

Religion, Religiosity, Lifestyles and Food Consumption

by

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This paper is based on data from Israel showing that beliefs, lifestyle and ability to cook affect food consumption patterns. The intensity of belief is especially important, and more devout followers present unique market opportunities. Time-constrained consumers will pay for extra convenience. Food marketers should know their consumers' beliefs and constraints.

The traditional literature on food demand has been based on the premise that consumers gain direct benefits from consumption of goods purchased at the market and has estimated the effect of prices, income and quality indicators on food purchases. However, for the most part, traditional demand studies that use prices and income as explanatory variables explain less than 50 percent of the variation in the data, and there is a place to increase the factors considered in demand analysis. Following Nobel Laureate Gary Becker's introduction of the concepts of human capital and family production functions, new considerations have added to food demand theory. He argued that consumers derive benefits from commodities produced within the household using processes that utilize both market goods and family members' time and skills. Another Nobel Laureate, George Akerlof, suggests that people consider the impact of their choices on family reputation within the context of social norms. The writings of Becker and Akerlof allow the inclusion of factors such as religion and gender in explaining consumer choices.

This article presents research results that aim to explain the factors that determine the properties of purchased food products. In particular, we analyze how factors such as religion, religiosity, gender, and joy of cooking, in addition to the usual variables (product price and income), affect purchasing of food products with differentiated characteristics. We analyze consumer choices of various poultry products, in particular, the choices of cut versus whole and fresh versus frozen chicken. We also consider the choice of ready-to-eat chicken. Cut chicken requires less time to prepare than whole chicken, and frozen chicken requires less purchasing time relative to fresh chicken. Frozen chicken is also perceived as a convenience good with an element of "modernity." Our empirical analysis is based on survey data collected in Israel in 1999, which has significant diversity both in terms of religious

affiliation and adherence. The majority of Israelis are Jewish, but it has large Muslim and Christian minorities, and members of all three religions vary in the extent to which they observe religious mores. We concentrated on chicken since both Judaism and Islam forbid their followers to consume pork, and chicken is the major meat consumed in Israel. We also present results on the choice between chicken and other meats, and attitudes towards food modification, and how they demonstrate the importance of lifestyle and religious beliefs within a larger context.

In preparing for our study, we searched but did not find studies on the impact of religion on the properties of consumed foods. However, we did find a study documenting that Pope Paul VI's 1966 apostolic decree, which relaxed the Catholic Church's rules demanding abstinence from meat consumption on Fridays, led to a significant decline in the demand for fish, threatening the viability of the fishing industry in the northeastern United States.

Conceptual Analysis and Results

In deciding what type of meat to purchase for a meal, consumers aim to maximize benefits of food consumption, leisure time and expenditure on other products, given income and time constraints. In our context, in choosing between cut and whole chicken, buyers consider the tradeoffs between the higher cost of cut chicken and the extra time and effort spent to cut a whole chicken. High-income individuals are more likely to purchase cut chicken, while individuals who enjoy cooking are more likely to purchase a whole chicken. In choosing between fresh and frozen chicken, individuals trade off the better taste of the fresh chicken with the longer shelf life (which saves shopping time) and the lower price of the frozen chicken. Furthermore, the use of frozen chicken is part of modernity, which may be less appealing to traditional groups who may also resist buying modern appliances needed to prepare frozen foods.

Table I. Determinants of the Demand for Convenience Features in Chicken

Variable	Fresh whole	Fresh cut	Frozen whole	Frozen cuts
Age of respondent		++	--	----
Religion				
– Jewish conservative	++		--	--
– Jewish Orthodox		----	++	+
– Muslim secular	++	----	----	----
– Muslim religious	++	--	--	----
– Christian	+	--		
Enjoy cooking – Men	+		----	----
Low leisure				
– Jewish secular	--		+	
– Jewish conservative	----	+		
– Jewish Orthodox	----	----	++	+
– Muslim secular	----		++	++

++ or ---- = significant at the 95% level; + or -- = significant at the 90% level.

Religiosity sets behavioral norms that directly and indirectly affect food characteristic choices. Devout followers have more children and, thus, lower per capita income and spend more time on child rearing. The lower per capita income increases the demand for frozen-whole chicken. The binding time constraint increases the demand for cut and sometimes frozen chicken. The final impact of religion on cut chicken depends on the magnitude of the two effects.

Religions have established behavioral norms for household chores and leisure time. All three religions value traditional home cooking. This leads to a preference for whole over cut and fresh over frozen chicken. Religions also establish norms on work outside the household. Muslims in Israel deter women from working outside the house, while ultra-Orthodox Jewish women are encouraged to work outside the house to allow their husbands to devote their time to religious studies. Thus, the low income and time constraint of ultra-Orthodox women may lead to increased demand for frozen meat. The conceptual analysis suggests that the stronger intensity of religious beliefs is associated with (1) larger family size, (2) stronger preference for home-cooked meals, and (3) stronger aversion to modernity represented by frozen-food purchases. This holds for all three religions. Affiliation to a specific religious group matters when it comes to a woman's role in the household. Muslims discourage women to work outside the home, while Orthodox Jewish women are encouraged to be the family breadwinner. The extra time pressure

suggests a stronger preference for frozen chicken among Orthodox Jews.

The empirical study is based on a face-to-face survey conducted in 388 households. We differentiated among three categories of religiosity (secular, conservative and orthodox) for Jews, Muslims and Christians. The main qualitative results are presented in Table I, and the results support our theoretical analysis. When an entry in a table has ++, it denotes that there is a 95 percent probability that an explanatory variable has a positive effect on consumption of a particular product. For example, age has such an effect on fresh cut chicken consumption. Similarly, there is a 90 percent probability that age has a negative effect on consumption of frozen whole chicken and 95 percent probability

that it has a negative effect on consumption of frozen-cut chicken.

The results suggest that religious Muslims, who are less well to do, more traditional, and have women working at home, are likely to buy fresh, whole chicken. Orthodox Jews prefer buying the less-expensive but time-intensive item, i.e., the whole chicken. When compared to the secular group, the ultra-religious group buys less fresh chicken and purchases more whole and frozen parts.

The results of this and related studies suggest gender and age differences. When husbands shop, they are more likely to buy whole chicken than when the wives shop. Men are likely to buy whole chicken when they cook. We also found that older individuals are more likely to buy fresh chicken (representing aversion to modernity) and significantly more cut (perhaps because cutting chicken is more strenuous for older consumers).

Related Findings

In addition to investigating choices of different products within the same category, we studied choices among different products, in this case, different types of meat (fresh processed and ready-to-eat chicken, beef and turkey), and obtained some interesting insights.

(1) *Food diversity matters.* The consumers in the survey ranked chicken much higher in terms of taste and ease of preparation. Yet during a period of production glut in chicken, preceding our study,

it was apparent that there is a limit to the quantity of chicken that consumers will buy, even when the prices are very low. In response to the question “why don’t you eat more chicken products” the answers of more than half of the respondents suggest that they prefer to diversify their meat intake.

(2) *Ready-to-eat purchases are, in many cases, the second-best choice of consumers.* Consumers with the highest tendencies to buy ready-to-eat meats were the ones who identified themselves as “poor cooks” or “very busy,” or “my family doesn’t like what I cook.” More than 35 percent of our respondents admitted that their family members either “don’t like” their cooking or “do not complain,” while 65 percent suggest that their family members “like it” or consider it to be “O.K.”

(3) *Religious intensity affects attitudes towards food modifications.* The intensity of religious beliefs was the most dominant explanatory variable when we presented consumers with the hypothetical choices between chicken fortified with hormones versus the same fortification through genetic modification, and between beef colored through chemical dye versus genetic modification. While overall, 70 percent of the population preferred the genetic modification, the largest opposition came from the Orthodox, in which 40 percent preferred the chemical treatment. Among the conservatives, 20 percent preferred the chemical treatment, while among the secular, only 10 percent preferred the chemical treatment. We also found that attitudes to the hypothetical genetic modification varies with education. Support for chemical treatment was highest among participants with elementary school educations (40 percent), while 25 percent of the high school educated and 7 percent of those with full or partial college educations were supportive. This suggests that beliefs and knowledge are not only crucial for consumption of existing products, but also affect attitudes towards proposed products.

Conclusions and Implications

This article shows that food purchases are largely affected by religious lifestyle and cultural factors, in addition to prices and income. We find that patterns of behavior vary among followers of different religions, resulting from different norms. Future research should pursue empirical analysis of the demand of different product categories in varying cultures. More empirical evidence will also provide a base for a more complete theory on purchases and consumers’

preference of food, and the impact of belief and lifestyle on consumption.

The result of this article can be generalized beyond religious belief to other beliefs and value systems that affect lifestyle and consumption patterns. Beliefs and attitudes of individuals and groups toward the environmental or ethical merits of production practices (use of pesticides, genetically modified foods, child labor) have a growing impact on consumption choice. It has several impacts for food marketers: (1) *Know your customers.* Their culture and beliefs affect the specific foods they eat, consumption patterns change with age, and the ability to cook affects what they buy; (2) *Recognize the intensity of adherence.* The religious or ideological label matters less than the extent to which people practice their belief. The more devout followers may present separate markets with unique opportunities; (3) *Understand the time constraints of your customers.* Busy parents and working mothers will pay for extra convenience; (4) *Relate to the community, not just the individuals.* Buyers are part of social groups with norms, and integration of marketing efforts with communal life and values may enhance sales; (5) *Anticipate and manage change.* Cooking skills and knowledge restrict food choices, and there is potential gain from provision of recipes and demonstration activities. New information technologies may help identify and reach members of distinct social groups more accurately and effectively.

The authors recommend the following source for further information:

Heiman, Amir, David R. Just, Bruce McWilliams, and David Zilberman, “Incorporating Family Interactions and Socioeconomic Variables into Family Production Functions-The Case of Demand for Meats,” *Agribusiness: An International Journal*, Vol. 17, No. 4 (Fall, 2001), pp. 455-468.

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