

## Determinants of Consumer preferences of Branded Goods: A Case Study of Selected Districts of Punjab Pakistan

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### Abstract

The objective of the study was to analyze the determinants of consumer preferences for branded or non branded goods in Punjab (Pakistan). For this purpose two cities named Faisalabad, Mandibhauddin and two corresponding villages( Manget and Makkuana) were selected. Users of branded and open Tea were selected for the study and Binary Logit Model was used to draw conclusions. It was found that due to low income levels more percentage of consumers were using non branded low quality goods as they are cheaper. Results indicated that variable income, education, consumer loyalty, taste, quality, and advertisement were positively related to the choice of branded tea while price was negative related to the choice of branded tea. Hosmer-Lemeshow Statistics shows that model is good fit.

**Keywords:** Consumer Preferences; Branded Goods; Logit Model; Hosmer-Lemeshow Test.

### Introduction and Review of Literature

Gross domestic product (GDP) is measured as sum of consumption, investment, and net exports. Consumption expenditure is major share of GDP of Pakistan. According to federal bureau of statistics of Pakistan, consumption expenditure accounts for 85% share of GDP in 2010-11 and share of private consumption is double as compare to government expenditures. Pakistan economy mainly driven by the consumption. Current research work is about the private consumption and consumer choice behaviour.

In this research work fast moving consumer goods (FMCG), sector is selected for analysis of consumer choice behaviour. FMCG are those goods that are generally replaced or used up over a short period of time, not more than a year. From the consumer view point FMCG are frequently purchased goods with low involvement and low price. Low involvement goods are usually low priced and have close substitutes. These goods are purchased repeatedly with a little thought process and minimum effort of collecting information. (Michael ET al.1997) .Examples of such goods are biscuits, shampoos, soap, detergents, tea etc. It is a very long list, but in present research work only tea is considered, it is low involvement good, though for some consumers it may be of high involvement. It is selected to avoid the impact of risk factor which is involved in the purchase or choice of durable goods due to their high price and long period of use, as electronics or automobiles.

To narrow down the topic of the research and to be more concise question to be explored is that consumer prefers branded tea or non branded tea. Concept of brand is comprehensive; it may be a name, color, symbol or mark to differentiate the good or product of a company or seller from others. From consumer view point a brand is as consumer perceive or recognize it. It is called the brand image. When consumer is buying a brand, he is not only buying that good but also image associated with it and also paying for it. That image may be about quality, taste or just trust. When a consumer is choosing a brand or no brand when purchasing i.e. tea, factor influencing his decision will be income, price, quality, information, availability, education, etc. During the process of decision making consumer wants the best use of his time and money spent but consumer don't have time and money to taste or use each and every type of available tea, while brands promise to provide the best. So it's more likely that a consumer may choose some branded tea to save time while also considering other factors such as price and his own income.

Tea is the most favourite beverage of Pakistan. It is cheap and refreshing; it is beverage of the poor and of the rich. With current high food inflation in country, tea is the cheapest drink available to the huge majority of poor population. Tea consumption in Pakistan is increasing on monthly basis and so the tea imports. Percentage increase in tea imports in 2010-11 as compared to 2009-10 was 27%,(FBS Pakistan 2010-2011).Pakistan is the third largest non tea producing tea importer in the world and in tea consumption come to fifth in world. Pakistan Per capita tea consumption is highest in south Asia according to Business Recorder 2011. There is little tea production in Pakistan, but to reduce import bill there is need for incentive on commercial basis for research and development to increase tea production locally.

Two types of tea are available and consumed in Pakistan, branded tea which is organized segment of market and depends on imported tea, non-branded or open tea which is smuggled from different countries. This loose or open tea is cheap so it has the largest portion of market. In the organized tea market largest player is Unilever (MNC).In both cases economic advantage of high tea consumption are not reaped by local producers. Tapal is largest contributor among the local companies but still there is a large potential for local industry to reap the benefits of high demand of tea.

Consumer choice making or buying process has five stages, need detection, information collection, and

evaluation of substitutes, purchase and subsequent to purchase assessment. Consumer passes through all stages during every purchase. In case of low involvement products consumer may skip some stages. usually consumer has limited information about the quality of competing brands, so consumer maximize only expected utility, and a consumer will search for information about the quality till the limit that marginal expected expenditure of exploration becomes larger than its marginal anticipated benefits. Recommendations of others are used more for purchases of experience goods than searching information by consumers themselves. (Nelson, 1970)

For the current case study considering the determinants of consumer behaviour as consumer income, education, loyalty, gender, price, quality, advertisement and residence rural or urban, are investigated as determinant of consumer choice. These determinants are explored by many earlier researchers, as Ward and Ferrara (2005) found that brand selection is affected by shop location, household characteristics, time, market size, relative prices and income and employment.

Income of consumer play significant role in consumer choice. In economics income is considered as constrained on consumer choice. Even if the consumer knows that the chosen good is of low quality or is inferior, he is bounded to buy it if he doesn't have enough income. Under the low income level consumer purpose is to minimize the expenditure so consumers with low income are more likely to choose inferior goods.

Positive association between education level of consumer and choice of high quality branded food cereal is revealed by Golub and Binkley (2005). Education of consumer is also taken as determinant of branded tea choice in the current study.

In the case of experience goods consumer prefer to buy familiar brands. Characteristics or quality of experience goods can not be judge without consumption, so previous purchase and use experience is important in determining the brand choice of such products.

(Monroe, 1976). Brand loyalty or choosing the same brand over time is major characteristic to be considered when exploring the consumer behaviour. Some researchers found it as most important determinant. (Tellis, 1988)

Differences between rural and urban life styles are prominent in Pakistan, so is the consumer behaviour. Residence of consumer is rural or urban is also investigated as the determinant of consumer choice behaviour in the current research work. Sun and Wu (2004) explored the difference between the rural and urban consumer behaviour in China. Urban consumers were found to be more conscious about brand and product itself.

Product attributes are also considered as important determinant of consumer choice. Product attributes mean any characteristic of the product.

Quality of any product play important role in consumer decision making. There are two concepts of quality, subjective quality and objective quality. Objective quality is related to product, its processing and its quality control measure, while subjective quality is perception of consumer about the quality of the product. Subjective quality or consumer perception of quality is influenced by objective quality and other factors. (Grunert, 2005). In the current study concept of subjective quality is discussed. Quality as determinant of choice is converse by many researchers. Consumer perception of quality as choice determinant is considered as most important variable by Henseleit et al. (2007).

In case of branded goods advertisement is also very important in determining the consumer choice. In case of low involvement goods consumer do not spend much time and effort in collecting information about the product, so consciously or unconsciously they rely on information provided by advertisement and on random information provided by reference group, friends, relatives or shopkeepers Anand and Krishna (2008) found that that preference for fast moving consumer goods brands in rural India were determined by good quality, value of money and by the recommendations of social group or friends.

Consumer perception about the quality is also prone to advertisement. Erdem et al. (2008) suggested that advertisement has positive impact on perceived quality by consumer and it found to increase the consumer willingness to pay for brands

Price of any product is key element in consumer decision making or choice of a product, though it is not the sole factor, but whenever the price of a product increases its demand decreases. Price of the substitutes also plays an important role in choice. If loose and branded teas are considered as substitutes, low price of loose tea should have a negative impact on demand of branded tea. Role of price in consumer decision making is explored by many researchers. Price shows its effect not in a simple or straight forward way on consumer choice. According to Guadagni and Little (1983), low price plays significant role in consumer decision making but consumer who are loyal to some brand are less price sensitive. Conventional economic role of price, suggest higher price of any good imply low demand and lower price imply high demand.

According to Golub and Binkley (2005), product attributes affects consumer buying decision of nutritious foods. Some consumer doesn't trust on quality of private labels so they buy branded food. Including all factors which can influence consumer behaviour and choice, the price effect was found to be strongest on the choice. Hastings and Shapiro (2011) explored the impact of price shocks on consumer behaviour and found that price changes were more important in determining consumer demand than changes in income of the consumer.

The difference between the price of branded and loose, tea and detergent is more than double. Consumers with low income are bounded to buy the loose tea and detergent in spite of the low quality of these goods, but consumer with enough income and awareness prefer branded goods. To know the particular role of price, it is also considered in present study as determinant of consumer choice.

There is an extensive list of factors which can influence the consumer choice and can affect the demand of a product. Important factors are investigated in the light of economic theory of demand and consumer behaviour with the help of econometric techniques, also considering the marketing aspect of the topic.

### Objectives of the Study

- To investigate the determinants of consumer preferences for branded goods
- To explore that Demand for brand is price sensitive or not
- To know that non branded goods are inferior goods or not (According to economic definition of inferior goods)
- To understand the implication of these findings

## DATA AND METHODOLOGY

### Data and Sampling Design

Current research work is based on cross sectional primary data; data was collected in eight consecutive weeks, from a household survey from two cities named Mandi bahauddin and from Faisalabad, and two near by villages in Punjab Pakistan. Two stage Cluster sampling method is used to collect the data. After selecting Faisalabad from large cities of Punjab and Mandi bhauddin from small cities of Punjab and two corresponding villages randomly as primary sampling units or clusters, secondary units were drawn from these clusters as it was not possible to consider each and every city and consumer .From above mentioned cities, 450 questionnaires were got filled, 225 for tea and 225 for detergent. 181 questionnaire for tea and 173 for detergents were properly filled. Questions were included about the consumer characteristics, product attributes and about the consumer perception of the product. Questionnaire was in both English and Urdu languages. The format of questionnaire is given in the appendix.

### Logit Model

Logit model has two important features which make it better to LPM, first is that as the value of independent variable (which has coefficient with positive sign) increases, probability that dependent variable is 1 increases but in no way lie out side the array 0 to 1. Second is that relationship between probability and independent variable is non linear. Mean probability is one which come down to zero at slower and slower rates as independent variable gets small, and approaches to one at slower and slower rate as independent variable happen to very large. Vasisht (2007), Stephenson (2008). In logit model probability is non linear function of explanatory variable and it is based on cumulative logistic function,

$$f(z) = \frac{e^z}{e^z + 1} = \frac{1}{1 + e^{-z}} = P_{tb}$$

It is called logistic distribution function, and it is the probability choosing branded tea by consumer in this study, where z is,

$$z = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \dots + \beta_kx_k,$$

Range of z is from  $-\infty$  to  $+\infty$ , when it ranges from negative infinity to positive infinity, probability ranges from zero to one. And it is also clear that probability is related non linearly to Z, so end result is that probability is non-linear function of independent variables and of estimated coefficients. Therefore OLS can not be used for the above functional form. Now to make the probability linear function of Z, procedure is that,

If  $P_{tb}$  is probability of buying branded tea

$$P_{tb} = \frac{1}{1 + e^{-Z}}$$

And probability of not buying branded tea  $(1 - P_{tb})$  is given by,

$$1 - P_{tb} = \frac{1}{1 + e^Z}$$

And

$$\frac{P_{tb}}{1 - P_{tb}} = \frac{1 - e^{-z}}{1 + e^{-z}} = e^z$$

Where  $\frac{P_{tb}}{1 - P_{tb}}$  is called odds ratio, in favour of buying branded tea, probability that a consumer will buy branded tea to the probability that consumer will not buy branded tea. Now by taking natural log at both sides

$$\text{Log} = \ln \left( \frac{P_{tb}}{1 - P_{tb}} \right) = Z$$

Where

$$Z = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6$$

or

$$\text{logit}(p_i) = \ln \left( \frac{p_i}{1 - p_i} \right) = \beta_0 + \beta_1 x_{1,i} + \dots + \beta_k x_{k,i}$$

Log of odds ratio is linear function of independent variable and of coefficients.

Gujarati (2004).

Efficiency of Logit Model and Sample Size: Efficiency of logit model depends on sample size and no of independent variables used in study. It is recommended that for each independent variable there should be at least 10 outcome of interest of dependent variable. If branded tea choice is event of interest and 50 of 100 consumer buy branded tea, the maximum no of explanatory variable can be used, to maintain model efficiency are  $50/10 = 5$  Nemes et al. (2009).

Functional Forms: To find the impact of different variables on consumer choice of branded tea logit model is estimated, once with consumer demographics as explanatory variables and again with product attributes as determinant of consumer behaviour.

Tea Choice and Consumer Demographic Variables: Probability of branded Tea choice = f (income, residence rural/urban, consumer loyalty, and cup of tea per day, gender, education)

Functional form:

$$\text{Tea branded} = \frac{P_{tb}}{1 - P_{tb}} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6$$

Where,  $X_1$  = income of consumer per month in RS,  $X_2$  = Years of education of consumer,  $X_3$  = Consumer loyalty (No of years since consumer is using same tea),  $X_4$  = Cups of tea per day taken by consumer,  $X_5$  = Gender of consumer (Dummy, assuming 1 for male and 0 for female),  $X_6$  = Residence (dummy, assuming 1 for urban and 0 for rural)

Tea Choices and Product Attribute: Probability of choosing branded Tea = f (price, colour, smell, quality, taste, advertisement)

Functional form

$$\text{Tea branded} = \frac{P_{tb}}{1 - P_{tb}} = \beta_0 + \beta_p p + \beta_c c + \beta_s s + \beta_q q + \beta_t t + \beta_a a$$

Where P is for price, C is for colour, s is for scent, q for quality, t for taste and a for advertisement.

### Hosmer-Lemeshow Goodness-of-Fit Test for Logit model:

It is a statistical test to confirm the goodness of fit of logit model or logistic regression.

Statistical form of Hosmer-Lemeshow test is as,

$$H = \sum_{g=1}^n \frac{(O_g - E_g)^2}{N_g \pi_g (1 - \pi_g)}$$

Where  $O_g$ ,  $E_g$ ,  $N_g$ , and  $\pi_g$  represent the actual events, estimated events, no of observations, predicted risk for the  $g^{\text{th}}$  risk quintiles group, and n is the number of groups. It follows chi – squared distribution with n-2, df. Null hypothesis of test is that model is a fitted properly to data (There is not much divergence between the fitted and

actual values), while alternative hypothesis is that model is not a good fit (There is much divergence between the fitted and actual values). If the probability of resulted chi squared distribution is more than chosen significant level, its mean result value is not significant and model is a good fit to data and there is not much difference between actual and fitted values. ( Hosmer and Lemeshow(2000)

### Results and Discussion

Descriptive Analysis: About 36 percent consumers are using open tea while 64 percent are using different types of branded tea. Open tea has largest market share as compare to different brands .it is about 36 percent , while next is Lipton and supreme with 32 and 21 percent share respectively. If we see the collective share of Lipton and supreme as they both belongs to Unilever it is about 52 percent while share of local brands is only 9 percent.

**Table 1: Distribution of Consumers according to their Education and Tea Choice**

		Education of consumer						
Consumer Choice of tea		Illiterate	Primary	Middle	Secon-dary	Inter-mediate	Graduate	Post graduate
Open Tea	% of consumers	15.4%	10.8%	10.8%	36.9%	15.4%	6.2%	4.6%
Branded Tea	% of consumers	1.7%	6.0%	7.8%	22.4%	18.1%	31.9%	12.1%

**Table 2: Distribution of Consumers according to their Income and Tea Choice.**

		Income range			
		Up to 10000	11000 to 20000	21000 to 40000	41000 and above
Open Tea	% of consumers	41.5%	36.9%	15.4%	6.2%
Branded Tea	% of consumers	12.9%	28.4%	37.9%	20.7%

**Table 3: Distribution of Consumers according to the number of Years Consumer is using a Particular Tea**

		Number of years since consumer is using a particular brand				Total
Tea		5.00	10.00	15.00	20.00	
Open Tea	% of consumer	64.6%	12.3%	13.8%	9.2%	100.0%
Branded Tea	% of consumer	43.1%	21.6%	11.2%	24.1%	100.0%

**Table 4: Number of Cups per Day**

		Number of cups per day			Total
Tea		0 - 2	3 - 4	5 - 6	
Loose Tea	% of consumer	56.9%	36.9%	6.2%	100.0%
Branded Tea	% of consumer	65.5%	28.4%	6.0%	100.0%

**Table 5: Distribution of Consumers according to their Residence and Tea Choice.**

		Residence	
Tea		Rural	Urban
Loose Tea	% of consumers	55.4%	44.6%
Branded Tea	% of consumers	32.8%	67.2%

**Table 6: Distribution of Consumers according to their Tea Choice and Price Sensitivity**

		Price	
Tea		price is not considered	low price is important
Open tea	% of consumers	16.9%	83.1%
Branded tea	% of consumers	95.7%	4.3%

**Table 7: Percentage and frequency of Consumers in each Tea Type, according to their Statement that they Induced by Advertisement or other Factors to Use Particular Tea**

Tea		Other factors	Advertisement	Total
Loose Tea	% of consumers	98.5%	1.5%	100.0%
Branded Tea	% of consumers	35.3%	64.7%	100.0%

**Table 8: Distribution of Consumers according to their Consideration of Quality of Tea and Their Tea Choice**

Tea	Quality			Total
		Quality is not important	Quality is important	
Open Tea	% of consumer	33.8%	66.2%	100.0%
Branded Tea	% of consumer	1.7%	98.3%	100.0%

**Table 9: Distribution of Consumers according to their Consideration of Smell of Tea and their Tea Choice**

Tea		Scent		Total
		Tea smell is not important	Tea smell is important	
Open Tea	% of consumer	35.4%	64.6%	100.0%
Branded Tea	% of consumer	13.8%	86.2%	100.0%

**Table 10: Distribution of Consumers according to their Consideration of Taste of Tea and Their Tea Choice**

Tea	Taste			Total
		Taste is not important	Taste is important	
	% of consumer	21.5%	78.5%	
Loose Tea	% of consumer	21.5%	78.5%	100.0%
Branded Tea	% of consumer	1.7%	98.3%	100.0%

**Consumer Demographics as Tea Choice Determinants**

**Table 11: Logit Model on Consumer Demographics as Tea Choice Determinants**

Independent Variables	Coefficient	Std. Error	z-Statistic	Prob.
Intercept	-11.00511***	2.871454	-3.832590	0.0001
Income(Rupees)	1.036068***	0.314989	3.289218	0.0010
Education(years)	0.100148*	0.057221	1.750182	0.0801
Using since(years)	0.090444***	0.030514	2.964024	0.0030
Consumer loyalty				
Cup of tea per day	-0.391978**	0.171380	-2.287188	0.0222
Gender(dummy)	0.538579	0.399326	1.348723	0.1774
Residence(dummy)	0.466968	0.405092	1.152745	0.2490

Dependent variable= assumed value of 1 ,when consumer use branded tea and value of 0 when consumer use open tea.

McFadden R – squared = 0.225970. \*\*\* Indicate that coefficients are significant at 1 percent level, \*\*Indicate that coefficients are significant at 5 percent level, \* Indicate that coefficients are significant at 10 percent level. Results indicate that income is positively and significantly related to the choice of branded tea. Sethuraman (2000) .As the consumer income increases probability of choosing branded tea increases this result is supported by the previous study that when the consumer income increases demand for branded beef increases, Martinez et al (2007), Fry and Longmire(1996).It can also be interpreted that, as the consumer income increases demand for open tea decreases. Results are supported by previous studies as according to Hailong and Jian(2007) low income consumer try to minimize expenditure as money is more important for low income consumer so the low income consumer will choose inferior good actively. While on the other hand as the consumer income increases demand for quality increases and willingness to pay for quality increases with the consumer income. Chatterjee and Raychaudhuri(2004). It is also concluded that according to the definition of inferior good, open tea is considered as inferior good by consumer. Demand for these Goods falls as income increases. Taylor and Weerapana(2007). Consumer education coefficient significant and has positive sign. It shows that demand for branded tea increases as consumer formal education increases. Impact of education is significant though coefficient has small value, less than one. Golub and Binkley (2005).

Results show that consumers who are using same tea for years are loyal to some brand as coefficient is positive and significant. It indicates that consumer who uses branded tea they are more likely to buy same brand every time. Tellis (1988), Guadagni and Little (1983), Monroe (1976). Number of cup of tea taken by consumer have significant coefficient with negative sign. Its mean that consumer who take more cup of tea per day use open tea. There is no previous study, but some statistic is available which support the result. Yearly tea consumption in Pakistan is between 180,000-190,000 tons and the fraction of smuggled tea is over 50 per cent whereas the rest arrives from the authorized channels.(Dawn news feb,9, 2011). Smuggled tea escapes all taxes and duties, and as a result can be sold at low price, as open tea (Tapal Tea Annual Report 2009). Predictor about the consumer rural or urban residence is not significant but has positive sign. It was assuming the value of 1 for urban residence while 0 for rural residence. Its positive sign shows that urban consumer choice is more inclined towards branded tea. Result is consistent with that of Sun and Wu (2004). Coefficient of gender is also insignificant. Its implication is that gender of consumer plays no role in branded or non branded tea choice. Result is consistent with of Gheal (2010). Result is also supported by Loudon (2001), “there are some demographic patterns to buying such as that razor blades are purchased mainly for men. However, except for specific products aimed directly at specific demographic groups, evidence indicates that demographic measures, outside of education, are not an accurate predictor of consumer behaviour”.

**Hosmer-Lemeshow Goodness-of-Fit Tests for Logit Model of Consumer Demographics:**

Null hypothesis: Ho= Model is a good fit (There is not much difference between the fitted and actual values), Alternative hypothesis:H1=model is not a good fit (There is much difference between the fitted and actual values)

**Table 12: Results of the Hosmer-Lemeshow Goodness-of-Fit Test, for the Logit Model of Consumer Demographics.**

H-L Statistic:	8.9636		Prob. Chi-Sq(8)	0.3454
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Probability of test result is more than alpha, 0.1, so null hypothesis can not be rejected. Its means that model is a good fit to data and there is not much difference between actual and fitted values. Hosmer and Lemeshow (2000)

Product attributes as Tea Choice Determinants

**Table 13: Product Attributes as Tea Choice Determinant in Punjab: A Household Analysis (Results of Logit Model)**

Independent Variables	Coefficient	Std. Error	z-Statistic	Prob.
Intercept	-3.986218***	1.032141	-3.862088	0.0001
Advertisement (Dummy)	2.379858***	0.550604	4.322270	0.0000
Quality(Dummy)	2.639647***	0.855072	3.087046	0.0020
Taste (Dummy)	1.489088**	0.624046	2.386181	0.0170
Smell(Dummy)	0.931532*	0.525669	1.772089	0.0764
Price	-1.178613***	0.415651	-2.835581	0.0046
Colour(Dummy)	-0.188379	0.422602	-0.445759	0.6558

Dependent variable= assumed value of 1 ,when consumer use branded tea and value of 0 when consumer use open tea.

McFadden R-squared = 0.334158, \*\*\* Indicate that coefficients are significant at 1 percent level, \*\*Indicate that coefficients are significant at 5 percent level, \* Indicate that coefficients are significant at 10 percent level, Results show that advertisement has positive, strong and significant role in branded tea choice. Results are consistent with that of, Erdem et al (2008), Everett and Mojduszka(2005), Mela et al (1997), Allenby and Lenk (1995).

As it is clear from descriptive analysis that unilever tea has highest tea market share, so are the advertisement expenditure of unilever in Pakistan. According to a survey report “Unilever remained at the top of the list of Advertisers, in terms of its % Value Share; 13.3% in Oct-09. (Special Annual Edition 2010: Advertising Expenditure in Pakistan. Produced by: Gallup Pakistan Jointly with Gilani Research Foundation). Quality is significantly and positively related to the branded tea choice. It is significant at 1 percent level.. The results of Chimboza and Mutandwa(2007), Anand and Krishna(2008),also indicate positive relationship between quality of product and brand choice. There are two concepts of food quality, subjective quality and objective quality. Objective quality is related to product, its processing and its quality control measure, while subjective quality is perception of consumer about the quality of the product. Subjective quality or consumer perception of quality is affected by objective quality and other factors. Grunert(2005).In the current study concept of subjective quality is considered. Bruns et al (2002). Result proves that taste of tea is positively and significantly related to the probability of branded tea choice. It shows that consumer prefer branded tea due to its good taste.

Result is supported by previous studies as Everett and Mojduszka (2005). Tea smell coefficient is also positive and significant. Consumer probability of preferring the branded tea is positively related to its good smell. Blom and Frijters (1990). Tea price is negatively related to the probability of choosing branded tea. Coefficient of price is negative and significant at 1 percent. Monroe (1976), Tellis(1988) . Fry and Longmire (1996), Mela et al (1997),Everett and Mojduszka (2005), Chimboza and Mutandwa(2007), Erdem et al (2008) Ching et al(2009) .As the price of branded tea is very high as compare to loose tea, so consumer who are price sensitive they prefer open or loose tea. .Smuggled tea escapes all duties and levies, and therefore can be sold cheaply, as loose tea. (Tapal Tea Annual Report 2009). Coefficient of tea colour is insignificant with negative sign. It was assumed to have negative relationship with choice of branded tea.

**Hosmer-Lemeshow Goodness-of-Fit Tests for Logit Model of Product Attributes:**

Null hypothesis: Ho= Model is a good fit (There is not much difference between the fitted and actual values)

Alternative hypothesis:H1=model is not a good fit (There is much difference between the fitted and actual values)

**Table 14: Results of the Hosmer-Lemeshow Goodness-of-Fit Test, for the Logit Model of Product Attributes**

H-L Statistics	12.6775	Prob. Chi-Sq(8)	0.1234
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Probability of test result is more than alpha, 0.1, so null hypothesis can not be rejected. Its means that model is a good fit to data and there is not much difference between actual and fitted values. Hosmer and Lemeshow (2000).

**Conclusions and Suggestions**

**Conclusions**

Income, price, advertisement, consumer perception of quality and product attributes are important determinants of consumer choice. Consumer demand for branded goods is price sensitive. Consumers with higher income don't buy non branded open goods, so consumer income and demand for these inferior goods is negatively related. Largest share of Pakistan tea market is captured by MNC (Unilever), and not far behind it, is loose or smuggled tea while share of local brands is at third number. Most important reason of loose tea choice is consumer low income and low price of open goods as compare to branded goods. Though consumers know that loose tea is of inferior quality and taste they are bounded to buy these inferior quality goods due to their low income. One of the most important determinants of branded tea choice is advertisement, quality, and taste. Unilever captured largest market share due to its heavy advertisement on TV media. Local brands have to compete to unilever and its heavy advertisement on one hand and loose tea and its low price on other hand. Pakistan economy is driven by consumption but benefits of the high consumption are not reaped by local investors.

**Policy Recommendations**

Govt. of Pakistan should decrease heavy taxes and import duty on tea imports to encourage local brands and to discourage smuggling. Import duty should also be decrease to reduce the price as tea is beverage of poor; it's not a luxury good. Local companies have to recognize that there are two markets , one is of low income consumer who are highly price sensitive, while other are higher income consumer which are highly quality conscious, so they should target the both markets accordingly. There should R&D on commercial basis for tea cultivation in Pakistan. For local companies there is still a large market, especially in rural area to exploit they should focus on it. MNCs are taking the share of market through advertising; local companies should counter them, as they know more about the local culture and its requirements. Consumer and consumption is ultimate target of production and investment, consequently there is need of research on consumer choice behaviour with reference to Pakistan.

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