Choice of Retail Outlet for Fish: An Exploratory Study of Shoppers in Trinidad and Tobago

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In the Caribbean, food retailing and specifically fish retailing has not attracted the interest of academics. The literature indicates that consumers' choice of retail outlet is not a single factor phenomenon and may be analyzed by looking at the shoppers' attributes, store attributes or some combination of both. Traditionally, the public markets, roadside stalls and the landing sites were the primary retail outlets for fish in Trinidad. However, contemporary shoppers are faced with an extended range of options from which to purchase their fish products, including supermarkets, specialty fish shops and fish vendors. Therefore, this study sought to determine consumers' preference for a range of fish retail outlets based on several socio-economic factors. This study analyzed patronage behavior of fish shoppers across five retail outlets – supermarkets, public markets, specialty fish shops, roadside stalls and landing sites. A total of 250 structured questionnaires were administered and data were analyzed with SPSS. Results of descriptive and chi-square analysis were reported. The results of the study showed that the public market is still the most patronized for fish in Trinidad, while landing sites are least patronized. The study suggests age, education and gender are influencing the consumers' preference for supermarkets as a retail outlet for fish. The traditional retail formats, roadside stalls and public markets, appear to be still outperforming the modern formats, supermarkets and specialty fish shops, on patronage. However operators of the traditional formats cannot afford to be complacent as younger, educated consumers are opting to patronize modern retail outlets.

Key Words: Fish, retail outlet choice, demographics, Chi-Square analysis

Introduction

Fish retailing has undergone a revolution in the last few decades in Trinidad and Tobago. No longer are shoppers restricted to making their purchases directly from the boats at landing sites and pubic markets. Today, shoppers have an expanded range of options from which to purchase their fish, including supermarkets, specialty fish shops and fish vendors who sell their wares at well established roadside stalls or from vans that make regular visits to dedicated areas across the country. Where do Trinidadians now purchase their fish and what attributes they desire is vital information for all stakeholders in the fish business as the competitive landscape changes.

Added to the complexity of the purchase decision now of – Where to buy – the shopper must include in the mix – What to buy. Supermarkets now offer their patrons the options of "seasoned versus unseasoned fish". Further, some fish retailers are expanding their differentiation options by offering "free range versus farmed fish", especially in the case of Tilapia.

For decades retail outlet choice has been a subject of wide research and has been studied from various perspectives, however, in the Caribbean food retailing in general, and more specifically fish retailing has not attracted the interest of academics. It is now well documented in the literature that store choice is not a single factor phenomenon and may be analyzed by looking at the shoppers' attributes (demographics, psychographics etc.), store attributes (atmospherics, location, service quality etc.) or some combination of both. Given the exploratory nature of this study, the focus will be on the shopper.

The retail outlet is the final link between businesses and other upstream actors in a value chain and customers. Understanding what motivates shoppers to choose one retail format from another is vital for the

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successful development of strategies to compete in today's highly competitive markets. Fish is an important source of protein for many Trinidadians. Armed with information on what draws customers to one retail format versus another or what type of shoppers are most likely to patronize a retail format is crucial as Trinidad moves towards developed country status. This study attempts to explore some of these issues.

The rest of the paper is organized as follows: The next section provides a brief description of some of the literature on store choice. This is followed by the conceptual framework and a statement of the problems addressed in the study and the hypotheses developed to try and address the research problems.

Thereafter the analytical approach and data used in the study is described. This is followed by the results and discussion, and finally some conclusions and recommendation offered.

Literature Review

Bellenger and Moschis (1982) in their attempt to develop a model of patronage behavior based on theory and research and summary of the findings of previous work suggested a model titled "A Socialization Model of Retail Patronage". Figure 1 illustrates the major components of their proposed model.
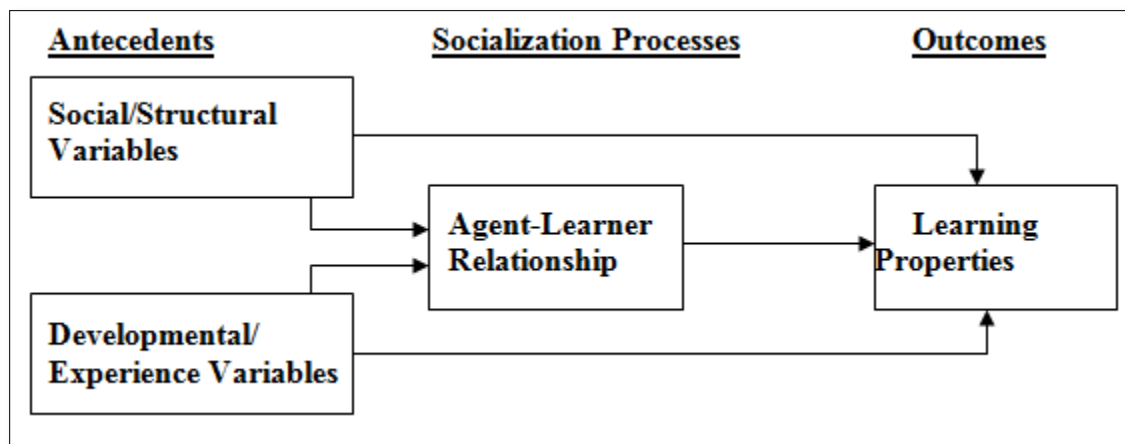

Figure 1: A General Consumer Socialization Model, *Source:* Bellenger and Moschis (1982)

Examining previous research the model arrived at four categorizations according to the variable sets with which they deal and /or according to the linkages explored between the variables. The four categories are:
(1) Effects of Social/Structural Variables
(2) Effects of Developmental/Experience Variables
(3) Effects of Socialization Processes on Outcomes
(4) Effects of Mental outcomes on Behavior Outcomes

Several researchers in developed countries have examined the effect of various attributes on retail outlet choice. However, it is not until recently such work has been pursued vigorously in developing and emerging economies. Many have suggested that the rapid rise of supermarkets and other "western" retail formats, along with increasing disposable incomes and intensified competition at the retail level have

propelled an interest in this branch of research in developing countries.

Ting Meng et al., (2014) in a study titled "Consumer's Food Shopping Choice in Ghana: Supermarkets or Traditional Outlets?" looked at purchase frequency at supermarkets, open-air markets, and hawkers. The explanatory variables used in the ordinal logit regression model included household income, education, occupation, age, marital status, household composition and regional location. They found that supermarkets are preferred by high income and well educated households. However, the appeal of supermarkets varied by location. Open-air markets are attractive to large households, and location did influence the shopping frequency to open-air markets. Hawkers appear to be more attractive to households of a lower socio-economic status than households of the better

educated or higher income. Again, location did influence the shopping frequency from hawkers.

Iqbali et al., (2013) examined the impact of demographic factors on store selection in Pakistan and found that educational level, occupation, income level and household size had an impact on store selection. Gender and marital status did not have an impact on store selection in this study. Oghojafor and Nwagwu (2013) examined the choice of shopping outlets for grocery products and socio-economic profile of female consumers in Nigeria. They found that socio-economic variables such as, income, level of education, type of employment and marital status did not influence retail outlet choice for groceries.

Okello et al., (2012) looked at the choice of vegetable retail outlet in Kenya, the case of Kale, and identified income, level of education, risk perception, living environment, willingness to pay for safe Kale and confidence in the consistency of quality of Kale as the major conditioners of the choice of retail outlet by consumers. Akpinar (2012) in a study titled "Analyzing the effects of consumers' demographic characteristics on the preferences of fresh fruit and vegetables supply chains", found gender, education, income, and employment influences outlet choice. Age and marital status had no influence on retail outlet choice.

Oghojafor et al., (2012) in a study titled "Outlet Attributes as Determinants of Preference of Women between a Supermarket and a Traditional Open Market" (Lagos, Nigeria) examined the impact of attributes such as, likeness of the pricing method in supermarkets and open market, convenience of reaching location, availability of parking space at location, scale of products offered, quality of products offered at the location, cleanliness of location etc. on outlet choice. They found that supermarkets were more patronized than open markets, 62% and 38% respectively of the 249 respondents. The top three attributes in descending order were quality of product on offer, price of products in the outlet, and 3rd was outlet location. These findings are very important for retail outlet operators as they strive to develop competitive strategies to outperform their rivals.

Gorton et al., (2009), investigated Thai shopping behavior between wet markets, supermarkets and food quality. They found that gender, age, income and education are not significant in explaining variations between wet markets and supermarkets. However for fresh produce sales there are positive relationships between supermarket spending and speed of service and variety of products. Supermarket shoppers seem to value more highly 'a one stop shop'. Frequency of wet market visits is positively related to the importance given to speed of service and product quality, and negatively related to atmosphere and the interaction of quality and cleanliness.

Mirza (2010) in her study of urban Pakistanis found that age, gender and occupation had no influence on the choice of retail format, while household income, household size and education does influence choice of retail format. As she reports her findings differed from Prasad and Reddy (2007) who found age, occupation, educational level, household income level and household size does influence the choice of retail format. Prasad and Reddy looked at three retail formats in India, convenience stores, supermarkets and hypermarkets. They suggest that working women create a huge demand for time saving products and services, which are generally more available in supermarkets.

The food and grocery products and retail outlet choice have received attention from many academics using different analytical procedures. Carpenter and Moore (2006) looked at consumer demographics, store attributes and retail outlet choice in the US grocery market. In this study they specified four outlet types, specialty stores, supermarkets, supercenters and warehouse clubs. They found that income was the only predictor of specialty store patronage. Household size is a significant predictor of patronage within the traditional supermarket category. For the supercenter format education, income and household size predict patronage. In the case of the warehouse clubs income and education positively influenced patronage.

Research Problem, Conceptual Framework And Hypotheses

Based on the brief review provided above the problems that will be addressed in this study are as follows:
(1) To identify the most patronized retail outlet for fish in Trinidad.
(2) To identify the demographic factors that influences the choice of retail outlet format for the purchase of fish in Trinidad.
In T&T fish retail outlets are put into five groups for purposes of this study – Supermarket (modern retail), Roadside Stall (traditional retail), Wet market/Public Market (traditional retail), Landing site (traditional retail) and Specialty Seafood/ Frozen fish outlet (modern retail outlet).

Research Hypotheses

H_{o1}: There is no relationship between income and choice of retail outlet for the purchase of fish by Trinidadians

H$_{02}$: There is no relationship between gender and choice of retail outlet for the purchase of fish by Trinidadians

H$_{03}$: There is no relationship between age and choice of retail outlet for the purchase of fish by Trinidadians

H$_{04}$: There is no relationship between education and choice of retail outlet for the purchase of fish by Trinidadians.

H$_{05}$: There is no relationship between family size and choice of retail outlet for the purchase of fish by Trinidadians

H$_{06}$: There is no relationship between ethnicity and choice of retail outlet for the purchase of fish by Trinidadians
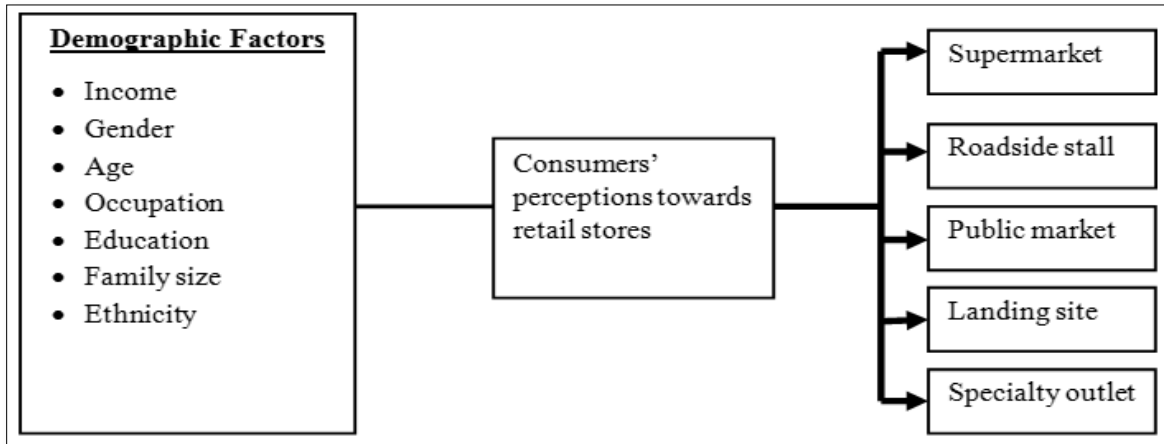

Figure 2: The conceptual framework to be used to address the second research problem.

Analytical Approach and Data

To investigate if there was a relationship between the socio-economic variables outlined in the conceptual framework above and retail outlet choice a questionnaire was developed and pretested in January 2014. The questionnaire consisted of two sections. Section one of the questionnaire focused on the consumers' main choice of outlet. Section two attempted to gather information on the demographics of respondents, such as, age, if employed, ethnicity, marital status, and highest educational level attained and income data were collected.

Structured questionnaires were administered to prospective respondents at the University of the West Indies and outside supermarkets and in public markets via face to face interviews. The instrument was pretested among 10 students at the University of the West Indies. Changes (question wording and general formatting) were then made. Next, the edited instrument was pretested among general consumers (10) in public markets. This resulted in minor (question wording) changes. A convenience sampling method was used in an attempt to get as large a sample size as possible in the shortest time. A total of 250 questionnaires were administered. After data

cleaning, the final sample size utilized in the analysis was 200 (response rate = 80%). The relevant data was analyzed using SPSS version 20.

The data collected was primarily nominal and ordinal; as such the analytical approach used was primarily descriptive. In marketing research the use of contingency tables or cross-tabulation analysis is very common (Hoffman and Franke 1986; Feinbery et al., 2013), and the present study used this approach to test the stated hypotheses.

Results

The sample consisted of 43% males and 57% females. The majority (83%) were forty five years and younger. With regards to employment status, 71% were employed, 8.5% unemployed and 20.5% students. The majority (49.5%) were of Indian decent, 19% mixed, 18% of African descent and the remainder of Chinese decent. The predominant family size was 1-4 members (53.5%). The majority (62%) were educated above the secondary level. 38% of the sample had a household income of T&T $5,000.00 and less per month, 45.5% between T&T $5100.00 and T&T $9,000.00, and the remainder greater than T&T $9,000.00.

Table 1 provides a breakdown of the respondents' choice of retail outlet when purchasing fish in Trinidad. As is observed in this table the preferred choice of outlet for fish in Trinidad as reported by the respondents was roadside stalls, a traditional retail format. It is also worthy to note that this was the only outlet receiving more than 50% of the respondents patronage. Public market ranked second with 44%, suggesting that fish is still predominantly purchased from traditional outlets. The modern retail outlets were ranked 3rd and 4th, with fish landing sites being only patronized by 28% of the respondents.

Table 1: Fish outlet patronage

Retail outlet	% using retail outlet	Rank of patronage
Roadside Stall	52.5	1st
Public Market	44.0	2nd
Supermarket	40.5	3rd
Specialty fish outlet	35.0	4th
Landing site	28.0	5th

Pearson Chi Square tests were employed to test relationships between outlet choice and all the demographic variables except gender where a Fisher's Exact test was used, since this was a 2x2 contingency table. The decision rule employed in this study is as follows: reject the null hypothesis if the probability of the test statistic is less than or equal to alpha 0.05. As is shown in table 2, the null hypothesis is not rejected for income, occupation, family size and ethnicity as the test statistics were greater than 0.05. This suggests that income, occupation, family size and ethnicity do not influence the choice of supermarket as an outlet for fish. Gender, age and education do appear to influence the choice of supermarket as an outlet for fish in Trinidad.

Table 2: Crosstabulation results for Supermarket based on Demographic variables

Crosstabulation	Pearson Chi-Square	Fisher's Exact Test	Accept/reject null hypothesis
Supermarket*Income	0.488		Accept
Supermarket*Gender		0.042	Reject
Supermarket*Age	0.001		Reject
Supermarket*Occupation	0.181		Accept
Supermarket*Education	0.005		Reject
Supermarket*Family size	0.403		Accept
Supermarket*Ethnicity	0.796		Accept

Table 3 illustrates the test results for roadside stall and the demographic variables. As is observed in this table age (alpha 0.017) is the only demographic variable influencing roadside stalls as an outlet for fish. One can therefore interpret the results of these tests as income, gender, age, occupation, education, family size and ethnicity being independent of the choice of retail outlet for fish in Trinidad.

Table 3: Crosstabulation results for Roadside Stall by Demographic variables

Crosstabulation	Pearson Chi-Square	Fisher's Exact Test	Accept/reject null hypothesis
Roadside stall*Income	0.232		Accept
Roadside stall *Gender		0.726	Accept
Roadside stall *Age	0.017		Reject
Roadside stall *Occupation	0.122		Accept
Roadside stall *Education	0.657		Accept
Roadside stall *Family size	0.286		Accept
Roadside stall *Ethnicity	0.830		Accept

Table 4 indicates that income, gender, age, education, family size and ethnicity do not influence the choice of retail outlet for fish in Trinidad since the null hypotheses were not rejected. Occupation does appear to influence the choice of public market as an outlet for fish, since the test statistic was less than alpha 0.05.

Table 4: Crosstabulation results for Public Market*Demographic variables

Crosstabulation	Pearson Chi- Square	Fisher's Exact Test	Accept/reject null hypothesis
Public Market*Income	0.553		Accept
Public Market*Gender		0.473	Accept
Public Market*Age	0.214		Accept
Public Market*Occupation	0.011		Reject
Public Market*Education	0.566		Accept
Public Market*Family size	0.541		Accept
Public Market*Ethnicity	0.599		Accept

Table 5 illustrates the Pearson Chi Square test and Fisher's Exact test results for the crosstabulation results with landing site and the demographic variables under consideration in this study. As is observed in this table none of the demographic variables appear to influence the choice of landing sites as a retail outlet for fish in Trinidad. It is worthy of note here that landing sites had the lowest patronage as is illustrated in table 1.

Table 5: Crosstabulation results for Landing site *Demographic variables

Crosstabulation	Pearson Chi- Square	Fisher's Exact Test	Accept/reject null hypothesis
Landing site*Income	0.060		Accept
Landing site*Gender		0.266	Accept
Landing site*Age	0.500		Accept
Landing site*Occupation	0.817		Accept
Landing site*Education	0.016		Accept
Landing site*Family size	0.822		Accept
Landing site*Ethnicity	0.589		Accept

Table 6 indicates that income, gender, occupation, education, family size and ethnicity do not influence the choice of specialty fish outlets in Trinidad. Age is the only demographic variable with a Pearson Chi Square test statistic less than 0.05. One can therefore conclude that age and the choice of specialty fish retail outlet are dependent.

Table 6: Crosstabulation results for Specialty fish outlet *Demographic variables

Crosstabulation	Pearson Chi- Square	Fisher's Exact Test	Accept/reject null hypothesis
Specialty fish outlet*Income	0.432		Accept
Specialty fish outlet*Gender		0.881	Accept
Specialty fish outlet*Age	0.036		Reject
Specialty fish outlet*Occupation	0.104		Accept
Specialty fish outlet*Education	0.366		Accept
Specialty fish outlet*Family size	0.213		Accept
Specialty fish outlet*Ethnicity	0.707		Accept

Conclusion and Recommendation

For the five fish retail outlets analyzed in this study the demographic variables income, family size and ethnicity does not appear to influence the choice of retail outlet for fish in Trinidad. The choice of supermarkets is dependent on gender, age and education. In the case of the roadside stalls age appears to influence its choice as a retail outlet. Occupation and the choice of the public market are not independent. The choice of the specialty fish shop is dependent on age.

Landing sites, which was the least used retail outlet based on the results of this study, is not dependent on any of the demographic variables analyzed. To some extent the low patronization of landing sites is to be expected. As consumers become more time pressured, with more women in the work force for example, visiting the landing sites for fish with no fixed time of the boats' arrival is not a very attractive option. Further, the landing sites may not appear to be very sanitary for the more educated and food safety conscious shoppers.

The traditional retail formats, roadside stalls and public markets, appear to be still outperforming the modern formats, supermarkets and specialty fish shops, on patronage. However operators of the traditional formats cannot afford to be complacent. As the results of the study suggest age, education and gender are influencing the choice of supermarkets as the retail outlet for fish. Armed with more and better information on what drives customers' choice of retail outlet one can expect supermarket operators to continue to fine tune their strategies to increase market share.

As is suggested by the title of this study the results need to be taken with some caution. A limitation of the study was the small sample size. In this regard it is suggested that future research use larger samples that might more accurately represent the population. It is also recommended that managers of retail outlets for fish explore other factors, such as, freshness, cleanliness of surroundings etc in order to determine relevant attributes that attract customers and builds markets share.

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