Impact of Consumer Beliefs on Beef Buying Intention in Pakistan: 
An application of the Theory of Planned Behavior

Jamshed Khan Khattak
Scholar PhD Scholar (Management Sciences) Capital University of 
Science and Technology

Dr. Syed Muhammad Mehdi Raza Naqvi 
Associate Professor, Capital University of Science and Technology

Abstract
This paper aims to investigate the effects of the beef buyers’ beliefs, using the 
theory of planned behavior (TPB). Paper uses deductive approach. Empirically, 
a model of consumer behavior for beef in the Pakistan is estimated using 
regression analysis and its results and implications are discussed. Results of the 
study implied that “evaluative belief” was the most important determinant of 
beef buying intention, followed by affective belief, subjective norms, and 
perceived behavioral control but subjective norm had no effect on the beef. The 
survey approach is a non-probability sample; therefore care must be exercised 
while making inferences about causality and representativeness. The results are 
of great worth for academicians, food industry managers and government 
authorities. The findings emphasized the need for effective marketing 
communication, government authorities to launch public food safety education 
to consumers and strict implementation of consumer protection laws. The study 
is an original research with regards to its potential contributions of the 
behavioral aspects of the beef buying.

Keywords: Theory of planned behavior, evaluative behavior, affective behavior, 
subjective norm, perceived behavioral control, beef buying intention, Pakistan

Food is vital for human survival. The food consumption patterns 
in the world have changed in the last decades because of many factors. 
Among the food, meat and meat products group has been affected most 
significantly in the last decades (Farina, Almeida, 2003). Meat is 
considered as one of the important food consumed by families in their 
diet in the eastern cultures and especially in Pakistan. 

Families have grown in number in the last few decades. Family 
is now considered by the marketers of various products as a big 
consumer market (Neal, Quester, & Hawkins, 2005; Kotler & 
Armstrong, 2010). Therefore family has received considerable research 
attention from marketing professionals and academics in terms of the 
consumption of various products like food, car, and household durable 
goods.

Micro and macro level changes in the country always have an 
effect on the buying behavior of the consumers (Hossain, 2010). It is also 
a proven fact that tastes, choices and preferences of consumers vary with 
respect to their cultural and socio-demographics factors (Solomon, 
2009). Government of Pakistan has reported certain recent trends, in the 
Family Income and Expenditure Survey (HIES, 2013-14). Since 2000,
there have been significant changes in food consumption especially meat. During the period of 2000-2014, the data of HIES reports significant increase in meat consumption (beef 259%, mutton by 31%, chicken by 373% and fish 66 %). From the results of HIES about meat, it has been learned that beef represent the market of tremendous growth potential.

Consumers’ intention to buy products is largely dependent upon their behavioral structure about the product. Behavioral structure of the consumer forms their intentions towards products. As a result of evaluative beliefs, affective beliefs, belief about subjective norms and perceived behavioral control, form either positive or negative intention towards products (Ajzen & Fishbein, 1980).

In response to food scares, the foot and mouth crisis and other health concerns, red meat consumption has dropped in many countries like UK (Kennedy, Stewart, Mitchell, & Thurnham, 2004). Consumer attention was also attracted in Brazil by food crises like “mad cow” and foot and mouth diseases (Farina, Almeida, 2003). Rising concerns about these crises and scandals has encouraged various discipline of research to assess food behavior and practices in different region of the world (Suruolal and Badrie, 2004).

Recent scandals about selling of beef of haram animals (prohibited in Quran to eat) and dead animal in Pakistan might have created scare and lack of trust in the seller of the beef and government institution responsible for the safety of food and consumer protection. Religious fervor and beliefs on the face of such doubts about beef may bring change in the consumption belief structure of the consumer. Growing negative attitude towards beef can badly affect the growing market of the beef in Pakistan.

Beside the scandals reported, very little is known about the belief structure of beef consumers as the largest consumer market in Pakistan. Most of the studies in the food market in Pakistan are descriptive in nature and not driven by the relevant theories. Theory driven research in the food market provide better understanding of the factors that possibly influence particular behavior, but there is a dearth of theory driven research about food market in Pakistan. Therefore the purpose of this study is to examine the impact of major behavioral beliefs about beef on beef buying intention in Pakistan. This study aims to investigate the predictive power of behavioral beliefs in explaining the buying intention of Pakistani consumer. In order to gain more comprehensive picture of the beef buying behavior in Pakistan, this study also aims at examining the families’ beef buying behavior, in this present situation, by applying theory of planned behavior. The research question that study intends to examine is:

**RQ:** What are the factors that determine beef purchase intention of Pakistani consumers?

The idea of testing the theory for analyzing the impact of beliefs structure of the Pakistani consumers on their future intention of buying
beef is explaining the main factors of the beef buying behavior. The knowledge gained from this analysis can be used for predicting and influencing beef buying behavior. Information provided by the analysis can be used to influence attitudes formed by these beliefs and thus helping the growing market of beef to flourish.

**Literature Review**

**Red Meat Consumption**

Study of Kubíčková & Šerhantová (2005) investigated the effect of factors on the consumption of meat and meat products and confirmed that health consciousness is a major change agent of meat consumption behavior in Czech Republic. Growing importance of meat consumption in the food of Chinese was reported in the analysis of Ortega, Wang, & Eales (2009). Ortega, Wang, & Eales (2009) analyzed meat demand in china and concluded that red meat consumption is gaining importance in the food of Chinese. The study also predicted that red meat will dominate the food expenditures of Chinese consumers in future. The popularity of red meat in Pakistan is reflected in the changing demand for beef (beef 259% increase) over the last two decades.

**Theory of Planned Behavior**

The theory that is most widely used in the behavioral science is Ajzen, 1985; Ajzen & Fishbein, 1980’s theory of planned behavior (TPB). Theory of Planned Behavior provides a simple, logical and conceptual framework to measure the relationship between beliefs, attitudes, subjective norms, intentions, behavioral control and behaviour (Grønhøj, Bech, Chan, & Tsang, 2012; Motyka, et al., 2014). This study is driven by the Theory of planned behavior (Ajzen, 1991).

**Buying Intention**

Behavioral intention is a measure of the strength of a decision maker drive to execute a specific behavior in short term future buying decision (Fishbein and Ajzen, 1975; Fandos & Flavia’n, 2006). Intentions to perform or restrain from a behavior is the outcome of the behavioral beliefs of the decision maker. Beliefs of the decision maker include evaluative beliefs, affective beliefs, beliefs about the subjective norms and control beliefs (Collins & Mullan, 2011). Actual buying behavior is the act that is performed by the consumer on the bases of his or her behavioral intention (Motyka, et al., 2014). Consumers form intention to perform buying behavior and based on their intention they repeat to purchase products and services (Wood & Neal, 2009).

**Consumer’s Belief about Product**

Consumer buy benefits, they never buy products (Kotler & Armstrong, 2010). Consumers always evaluate the product attributes to confirm that it delivers the perceived benefits. This evaluation on part of
the consumers is referred to as evaluative beliefs of the person (Neal, Quester, & Hawkins, 2005). The constructs of evaluative belief is an evaluation of a particular purchase of particular product with some degree of favor or disfavor (Zhou, Thøgersen, Ruan, & Huang, 2013). These beliefs in turn form behavioral intention that determines readiness of the decision maker to perform a specific behavior (Ajzen, 2002). Many studies have revealed the noteworthy influence of the belief structure towards intention (Alam & Sayuti, 2011; Walsh, Shiu, & Hassan, 2012; Zhou, Thøgersen, Ruan, & Huang, 2013; Ferdous & Polonsky, 2013). Generally more favorable beliefs with respect to a buying behavior, can result into more stronger intention to perform the beef buying behavior in future.

The most widely used model for measuring the belief structure is the Fishbein model (Wu, 2003). The Fishbein model includes a person’s evaluative belief and affective belief about the product. Evaluative beliefs (E_i) and affective beliefs (A_i) about different aspects of the product have different level of importance in the mind of the consumers. Therefore total strength of the each belief is a measure of the product of the belief score to its relative importance score.

- **Evaluative Belief** = \( \sum E_i \times I_{Ei} \)
- **Affective Belief** = \( \sum A_i \times I_{Ai} \)

Based on Fishbein model and support provided by the extant literature this study put forward the following hypotheses:

\( H_1 \): Evaluative beliefs towards beef significantly influence buying intention towards beef.
\( H_2 \): Affective beliefs towards beef significantly influence buying intention towards beef.

**Subjective Norm**

People to whom we are related also directly or indirectly shape consumption behaviors (Simpson, Griskevicius, & Rothman, 2012). Subjective norms are the assessment of a person about thinking of people to whom he or she is closely related to perform a particular behavior (Ajzen & Fishbein, 1980). A subjective norm is the social pressure the decision maker feel about approving or not approving a certain buying behavior (Fishbein and Ajzen, 1975; Bagozzi, Wong, Abe, & Bergami, 2000). Influence of subjective norms on buying intention is well documented in the literature (Cheng, Tsai, Cheng, & Chen, 2011; Zhou, Thøgersen, Ruan, & Huang, 2013; Al-Swidi, Huque, Hafeez, & Shariff, 2014). Subjective norm of a person is measured by taking the product of the scores of the perceived social pressure (S) and motivation to comply (M_s) with it. The following equation provides measure of the subjective norms for beef.

\[ SN = \sum S_i \times M_{Si} \]

Based on the support of the available literature, following hypothesis can be developed:
H₃: Subjective norm significantly influence buying intention towards beef.

Perceived Behavioral Control

If a person feels lack of time, money and skills, it is likely that he or she has insignificant intention to perform the behavior (Ajzen, 1989; Zhou, Thøgersen, Ruan, & Huang, 2013). Perceived behavior control of a person is his or her perception about his or her own ability to perform certain behavior (Aertsens, Verbeke, Mondelaers, & Huylenbroeck, 2009). Studies of the Zhou, Thøgersen, Ruan, & Huang (2013) revealed insignificant variation into intention due to behavioral control.

Behavioral control of a person is calculated by taking sum of the product of the scores of the perceived control belief (C) and scores perceived power (P) of the control belief. Behavioral control for beef can be represented by the following equation:

\[ \text{PBC} = \sum C_i \times P_i \]

Considerable research work validates the relationship between perceived behavior control and intention (Aertsens, Verbeke, Mondelaers, & Huylenbroeck, 2009; Lada, Tanakinjal, & Amin, 2009; O'Connor, L., White, & M, 2010; Bang, Odio, & Reio, 2014). Consistent with the available literature this study expect that increase in perceived behavioral control will lead to more favorable intention towards beef and put forward the following hypothesis:

H₄: Perceived Behavioral control significantly influences buying intention towards beef.

Review of extant literature to test the stated hypotheses provides bases to propose the following theoretical model. Analysis of the proposed model facilitates this study to evaluate the proposed variations and hypothesized relationships in general and particularly for Pakistan.
Figure 1. Theoretical Model

Research Methodology

This study is cross-sectional in its nature. Families in the major urban areas of Pakistan are the target population of the study. Spouse (wife or husband) that make decision of buying beef for the family is the sample unit of analysis based on the view that a family act as a single decision making unit and consumption unit, even if it consists of different individuals with different preferences (Vermeulen, 2002).

Due to massive population size, availability of limited resources and time limitation, collecting data from the randomly selected representative population was not possible. However in behavioral studies convenience sampling technique is equally acceptable. Bearing on these facts, this study applied a convenience sampling technique to collect data (Henley et al., 2011).

A nationwide survey in all four provinces of the country was launched in December 2015 to collect data for this study (Yildirim, I., & Ceylan, M., 2008). An online calculator (Jamshed, et al., 2011) was used to calculate sample size of 1537 for this study, following the suggested procedure for a representative sample size (Kotlik, & Higgins, 2001). Online Sample Size Calculator uses the following formula:

$$SS = \frac{Z^2 \times (p) \times (1-p)}{c^2}$$

Where: $Z = 1.96$ (for 95% confidence level), $p = \text{percentage picking a choice}(50 \% \text{ of } 0.5)$ and $c = \pm 2.5 \%$ (confidence interval)

A closed-ended questionnaire was developed in the light of the procedure suggested by Ajzen (2006). Five point Likert scale was used for measuring items of behavioral intention, evaluative beliefs, affective beliefs, subjective norm, and perceived behavioral control. Keeping in view the English literacy rate and to make it convenient for the respondents, questionnaire was translated into Urdu, the national language of Pakistan. Questionnaire was self-administered through focal persons in each province and different cities (Cheng and Chin, 2011) for distributing in butcher shops and university students asking them to fill it from their parents (Grønhøj, Bech, Chan, & Tsang, 2012).

The measures of evaluative beliefs, affective beliefs, intention, subjective norms and perceived behavioral control are adapted from existing and validated measures in the literature (Ajzen and Fishbein, 1980; Walsh, Shiu, & Hassan, 2012; Zhou, Thøgersen, Ruan, & Huang, 2013; Al-Swidi, Huque, Hafeez, & Shariff, 2014).
The scales for measuring intention are adapted from Ajzen and Fishbein, (1980); Berndsen & Pligt, (2004); Verbeke & Vackier, (2005); Cheng, Tsai, Cheng, & Chen, (2011); Walsh, Shiu, & Hassan, (2012); Zhou, Thøgersen, Ruan, & Huang, (2013). The response categories included future intention to buy beef, the same amount of beef as now or more beef.

Evaluative belief was measured by taking six items and affective belief by taking three items. These items were measure by taking a 5 point scale anchored in “Totally not agree” to “Totally agree”. Importance of each evaluative belief and affective belief of the participants was measured on a five point scale of “Totally unimportant” to “Very important”. To measure the value of each evaluative belief and affective belief, each item of these was multiplied to their respective importance scores. The scale is adapted from Walsh, Shiu, & Hassan, (2012); Zhou, Thøgersen, Ruan, & Huang, (2013); Al-Swidi, Huque, Hafeez, & Shariff, (2014).

Five point Likert scale anchored in “Totally not agree” to “Totally agree” was taken to measure social pressure. Respondent were asked to show the motivation to comply for each subjective norm on a five point Likert scale from “Totally unimportant” to “Very important”. Each social pressure score was multiplied to its respective respondent’s rating of their motivation to comply with these social pressure. The scale was adopted from Verbeke & Vackier, (2005); Grønhøj, Bech, Chan, & Tsang, L., (2012); and Al-Swidi, Huque, Hafeez, & Shariff, (2014); Bang, Odio, & Reio, (2014)

To measure perceived behavioral control participants were asked to indicate their control belief and perceived power on the control belief in 4 items on a scale of “Strongly Disagree” to “Strongly Disagree” and “Totally unimportant” to “Very important” respectively. A product of the score of each control belief to its respective power score to calculate the value of control belief. Verbeke & Vackier, (2005); Grønhøj, Bech, Chan, & Tsang, (2012); Zhou, Thøgersen, Ruan, & Huang, (2013); Bang, Odio, & Reio, (2014)

The data of the study was analyzed using SPSS software. Various statistical tests like Cronbach α for inter item consistency, correlation coefficients, linear regression, multiple regression, ANOVA, and other tests were applied (Yildirim, & Ceylan, 2008).

**Data Analysis and Results**

Total number of questionnaires received was 2313. After discarding incomplete or blank questionnaires finally data of 1834 questionnaires was considered for analysis.

The gender composition of the respondents was 57.7 percent husband and 42.3 % percent wives. Both types of families were equally represented in the sample. Nearly on half of the families (49.9%) were traditional families (consist of husband, wife, children, grandparents and
other relations) and one half of the families (50.1%) were modern (consist of husband, wife and children only). The sample was relatively highly educated with 33% having education of master or above, 31% graduate, 17% intermediate, 10% SSC, 7% only basic education and 1% illiterate. The distribution of the respondents with respect to the province showed that 22.7% were from Baluchistan, 20.2% from KPK, 41.9% from Punjab and 15.2% from Sindh.

Inter item consistency analysis of all items in the scale produced Cronbach \( \alpha \) of 0.9 which fall in the excellent category. Cronbach \( \alpha \) for 4 items of meat buying intension is 0.8, Cronbach \( \alpha \) for 4 items of evaluative belief is 0.9, Cronbach \( \alpha \) for 3 items of affective belief is 0.8, Cronbach \( \alpha \) for 16 items of subjective norms is 0.9, Cronbach \( \alpha \) for 8 items of perceived behavioral control is 0.8. Cronbach \( \alpha \) for all measures fall within the good range of the recommended levels (George and Mallery, 2003).

Table I shows the descriptive statistics and correlations among these variables of the study. All predictor variables had a significant zero-order correlation with beef buying intention and beef buying behavior.

**Table 1. Descriptive statistics and correlations for all research variables**

<table>
<thead>
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<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef Buying Intention</td>
<td>3.33</td>
<td>.84</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluative Belief</td>
<td>12.06</td>
<td>4.53</td>
<td>.405**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affective Belief</td>
<td>13.17</td>
<td>4.57</td>
<td>.337**</td>
<td>.551**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Subjective Norms</td>
<td>11.24</td>
<td>3.89</td>
<td>.297**</td>
<td>.574**</td>
<td>.492**</td>
<td>1</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>11.74</td>
<td>3.86</td>
<td>.273**</td>
<td>.318**</td>
<td>.377”</td>
<td>.358”</td>
</tr>
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</table>

*Note. n = 1835, ** Correlation is significant at the 0.01 level (2-tailed).*

Central limit theorem is applied because the sample size (1835) is quite large; therefore the data in such case exhibits the property of normal distribution. The collinearity diagnostic for explanatory variables resulted into VIF values of 1.005, 1.017, 1.014 and 1.009 respectively for all four independent variables. Results for the tolerance have shown .995, .983, .986 and .991 respectively for the independent variables. The values of Tolerance and VIF both fall into the recommended acceptable level i.e none of the tolerance value is ≤ 0.01 and all VIF values are below 10. Therefore the measures for explanatory variable are free from multicollinearity.

Hierarchical multiple regression analysis was carried out, while controlling for the socio-demographic variables of the study to predict beef buying intention with evaluative belief, affective belief, subjective norms and perceived behavioral control. The model fit summary in block 2 have shown that \( F (9,1825) = 70.323 \), with \( p < .001 \). The results reveal that the model is statistically significant predictor of the relationships between the study variables.

The model summary in the hierarchical multiple regression analysis for the study variables in in Table II revealed that subject
variables have non predictive capacity and thus are insignificant predictors of beef buying intention. The predictors of beef buying intention model (evaluative belief, affective belief, subjective norms and perceived behavioral control) resulted into $R^2 = .204$, $F(6,403) = 17.176$, $p < .001$, showing that by adding evaluative belief, affective belief, subjective norms and perceived behavioral control, predictive power increased predictive capacity in a statistically significant way and increased by 20.4%. This is a pretty good increase showing the predictive capacity of these variables. The results also revealed that variables are significant predictors of beef buying intention.

The results also revealed that subjective norms (β = 0.032 and $p > 0.05$) was not a significant predictor of beef buying intention. Results provide in Table II supported hypotheses $H_1$, $H_2$, and $H_4$, providing that, evaluative belief had the most salient impact on the beef buying intention, followed by perceived behavioral control, and affective belief. Results did not support $H_3$.

**Discussion**

The purpose of the study was to examine the predictive power of various beliefs in explaining the beef buying intention of consumer in Pakistan. The study was also aimed at confirming the application of the TPB in the context of belief structure about beef in Pakistan. The study was also aimed at understanding of family beef buying intention on the face of recent scandals and scares in the context of the framework of TPB in Pakistan.
The outcomes of the study provided strong backing for Effects of beliefs (evaluative belief, affective belief, and perceived behavioral control) as significant predictors of beef buying intention. Evaluative belief was found as the strongest predictor of beef buying intention followed by affective belief, subjective and perceived behavioral control.

Salient impact of evaluative belief indicated that during the recent scandals and scares, beef buyers became more conscious about the healthiness, nutritional value, trustworthiness and safety of beef. Evaluative belief is an important factor that influences consumers’ intention in buying beef in Pakistan. Hence Pakistan is a Muslim country and it is natural that scares and scandals about meat of Haram and dead animals definitely lead to more conscious behavior of the buyer. The results of the study depicted that scandals and scares has increased the level of evaluative belief and made it the most significant predictor of the beef buying intention. The finding is consistent with the study of (Alam & Sayuti, 2011; Karijin et al.2007).

PBC was also found to be a significant predictor of beef buying intention. Significance level of The significance level PBC shows that consumers’ have sufficient knowledge, judgment skills, experience of making choice of good beef, feel easy to purchase and think it is easily available.

Affective belief depicted as the third significant predictor of the beef buying intention. Hence consumer of food have both utilitarian and hedonic needs, therefore affective belief being the hedonic need of the family is a significant predictor of beef buying intention. Positive affective belief about beef means that consumers’ like taste of beef, variety of meals prepared from beef and excitement of eating beef. It can be inferred that consumers’ with high positive affective belief seemed to have greater intentions to purchase beef. The finding of the study is consistent with Ajzen’s (1985, 1991).

Insignificant prediction of subjective norms indicate that consumers’ do not feel pressure of family members, friends, doctors & nutritionists advice, stimulation by advertising and encouragement by the food industry to buy beef for the family. This lack of social pressure may be due to the fact that beef is a routine purchase item in Pakistan. Another fact is that in Pakistan proper policy is not in tact to educate people on the benefits of the beef eating. Similarly advertisement about beef and its benefits is almost not carried out in Pakistan.

The findings of the study provides a ground to its application in the meat market involving marketing managers of food companies, restaurants, govt. agencies looking after the food market, doctors and nutritionists, food industry and the media of the country.

The study provides deep understanding of the decision-making process carried out by the consumers’ for beef buying. Using the major advertising design theory of hierarchy of effects model, the results reveal that there is a need for increasing awareness about healthiness of beef.
provided in the market, being trustworthy food, high nutritional value of beef, and a safe food in all respect. Similarly the findings also provide insight into using Means-End theory of advertising to highlight consumer’s benefits in turn will increase positive intention towards meat. These marketing communication strategies will also increase PBC by providing sufficient knowledge to judge Halal and good beef. These strategies might help in building trust of the consumers and thus can increase beef buying intention. The results of the study highlighted evaluative behavior, affective behavior, and perceived behavioral control as the significant factors of the beef buying intention. The marketing communication managers can use these important aspects of beef buying process as the leverage point.

Government authorities and beef marketing companies must focus on creating trust in beef being of halal animals and encourage people to purchase beef from a behavioral perspective. The government authorities and beef marketing companies must improve the awareness of people about beef and their ability to judge quality of beef.

Hence non-probability sampling technique is used in this study therefore it provides limited generalization. Understanding of the metaphors in the mind of the customers also requires some qualitative investigation to gain deeper understanding in the area of behavioral studies.

Research is needed about the application of TPB in collectivist culture and Muslim countries as behavioral structures are different in such cultures. To increase the predictive power of TPB the study also recommends including other aspects of behavioral structure in the model.

References


