



## The Impulsive Buying Behavior of the Farmers toward Cattle Purchase

<sup>1</sup>Iqbal Javed, <sup>1</sup>Waseem Akram and <sup>2</sup>Haroon Javaid

<sup>1</sup>Department of Economics, The University of Lahore, Sargodha Campus, Sargodha, Pakistan

<sup>2</sup>Department of Business Administration, University of Sargodha, Sargodha, Pakistan

---

**Abstract:** There are many other factors that affect the farmers' purchasing of cattle but an important one is the impulsive behavior of farmers. This study is conducted to explore the impulsive buying behavior of farmers to identify the factors of the impulsive buying of farmers toward animal purchase. The study area of this research is Sargodha division and a sample of 100 respondents has been selected purposively among the farmers involved in livestock. The data is collected through a questionnaire that was pretested before the final survey. The data on variables, like age, education, income, land holding, marital status, household members and the impulsive buying behavior is collected through a detailed survey. The logistic regression model has been estimated to identify the determinants of impulsive buying behavior of farmers. The results revealed that assets and land holding have a positive impact on the impulsive buying behavior of the farmers toward cattle purchase. Family income, marital status and family size have a negative impact on impulsive behavior of farmers for purchasing cattle. It is further needed to conduct a study on risk measurement by taking impulsive decisions among small farmers' community related to the purchase which directly influences future prospects of their farms.

**Key words:** Impulsive buying behavior, Cattle purchase, Farmers, Logistic regression model.

---

### INTRODUCTION

Impulsive buying behavior is the main characteristic of any consumer or buyer which directly influences his buying decision, however, it does not mean that the buying is rational. Impulsive buying is one of the most important topics of buying decisions identified by researchers and marketers all around the world. This phenomenon has been widely studied by researchers in developed countries but a little has been done in developing countries (Awan *et al.*, 2014).

About 90% buyers make occasional buying based on impulse behavior in United States (Welles, 1986), and about 80% of all and almost 80% of all the buying of certain product categories are made based on impulsive behavior in United States (Abrahams, 1997; Smith, 1996). Developing countries mostly depend on agriculture and livestock has a major role in agriculture everywhere. In Pakistan, about 20% of GDP comes from agriculture sector and livestock alone contributes 11%. Livestock is also a source of employment especially in rural areas of Pakistan. It is also responsible for domestic milk demand and income generation for small holders, which is playing its role in poverty alleviation by involving 75% rural population of Punjab. Small ruminants and other

animal farms are a part of rural life and about 88% of livestock owners possess 6 or less animals (Pasha, 2015).

There is much potential in livestock in Pakistan and, now a days, people are entering in this sector because of high margin of earning. Meat and milk demand is increasing day by day and a large number of farmers are investing in this sector. Good breeds are entering into Pakistan, especially in cows, whose milking capacity is 3 to 4 times higher than the average domestic cows. Therefore, the demand of good quality cattle is increasing every day. Using the artificial insemination techniques, good cattle of cross breeds are also available with high milking capacity. Mostly the farmers attracted toward this sector are uneducated. Every farmer wants to get a cattle of high quality breeds in his farms to fulfill the demand of milk in his domestic areas. There are many other factors of farmers' purchasing of the cattle but an important one is the impulsive behavior. In order to identify the factors responsible for impulsive buying of farmers toward animal purchase, this is the first study on impulsive buying behavior of farmers for the purchase of livestock animals.

Formerly in marketing, the literature about impulse buying behavior was defined as simply the

---

**Corresponding Author:** Iqbal Javed, Department of Economics, The University of Lahore, Sargodha Campus, Sargodha, Pakistan  
E-mail: iqbaljaved\_uaf@hotmail.com

purchase without any planning (Kollat and Willett, 1967). There were many factors, which were associated with consumer's impulse buying in literature. Different associated factors with impulse behavior, such as, the consumer's mood or emotional state (Weinberg and Gottwald, 1982; Rook, 1987; Rook and Gardner, 1993), trait buying impulsiveness (Rook and Fisher, 1995; Weun *et al.*, 1998) and other demographic factors (Bellenger *et al.*, 1978; Wood, 1998; Mai *et al.*, 2003; Ghani *et al.*, 2011), have been used to examine consumers' corresponding impulse buying. Impulse buying phenomenon is further described as over excited, emotional and relatively rapid decision making in favor of immediate possession (Rook, 1987; Rook and Hoch, 1985). Awan *et al.* (2014) contended that impulse buying behavior is a natural phenomenon and it takes place often when income of a consumer is high. Similarly, Awan and Zahra (2014) reported that high income stimulated impulse that led to purchase and innovative behavior in happening the impulse buying because it motivated the buyer to buy an innovative item. Awan and Rehman (2015) also endorsed an important role of innovations in impulse purchase. Farmers' behavior refers to the evaluation of the factors affecting the decision making process of a farmer's purchasing or not purchasing an animal regarding 'when, how, why and where'. It aims at analyzing the behavior regarding decision making of a farmer.

## METHODOLOGY

**Sources of data:** A questionnaire consisting of different questions regarding farmer's impulsive behavior for purchasing cattle, his income, family size, assets, landholding, etc., was prepared. Primary data, collected through a detailed survey from Sargodha division, was designed and pretested. A sample of 100 respondents has been selected purposively for the study. The data has been collected from the farmers involved in livestock.

**Model and estimation technique:** The focus of the study is to identify the factors causing farmer's impulsive behavior in cattle purchase. For assessing impulsive buying behavior of farmers a question regarding the purchase of cattle was asked, i.e., whether the purchase of cattle was planned and premeditated or it was unplanned and sudden and their responses were used as proxy of impulsive buying behavior of farmers. Impulsive buying was coded as 1, if a farmer possessed impulsive behavior and zero otherwise. The respondents were asked questions related to education of farmer, age, family size, assets, land holdings, income and marital status, etc., were also asked.

By following the study of Gujarati and Porter (2009), the study utilized logistic regression model to identify the factors responsible for farmer's impulsive behavior in cattle purchase. The following logistic regression model has been estimated for the purpose by taking impulsive buying as a dependent

variable. The conditional expectation given explanatory variable can be written as:

### Model 1:

$$P(\text{Ibuy} = 1 \mid \text{edu, age, fmem, assets, land, Y, marry}) \\ = F(\beta_0 + \beta_1 \text{edu} + \beta_2 \text{age} + \beta_3 \text{fmem} + \beta_4 \text{assets} + \beta_5 \text{land} + \beta_6 Y + \beta_7 \text{marry})$$

### Variable description:

IBuy=	Impulsive buying behavior of farmers towards cattle purchase (equal to 1 if behavior is impulsive and zero otherwise)
Edu=	education of the farmer
Age=	age of the farmer
Fmem=	family members of the farmer's household
Assets=	assets of the farmer
Land=	landholding of the farmer
Y=	income of the farmer
Marry=	marital status of the farmers involved in livestock (equal to 1 if farmer is married and zero otherwise)

## RESULTS AND DISCUSSION

**Profile of the farmers:** Out of hundred, fifty-six farmers purchased cattle based on their impulsive behavior. Table 1 shows that the impulsive buying is high among the farmers who are less qualified and the ration of impulsive buying is high in singles as compared to married farmers, while it is less in old farmers. Further the impulsive buying is seen less in farmers with large family size and the farmers with high income, high land holding and high assets have more impulsive behavior toward cattle purchase as compared to low income, low assets and low land holding farmers.

The mean values of the variables predicted to influence the farmer's decision of impulsive buying of cattle were computed. Table 2 shows the summary statistics of all the variables (education, age, marital status, family size, income, assets, and land holding) used in the logistic model including mean, median, standard deviation and variance.

For the detection of multicollinearity Variance Inflation Factor (VIF) and tolerance level for each variable used in the logistic model was calculated. VIF values less than 10 indicate that there is no multicollinearity among the independent variables as shown in Table 3.

The impulsive buying behavior among the farmers for purchasing the cattle was analyzed through logistic regression model by taking the independent variables of education, age, family income, landholding, marital status, household members and the assets. The dependent variable of impulsive buying is a binary variable that equals 1 if buying behavior is impulsive, and zero otherwise. There existed a difference in attitudes of impulsive buying when a person purchased something from a shopping store or a cattle from a *mandi*. Current study

adds to the literature the buying behavior in other aspects when a farmer buys a cattle besides analyzing

the factors that impact a farmer's decision for purchasing a cattle.

**Table 1: Farmers' characteristics for the impulsive buying behavior.**

Factors of impulsive behavior		No impulsive buying	Impulsive buying	Total
Education	Low (less than 10 years of schooling education)	18	20	38
	Middle	5	19	24
	High	21	17	38
Marital status	Single	7	24	31
	Married	37	32	69
Age	Less than 20	2	11	13
	20- 40	27	31	58
	More than 40	15	14	29
Household members	Small family	24	29	53
	Middle family	2	14	16
	Large family	18	13	31
Family income	Low (less than 50,000)	18	21	39
	Middle (50,000 to 120,000)	18	17	35
	High (more than 120,000)	8	18	26
Assets	Small	36	23	59
	Medium	8	17	25
	High	0	16	16
Land holding	Small	38	29	67
	Medium	1	15	16
	Large	5	12	17
<b>Total</b>		44	56	100

Source: Author's calculations.

**Table 2: Summary statistics of the variables used in the logistic regression.**

Variable	N	Mean	Median	Std. Deviation	Variance
Impulsive buying	100	0.56	1	0.49889	0.249
Education	100	11.69	12	5.34978	28.62
Age	100	33.85	33	12.42	154.432
Marital status	100	0.69	1	0.46482	0.216
Household member	100	7.44	6	4.69541	22.047
Income	100	95.31	70	83.7	7018
Assets	100	125.37	50	248.04	61520
Land holding	100	15.74	7	28.97	839.669

Source: Author's calculations.

**Table 3: Multicollinearity among the independent variables used in the logistic model.**

Variables	Tolerance	VIF
Education	.697	1.434
Age	.548	1.825
House hold member	.674	1.483
Assets	.250	4.001
Land holding	.297	3.371
Family income	.561	1.781
Marital status	.540	1.853

Source: Author's calculations.

The results, presented in Table 4, showed that age does not have any significant impact on impulsive buying behavior of the farmer towards cattle purchase. Assets positively affect the impulsive behavior and cause to increase the probability of decisions that base on impulsive behavior. Education

also does not have significant relationship with impulsive buying behavior. An interesting result is found regarding the impact of income of the farmers on impulsive behavior. In general, income always has positive impact on impulsive buying behavior (Abratt and Goodey, 1990; Dittmar *et al.*, 1995; Wood, 1998;

Gutierrez, 2004; Wells *et al.*, 2007; Butkeviciene *et al.*, 2008; Tirmizi *et al.*, 2009; Ghani *et al.*, 2011; Yang *et al.*, 2011; Rana and Tirthani, 2012) but in case of farmers for cattle purchase, it is found opposite. During analysis, family income was found to have a significant negative effect on impulsive behavior of farmers for purchasing cattle and these results are consistent with those of Ekeng *et al.* (2012). The low-income farmers make quicker and

unplanned decisions as compared to the farmers with high income.

Land holding has a positive and significant impact on impulsive buying behavior of farmers as it directly affects the feeding of animals, hence, if the farmer has enough land holding to feed the cattle, it makes him quicker in decision making based on impulsive nature.

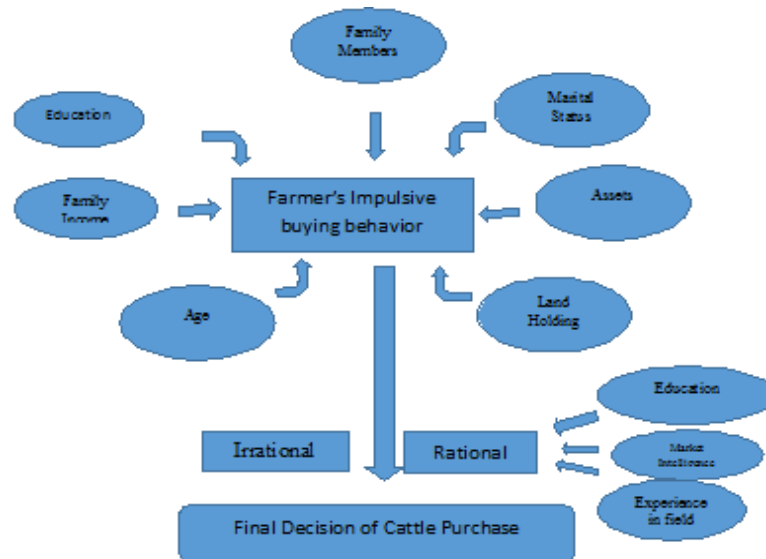
**Table 4: Logit model for impulsive buying behavior of farmers.**

Variables	Coefficient	Std. error	Z-Statistic	Prob.
Constant	1.714171	0.727124	2.357467	0.0184*
Age	-0.009753	0.015480	-0.630073	0.5286 <sup>NS</sup>
Assets	0.003387	0.001633	2.073513	0.0381*
Education	-0.045504	0.032196	-1.413350	0.1576 <sup>NS</sup>
Income	-0.004302	0.002451	-1.755196	0.0492*
Land	0.036385	0.016735	2.174235	0.0297*
Marital status	-0.991812	0.415479	-2.387155	0.0170*
Family size	-0.066188	0.036372	-1.819750	0.0488*
McFadden R-squared		0.251444		
S.E. of regression		0.428288		
Akaike info criterion		1.197420		
Schwarz criterion		1.405834		
Log likelihood		-51.87100		
LR statistic		34.84743		
Prob (LR statistic)		0.000012		

\* = Significant at 5% level of confidence; NS= Non-significant;  
 Source: Author's calculations

The probability of making impulsive decisions is less in married farmers as compared to single ones. The impact of family size has a negative but significant impact on impulsive buying. It is assumed,

generally, that both marital status and family size have positive impact on impulsive buying behaviors of individuals. The factors affecting the impulsive buying behavior among farmers are shown in Fig. 1.



**Fig. 1: Model for impulsive buying behavior of a farmer for cattle purchase.**

Source: Author's calculations

**CONCLUSION**

Current study is the pioneer study on the impulsive nature of farmers for purchasing of farm related items especially cattle, which, in future, may influence their farm income. The concept of impulsive selling can be applied to the farmers' community

because different stakeholders of farm related products are completely unaware of the impulsive behavior of farmers. Assets and land holdings have a positive impact on the impulsive buying behavior and cause to increase the chances of impulse decision making by the farmers towards cattle purchase. The

other determinants (i.e., age, income, marital status, family size) cause to reduce the probability of impulsive buying among farmers. The farmers can be attracted to provide them impulse based on their future wellbeing. These results show how the farmers can be inclined impulsively. Government should ensure the impulsive buying nature of farmers a reliable source of future planning as the impulsive decisions are made irrationally in most cases and most farmers in Pakistan are less educated and they make irrational decisions. Government should provide training and education to the farmers, especially for livestock, so that, the negative impact of their impulsive decision should be minimized.

Further studies are important on risk measurement by taking impulsive decisions among small farmers community related to the purchase that directly influence the future prospects of their farms.

### REFERENCES

- Abrahams, B., 1997. It's all in the mind. *Marketing*, (27): 31-33.
- Abratt, R. and S.D. Goodey, 1990. Unplanned Buying and in-store stimuli in supermarkets. *Manage. Decis. Econ.*, 11(2): 111-121.
- Awan, A.G. and A. Rehman, 2015. Impact of customer satisfaction on brand loyalty: An empirical analysis of home appliances in Pakistan. *Br. J. Mark. Stud.*, 2(8): 18-32.
- Awan, A.G. and S.Z. Zahra, 2014. Impact of innovations on consumers' behavior. *Eur. J. Bus. Innovation Res.*, 2(6): 93-108.
- Awan, A.G., J. Hassan and P. Shahid, 2014. Relationship between employees motivation and customer satisfaction: A case study of selected banks in Pakistan. *Global J. Human Resour. Manage.*, 2(3): 1-12.
- Bellenger, D.N., D.H. Robertson and E.C. Hirschman, 1978. Impulse buying varies by product. *J. Advertis. Res.*, 18(1): 15-18.
- Butkeviciene, V., J. Stravinskiene and A. Rutelione, 2008. Impact of consumer package communication on consumer decision making process. *Inz. Ekon. Eng. Econ.*, (1): 57-65.
- Dittmar, H., J. Beattie and S. Friese, 1995. Gender identity and material symbols: Objects and decision considerations in impulse purchases. *J. Econ. Psychol.*, 16(3): 491-511.
- Ekeng, A.B., F.L. Lifu and F.A. Asinya, 2012. Effect of demographic characteristics on consumer impulse buying among consumers of Calabar Municipality, Cross River State. *Acad. Res. Int.*, 3(2): 568-574.
- Ghani, U., M. Imran and F.A. Jan, 2011. The impact of demographic characteristics on impulse buying behavior of urban consumers in Peshawar. *Int. J. Acad. Res.*, 3(5): 286-289.
- Gutierrez, B.P.B., 2004. Determinants of planned and impulse buying: The case of the Philippines. *Asia Pacific Manage. Rev.*, 9(6): 1061-1078.
- Gujarati, D.N. and D.C. Porter, 2009. *Basic econometric*, 5th ed. The McGraw-Hill Series Economics, 554-557
- Kollat, D.T. and R.P. Willett, 1967. Customer impulse purchasing behavior. *J. Mark. Res.*, (6): 21-31.
- Mai, N.T.T., K. Jung, G. Lantz and S.G. Loeb, 2003. An exploratory investigation into impulse buying behavior in a transitional economy: A study of urban consumers in Vietnam. *J. Int. Mark.*, 11(2): 13-35.
- Pasha, A.G., 2015. Punjab growth-Strategy 2018. Punjab government, Lahore, Pakistan, p: 81-82
- Rana, S. and J. Tirthani, 2012. Effect of education, income and gender on impulsive buying among Indian consumer an empirical study of readymade garment customers. *Indian J. Appl. Res.*, 1(12): 145-146.
- Rook, D. and R.J. Fisher, 1995. Normative influences on impulsive buying behavior. *J. Consum. Res.*, 22(3): 305-313.
- Rook, D.W. and S.J. Hoch, 1985. Consuming impulses. *Adv. Consum. Res.*, 7(1):23-27.
- Rook, D.W., 1987. The buying impulse. *J. Consum. Res.*, 14(2):189-199
- Rook, D.W. and M.P. Gardner, 1993. In the mood: impulse buying's affective antecedents. *Res. Consum. Behav.*, 6: 1-26.
- Smith, D., 1996. The Joy of Candy. *National Petroleum News Supplement*, (February), S 2.
- Tirmizi, M.A., U. Kashif and S.M. Iqbal, 2009. An empirical study of consumer impulse buying behavior in local markets. *Eur. J. Sci. Res.*, 28(4): 522-532.
- Weinberg, P. and W. Gottwald, 1982. Impulsive consumer buying as a result of emotion. *J. Bus. Res.*, 10(1): 43-57
- Welles, G., 1986. We are in the habit of impulse buying. *USA Today*, May 21(1986).
- Wells, L.E., H. Farley and G.A. Armstrong, 2007. The importance of packaging design for own-label food brands. *Int. J. Retail Distribut. Manage.*, 35(9): 677-690.
- Weun, S.J., A. Michael and S.E. Beatty, 1998. The development and validation of the impulse buying tendency scale. *Psychol. Rep.*, 82: 1123-1133.
- Wood, M., 1998. Socioeconomic status, delay of gratification and impulse buying. *J. Econ. Psychol.*, 19(3): 295-320.
- Yang, D.J., K.C. Huang and X. Feng, 2011. A study of the factors that affect the impulsive cosmetics buying of female consumers in Kaohsiung. *Int. J. Bus. Soc. Sci.*, 2(24): 275-282.