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Supermarket Sales of Crawfish and Competing Crustacean Products

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Abstract

Understanding supermarket sales of crawfish and potential competing crustacean products has the potential to assist the crawfish industry to refine its marketing strategies. A.C. Nielsen scanner data were used to develop a descriptive sales analysis of crawfish and competing crustacean product markets. Market shares, market trends and price fluctuations for different product forms of crawfish, crab, shrimp and lobster are presented for the period of 2005-2010. Markets for crawfish and competing products are described for different cities in the U.S. Discussions of potential effects of market specific demographics on consumption of crawfish and competing crustacean products are included.

Keywords: Marketing Strategies, Frozen Crawfish, Crawfish Price, US Crawfish Sales

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Introduction

Supply of crawfish in the US comes from domestic aquaculture, wild catch, and imported aquaculture sources. Crawfish was originally cultured and consumed in Louisiana with about 70 % of crawfish production being locally consumed. Consumers outside the southeast US view crawfish as a novelty product. Demand in those areas is largely dependent on promotion and consumer education.

In the US crawfish market, 88% of crawfish are sold as whole live or boiled and sold to restaurants and retailers while the remaining 12% are further processed into tail meat and sold to restaurants, distributors, and retail food stores (Lee and Kennedy 2008). The US processes about 10% of total live crawfish, and supplies about 2 million pounds of tail meat, equal to approximately \$13 million a year. Crawfish meat is imported to the US from China, Canada, Spain, and Japan, totaling approximately 6 million pounds or \$48 million/year during the 2006-2010 period of this dataset. Imports of frozen crawfish tail meat is increasing, as evidenced by the US market share of crawfish tail meat having decreased from 42% to 13% during the 2006 to 2010 period (US ITC 2003).

Objectives

The objective of this article is to provide a brief overview of the US crawfish market, specifically for crawfish products sold at supermarkets, i.e., frozen product, in major US cities. Sales of crustacean products are compared graphically over the study period for the major cities selling crawfish products.

Data

Data on crustacean species' sales volume, price, and promotion were collected by Nielsen scanners for 52 major cities in the US. The dataset is for weekly sales from June 2005 through June 2010. Data used in the crawfish analysis is for frozen crawfish products. There were 132 individual crawfish product items in the US supermarkets that were categorized into six product forms (crawfish; crawfish and crab pie; crawfish cake; crawfish pie; crawfish pistolette; crawfish whole). Sales of crustacean products are compared graphically over the study period for the major cities selling crawfish products.

Of the 132 individual crawfish products the top 20 items accounted for 91.5% of total sales. Crawfish package sizes ranged from 12 oz., 16 oz. and 48 oz., with sales volume shares of 59%, 31%, and 10%, respectively. Frozen crawfish were sold in forms such as tail meat, whole, chopped, patties, and piece. The crawfish product type shares were dressed (45%), regular (39%), peeled (5%), Cajun (5%), Etouffee (2%), hot and spicy boiled whole (2%), and wild caught with Cajun spicing (2%). Product prices ranged from \$3.00 to \$16.00 per pound with an average price of \$7.50 per pound in the 2009/2010 season.

Results

In Table 1, a description of supermarket crustacean sales for the entire US supermarket outlet is presented for the 2005-2010 study period. Crustacean species are processed and sold at the US retail store level in different product forms. For example, shrimp has 703 different individual products, crab 558 individual products, lobster 178 individual products, and crawfish 132 individual products (Table 1). The average sales value and price on a weekly basis over the study period is presented in Table 1. Shrimp accounts for 60% of the total market share of the crustacean market with an average price of approximately \$4/lb. Crab accounts for 28% of the total market share and the average price is \$6/lb. Crawfish and lobster together account for about 12% of total market share, with prices higher than shrimp and crab, at approximately \$7/lb and \$12/lb respectively. The promotion variable measures the average weekly value of each commodity being a part of some kind of sales promotion, such as having a reduced price, having sale signs put up for a featured item or having a product display. Lobster and shrimp products have gone to more frequent promotions than crab and crawfish products.

Table 1. Description of Crustacean Products Sold in US Supermarkets, 2005-2010

Species	Products (individual / group)	Weekly Average Sales (\$)	Weekly Average Unit value (\$/lb)	Market share (%)	Weekly Sales Under Promotions(\$)
Shrimp	703 / 39	2,516,215	3.94	60.19	1,192,789 (47%)
Crab	558 / 28	1,185,056	6.00	28.35	440,719 (37%)
Crawfish	132 / 6	271,727	6.92	6.50	76,858 (28%)
Lobster	178 / 9	207,321	11.70	4.96	112,201 (54%)

In Figure 1 crustacean (crab, shrimp, crawfish and lobster) product sales per year (2006-2010) is presented with the top three sales amounts occurring in the New Orleans/Mobile area, New York and Philadelphia. Figure 2 shows the total crustacean sales for the top 10 US cities by year for the same time period. In Figures 3 through 12 the annual supermarket sales of frozen crustacean product sales for the US area/cities of New Orleans LA / Mobile AL area, Houston TX, Atlanta GA, Chicago IL, Dallas TX, Little Rock AR, Memphis TN, Nashville TN, New York NY, and San Antonio TX, respectively.

Crawfish supermarket sales were greater in the New Orleans/Mobile area than for any other city and were preferred over the three other crustacean products (Figure 3). Sales in this city increased in each of the study years (from \$6 million in 2006 to over \$8 million in 2010). Houston was the other city that preferred crawfish over other crustacean products (Figure 4). Other cities that liked crawfish product along with shrimp products included Dallas (Figure 7), Little Rock (Figure 8), Memphis (Figure 9), and San Antonio (Figure 12). Cities that preferred shrimp crustacean products over crawfish products included Atlanta (Figure 5), Chicago (Figure 6), Little Rock (Figure 8), Memphis (Figure 9), Nashville (Figure 10), New York (Figure 11), and San Antonio (Figure 12). Cities that predominantly preferred crab products over other crustacean products included Atlanta and Memphis. Atlanta, Chicago and New York had a lobster preference, while shrimp was a favorite in most cities.

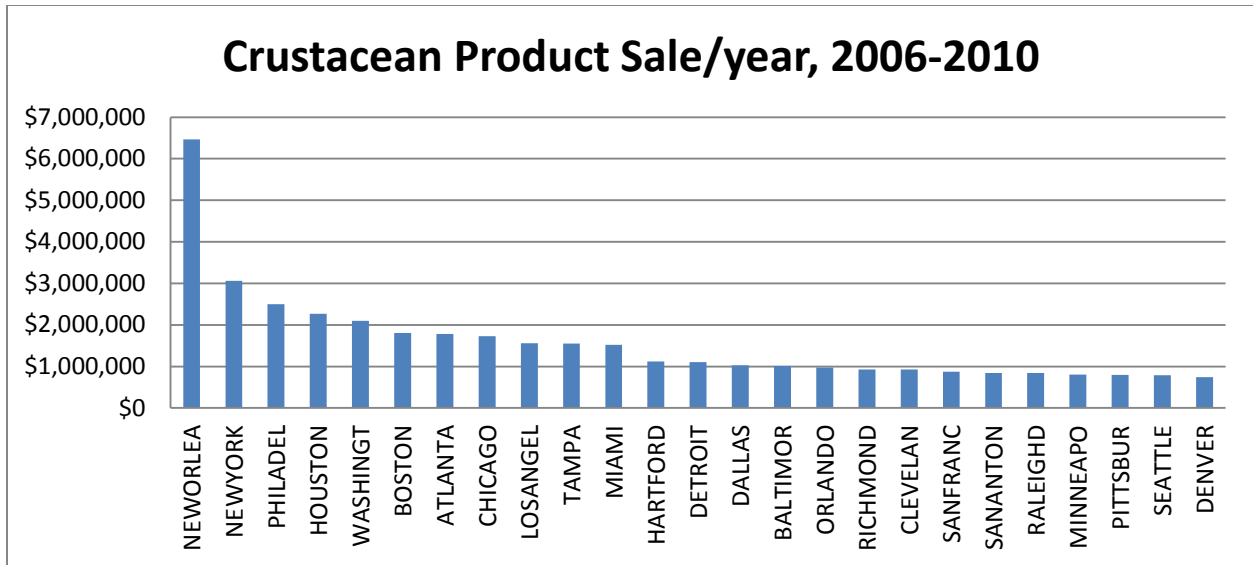


Figure 1. Crustacean Product Sales per Year, 2006-2010.

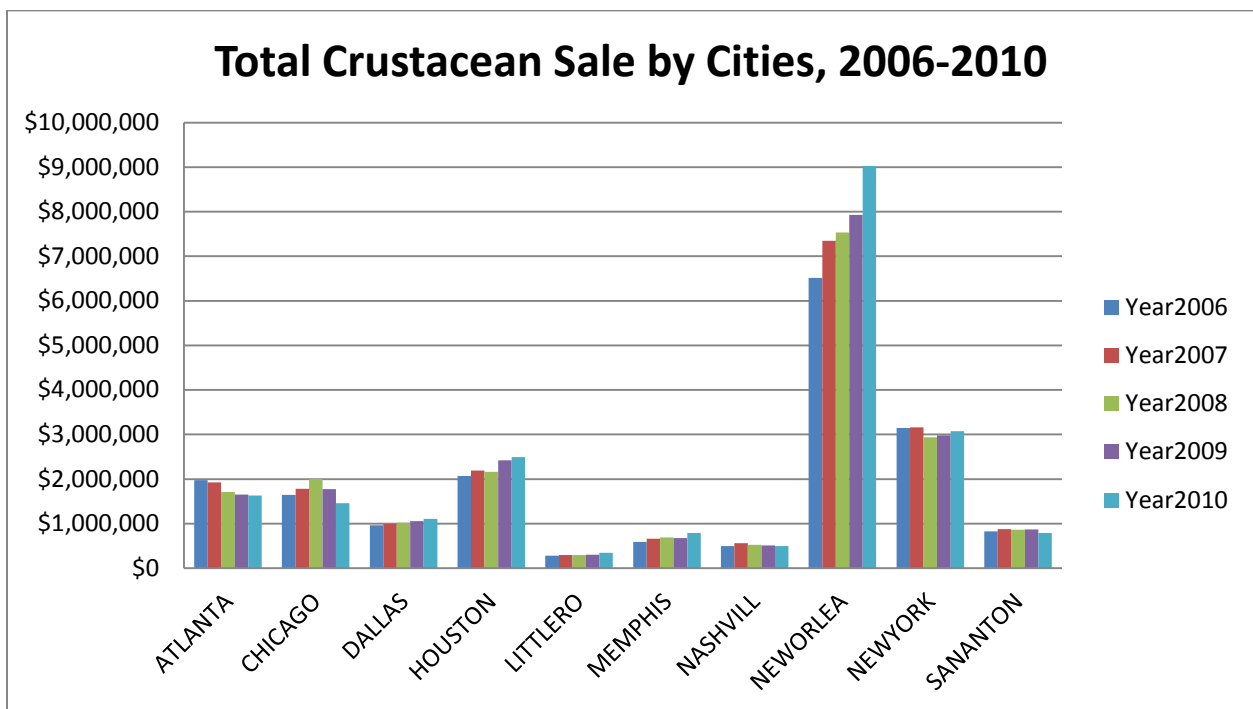


Figure 2. Total Crustacean Sale by Cities 2006-2010.

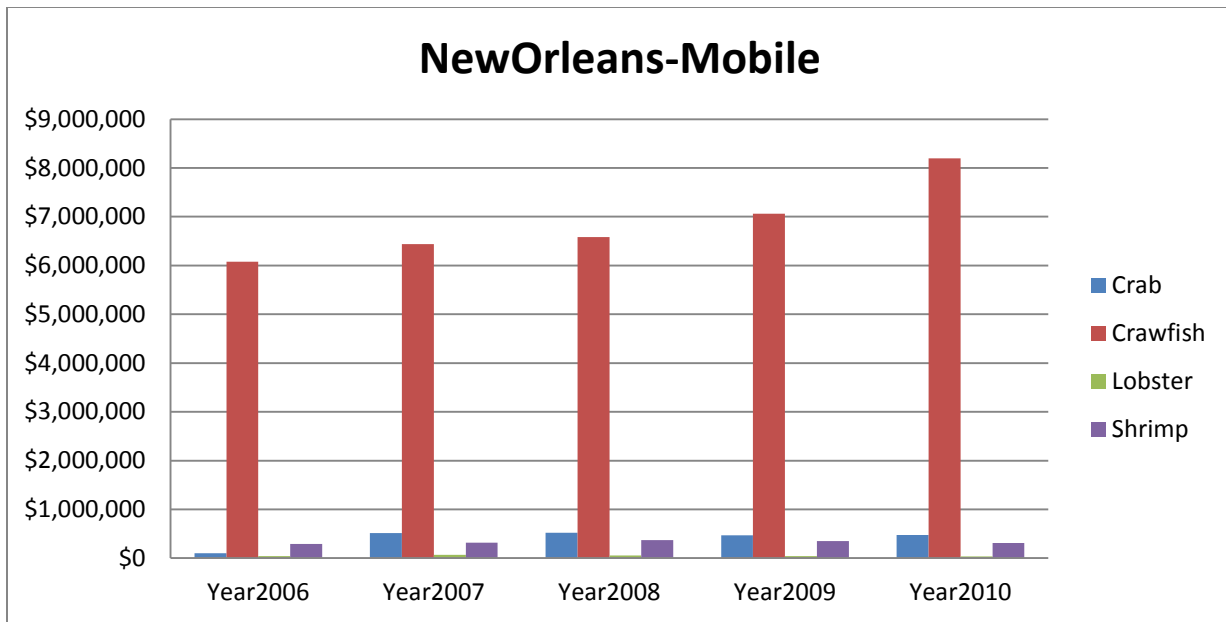


Figure 3. Annual New Orleans, LA / Mobile, AL Supermarket Sales of Frozen Crustacean Products, 2006-2010.

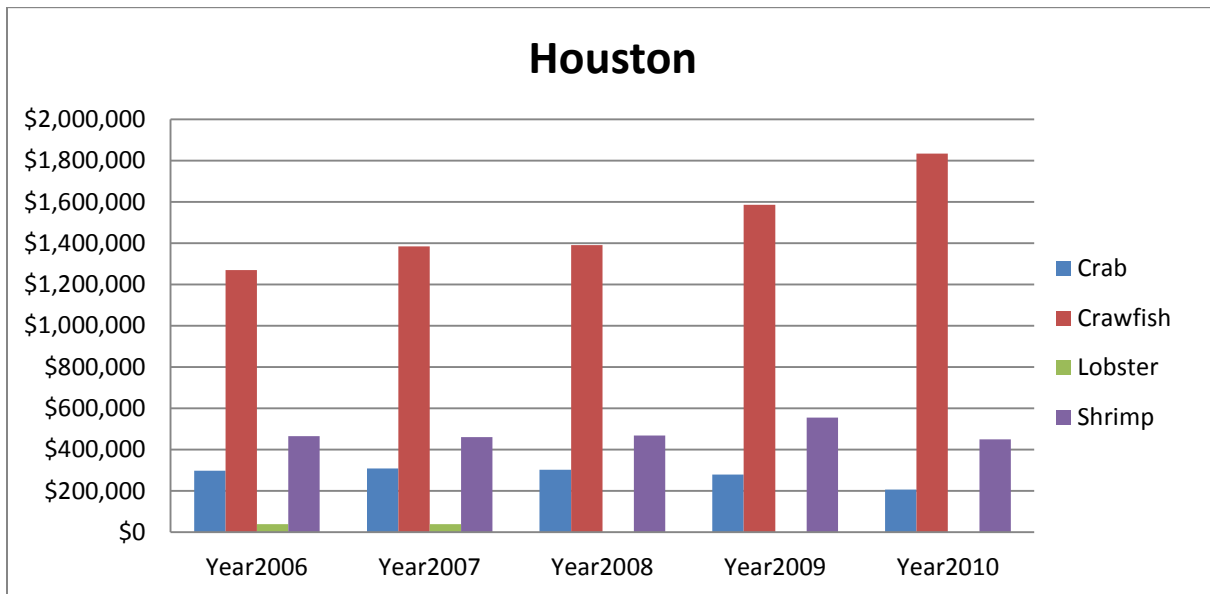


Figure 4. Annual Houston, TX Supermarket Sales of Frozen Crustacean Products, 2006-2010.

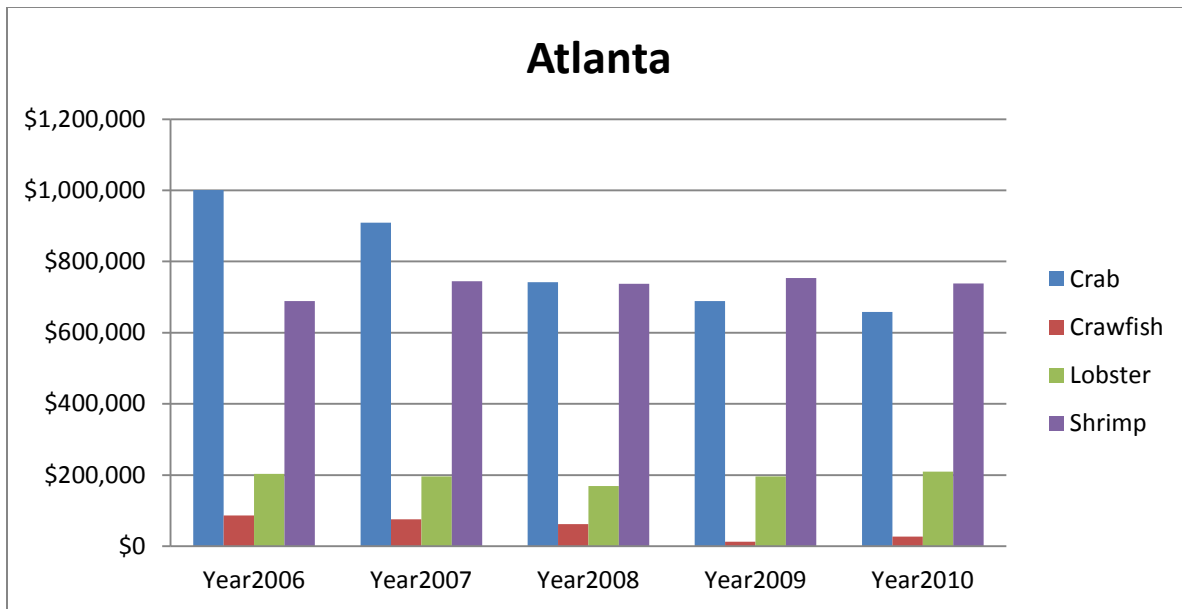


Figure 5. Annual Atlanta, GA Supermarket Sales of Frozen Crustacean Products, 2006-2010.

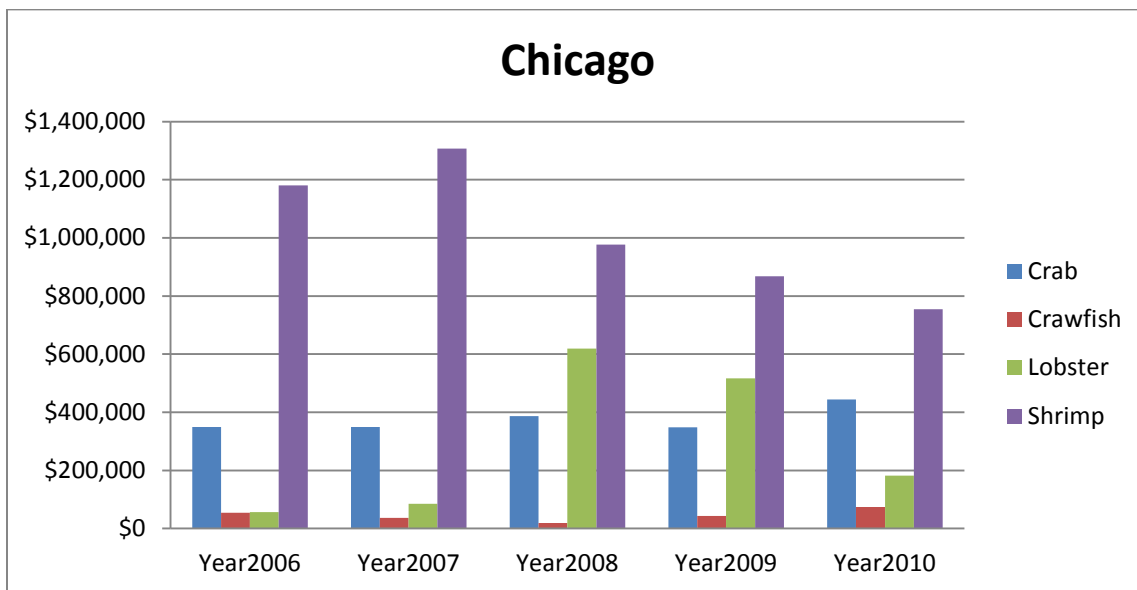


Figure 6. Annual Chicago, IL Supermarket Sales of Frozen Crustacean Products, 2006-2010.

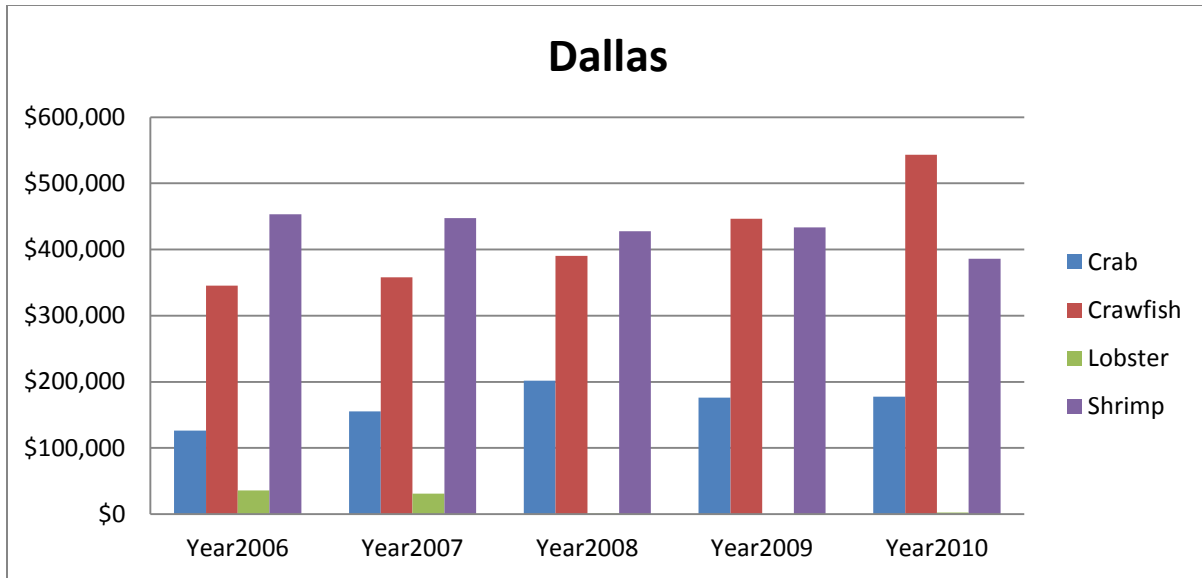


Figure 7. Annual Dallas, TX Supermarket Sales of Frozen Crustacean Products, 2006-2010.

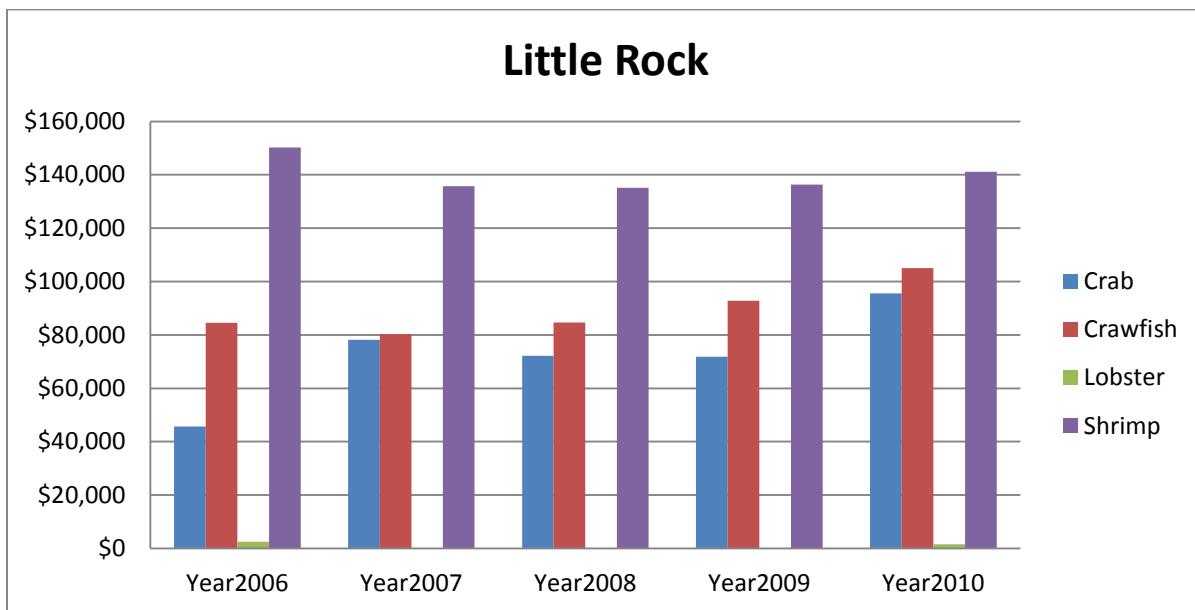


Figure 8. Annual Little Rock, AR Supermarket Sales of Frozen Crustacean Products, 2006-2010.

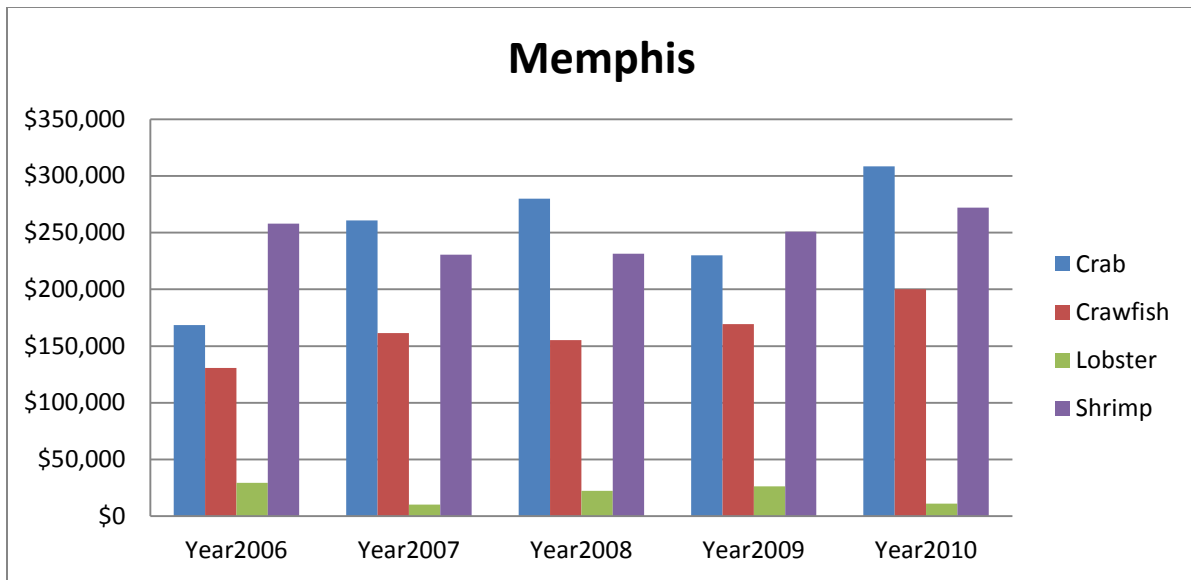


Figure 9. Annual Memphis, TN Supermarket Sales of Frozen Crustacean Products, 2006-2010.

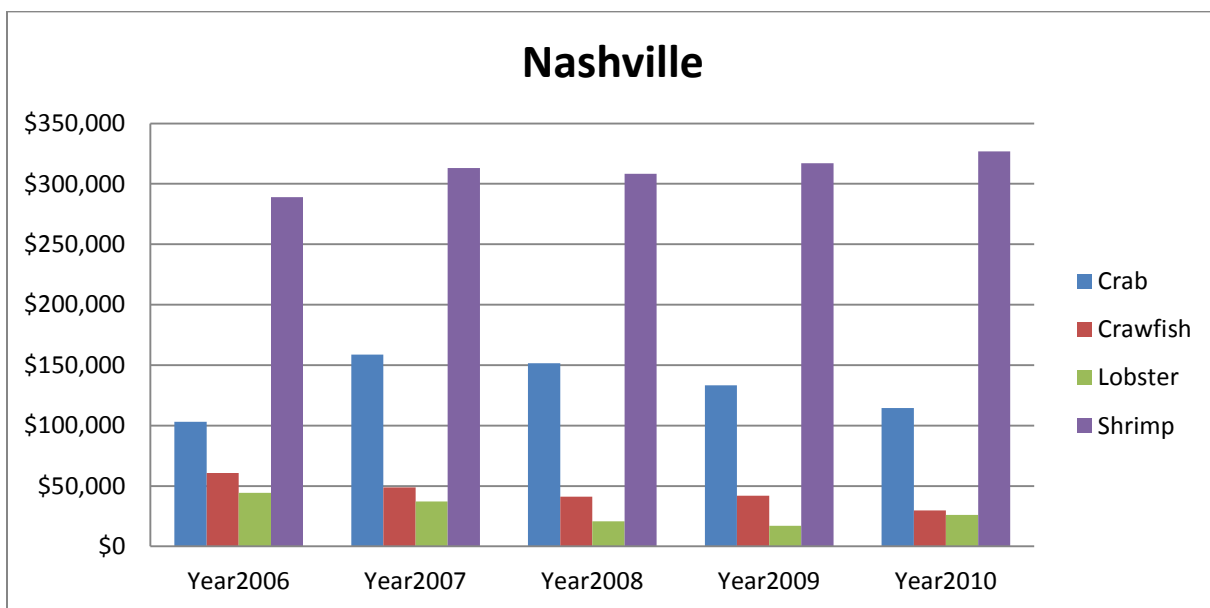


Figure 10. Annual Nashville, TN Supermarket Sales of Frozen Crustacean Products, 2006-2010.

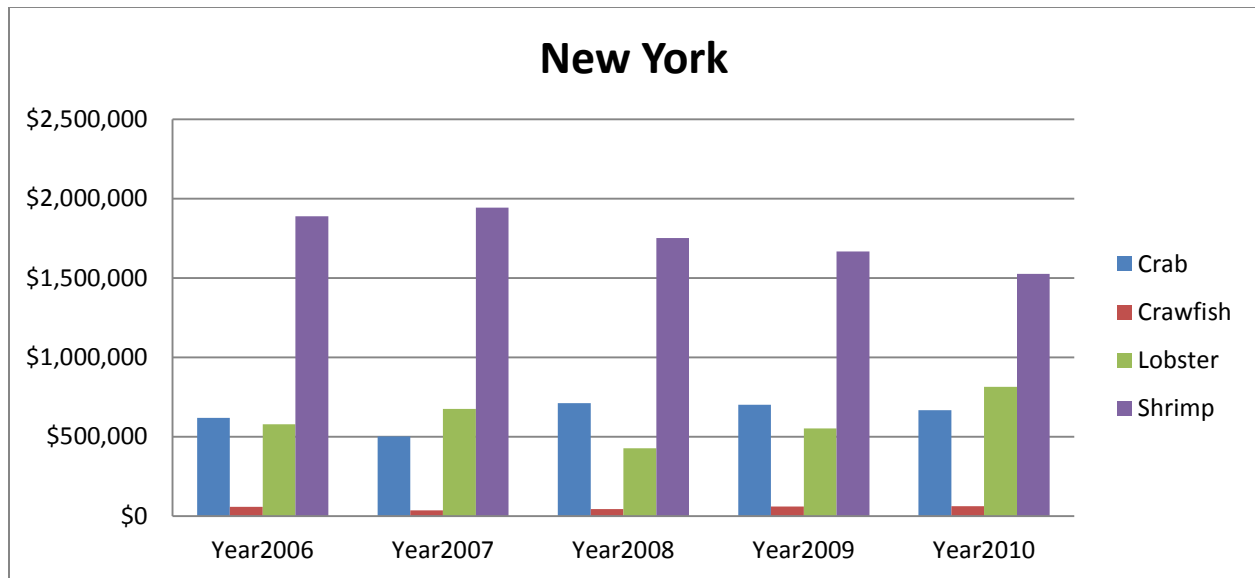


Figure 11. Annual New York, NY Supermarket Sales of Frozen Crustacean Products, 2006-2010.

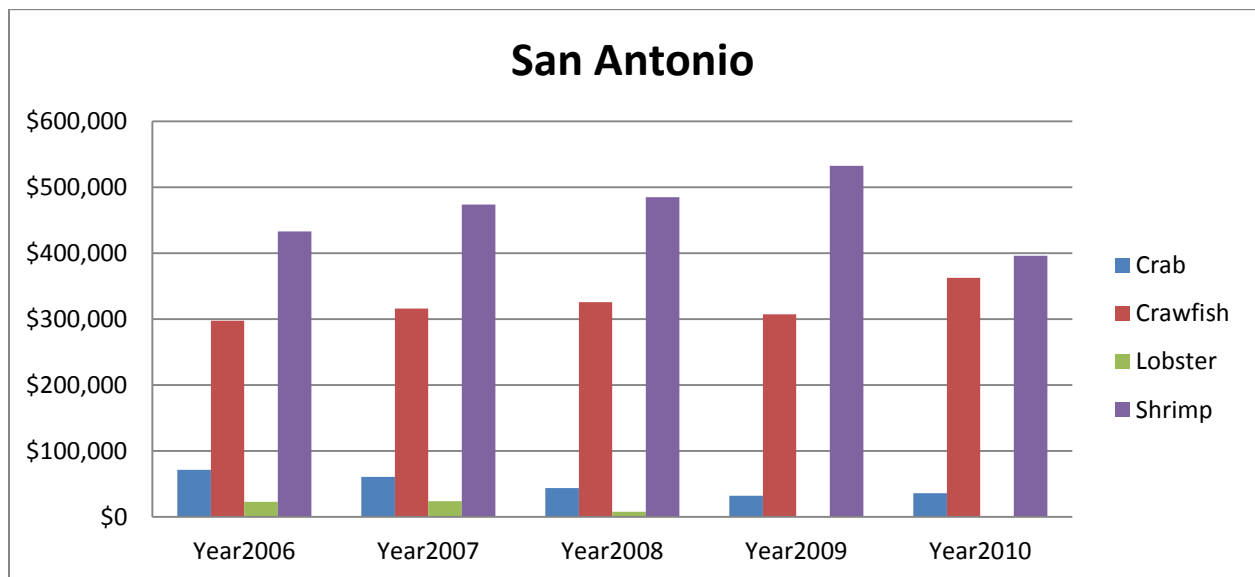


Figure 12. Annual San Antonio, TX Supermarket Sales of Frozen Crustacean Products, 2006-2010.

Conclusions

This brief descriptive analysis provides an insight into supermarket preferences for crustacean products within many larger US cities with several cities preferring crawfish over other crustacean products. While this descriptive review compares US city preferences for crustacean products, a more in-depth demand analysis is required. Chidmi, Hanson and Nguyen (2012) used a non-linear AIDS model to estimate substitution patterns across seafood categories at the US re-

tail market, but do not specifically investigate individual city's demand for these products. Future analysis of this data will estimate demand elasticities for crustacean products at the city supermarket level. This would be beneficial to crawfish retailers as they could price this product to increase their total revenues.

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