	1.89	0.0586
Asian	**1**	0.17151	0.18031	0.95	0.3417

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Other	**1**	0.17276	0.15449	1.12	0.2637
hispanic	**1**	0.19743	0.14561	1.36	0.1754
hs_grad	**1**	-0.80731	0.44684	-1.81	0.0711
some_college	**1**	-0.71950	0.44191	-1.63	0.1038
college_grad	**1**	-0.71592	0.44211	-1.62	0.1056
Age36to50	**1**	0.03658	0.15504	0.24	0.8135
Age51to75	**1**	**0.37846**	0.15123	2.50	0.0125
Age75plus	**1**	**0.45907**	0.21325	2.15	0.0315
household_size	**1**	**0.13584**	0.03436	3.95	<.0001

Note: Bold values are statistically significant at p-value 0.05

Table 6

Regression Analysis for Superfruit Juice

Dependent Variable: ln_total_super_q

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	**1**	**3.12334**	0.72768	4.29	<.0001
ln_poz_apple_imp	**1**	0.09288	0.06730	1.38	0.1678
ln_poz_orange_imp	**1**	**0.21453**	0.09886	2.17	0.0302
ln_poz_super_imp	**1**	**-0.29785**	0.10451	-2.85	0.0044
ln_income	**1**	0.00714	0.05064	0.14	0.8879
NewEng	**1**	0.08617	0.14561	0.59	0.5541
MidAtl	**1**	-0.19602	0.11476	-1.71	0.0879

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
EaNCen	**1**	**-0.32152**	0.10682	-3.01	0.0027
WeNCen	**1**	-0.06432	0.15670	-0.41	0.6815
SouAtl	**1**	-0.07542	0.10273	-0.73	0.4630
EaSCen	**1**	-0.15518	0.13995	-1.11	0.2677
WeSCen	**1**	-0.06476	0.14027	-0.46	0.6444
Mount	**1**	-0.15609	0.13585	-1.15	0.2508
child	**1**	-0.03933	0.09031	-0.44	0.6633
Black	**1**	0.09375	0.07973	1.18	0.2399
Asian	**1**	0.11912	0.15229	0.78	0.4343
Other	**1**	0.10140	0.13049	0.78	0.4373
hispanic	**1**	-0.04638	0.12299	-0.38	0.7061
hs_grad	**1**	0.44735	0.37741	1.19	0.2361
some_college	**1**	**0.68638**	0.37325	1.84	0.0662
college_grad	**1**	0.63635	0.37341	1.70	0.0886
Age36to50	**1**	0.07363	0.13095	0.56	0.5740
Age51to75	**1**	**0.30836**	0.12773	2.41	0.0159
Age75plus	**1**	**0.46261**	0.18012	2.57	0.0103
household_size	**1**	0.01243	0.02902	0.43	0.6685

Note: Bold values are statistically significant at p-value 0.05