MPRA

The impact of packet size on inventory turnover of fmcg products in Pakistan [wholesaler retailer perspective]

Alvi, Mohsin

3 June 2012

THE IMPACT OF PACKET SIZE ON FMCG PRODUCTS OF PAKISTAN.

(Wholesaler & Retailer perspective)

MOHSIN HASSAN ALVI

mohsinhassanalvi@hotmail.com

Abstract: A question arise, is there any impact of different packet sizes on consumer buying pattern. The study is focus on retailers and wholesaler perspective in Pakistan context. There are 75 respondents were include in research and handed over them a questionnaire having questions regarding with selling pattern of four different packet sizes (i.e. sachet, quarter pack, half pack and full pack) that formulated data of 300 observations (75*4) and asked them about to buy stock on monthly basis. Data converted from monthly basis to yearly basis in order to compose it into inventory turnover. Simple linier regression (OLS-Model) has been used in analyzing data. It was assumed that there is negative impact of packet size on inventory turnover. Several test has been applied on data include (Test of Sufficiency, Test for Significance and Test for Specification). Result matched with hypothesis and negative impact has been shown that represent that with reducing packet size, inventory turnover increases. Beside this it also shows that mostly people in recent context prefer to buy more sachet or quarter pack as compare to half pack and full pack.

Key words: *Packet size, Inventory turnover, fmcg products, Simple liner regression*

1. Introduction

With the rising prices of food and commodity products, Pakistan's huge middle class market has been forced to buy more of low-unit packs of soaps and detergents, shampoos, biscuits and snack foods more than ever. Companies such as Unilever, P & G, Britannia, Dabur and Nestle are banking on these 'magic price points' to push sales volumes.

Fast Moving Consumer Goods are products that are sold quickly and at relatively low cost. Examples include non-durable goods such as soft drinks, toiletries, and grocery items. Pakistani market has many products which its offers in FMCG category.
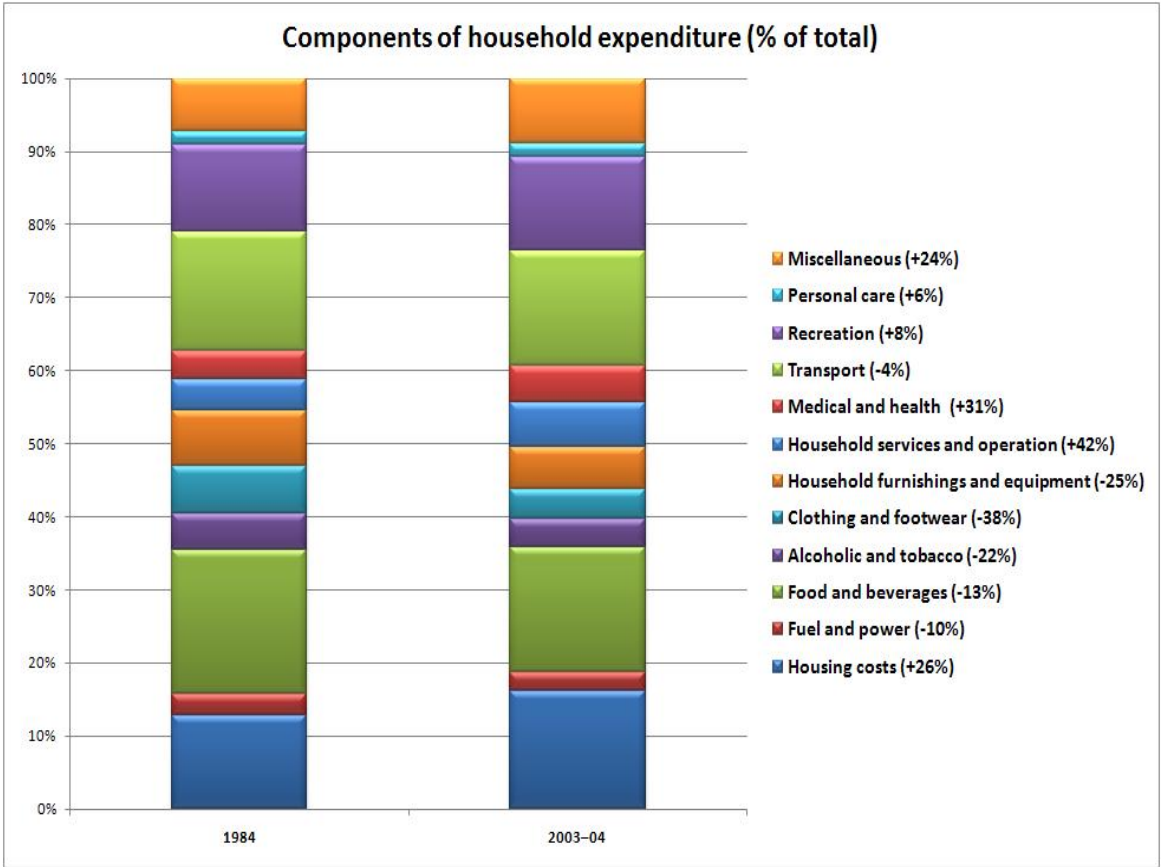
Figure 1: FMCG Toiletries Products with Companies' Names

FMCG products (specially toilitories) are growing rapidly in manufacturing as well as in consumption as compare to other relatively. It was observed to increase of household expenditure due to miscellaneous item like toilataries not only in recent context but all over the world.

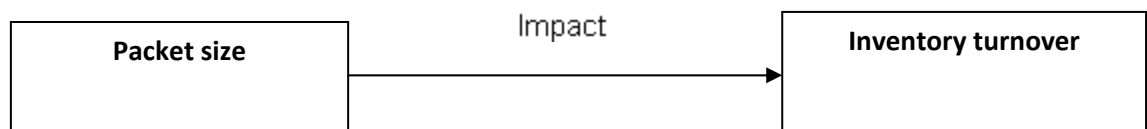Figure 2: Percentage of Household Expenditure

The leader of recent context's market is Unilever and its close competitor is P&G. since 1970 different packet size of FMCG product has been offered in Pakistan. Beside these recently studies prove that more than 50,000 wholesalers those are working more than 10 to 20 years in Pakistan in which around 30,000 wholesalers belong to FMCG products. It is observed that by reducing size product is sold quickly as compared large pack, resulting increase in turnover rate of wholesaler and retailer. It was noted that more than 90% of retailers buy stocks from wholesaler whereas others buy with different sources like personal selling. The study is to find out that do packet size effect on inventory turnover. There are two variables are involved in research, one is packet size (sachet, quarter pack, half pack and full pack) and second is inventory turnover. So it can be use further in order to find the relation between same variables in term of sale revenue, profit and growth as well.

2. Literature review

There are many aspects for fluctuating inventory turnover; one of them is different product stages. At level boom product sold quickly whereas at decline stage it needs to push toward consumer. Food items sold quickly as compare to toiletries due to this companies keep in mind in order to placement of inventory to different retail stores Takayasu, Watanabe & Ueno (2010). Mostly small retailers of recent context prefer to buy inventories through personal selling and buy in lesser amount, it can be a reason that they cannot buy in bulk amount due to not affordability of sufficient amount of stock. As it is mentioned earlier that companies keep manage their inventory process with supplier and customer, in the changing preferences world mostly companies adoption some e-business solution in order to promote B2B operation and supply chain strategies Webster, Beach & Fouweather (2006). It cannot be ignored while studying that inventory turnover and profit margin is two different things, for sure it cannot be judge if inventory turnover is increasing so its profit is increasing as well. Basically it depends upon companies' policies and pricing strategies. As far as concern about inventory turnover so further researches have been done on it to relate it with profit, capital intensity, and sale volume etc.

Furthermore research has been carried out that are associated with inventory turnover of FMCG products that explain to influence consumer preferences through attractive portfolio of product and that increases production size Yee & Shah (1997) and is also acknowledged in several aspect of analyzing performance through inventory. yes it has predicted that companies' sale volume increases due to efficient inventory turnover rate and it effect managerial decision about operational performance Gaur, Fisher & Raman (2005) whereas it was also found that retail operation and companies' performance both are quite different in nature and have different effect of inventory turnover on them.

Conceptual Frame work and Hypotheses

| Packet size | Impact | Inventory turnover |

By keeping the view of conceptual framework, the following hypothesis has been formulated in order to analyze research questions.

H: There is a significantly negative effect of packet size on inventory turnover of FMCG products in Pakistan.

3. Research methods

A part of data collection of research, Packet size was considered standardize (i.e. sachet, quarter pack, half pack and full pack) of FMCG products whereas FMCG products were the toiletries products. Although research is based on primary data, so random and cluster sampling techniques were used in order to collection of data because of presence of some wholesaler in a form of cluster, means they are present in wholesale market. Karachi is the biggest city of Pakistan so it was consider of obtaining best result from here. 75 respondents were included in research those were true represented of data. They have been asked several questions about to buy of different packet sizes of FMCG products on the monthly basis. It was kept in mind that respondent should have 5-10 years of experience in a same field with have a sense of understanding the language of questionnaire. After collection of data, it was taken into consideration and converted monthly basis data into yearly basis in order to express it in turnover rate in order to analyze impact on it by different packet sizes. Inventory turnover kept in dependent variable and predictors were standardized packet size.

Econometrical Model

In order to find out the impact of inventory turnover by different packet size, linier regression has been used as an econometrical technique that deployed (OLS-Model). Shown below:

Inventory turnover = α - β (packet size) + ET
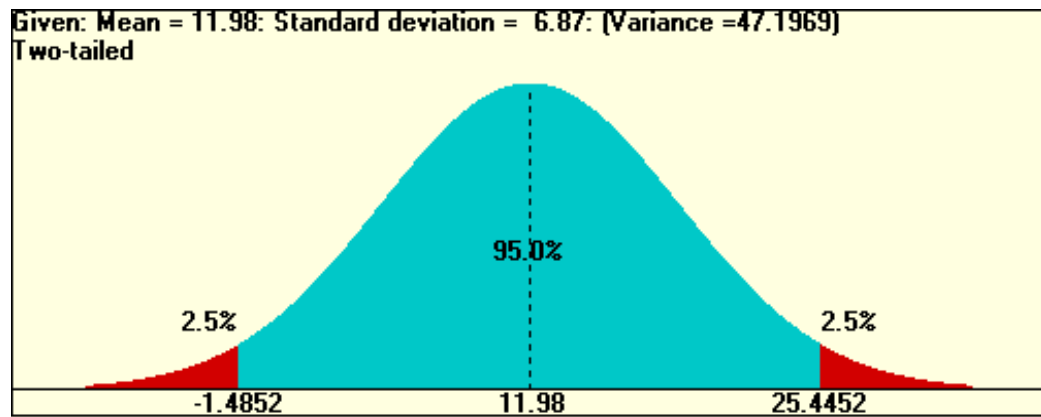
4. FINDINGS AND RESULTS

For getting the best output result several tests has been applied. Test for specification (Correlation = -0.808), Test for Significance (t value = -23.712) and Test for Sufficiency (R square = 0.654). The negative strongly correlation has been found between variables as expected. Whereas variables are predicted by the model that significantly accept the hypothesis at $p < 0.05$. Furthermore 65.4% variation in inventory turnover is due to different packet sizes that show that research model has covered a major area of dependent variable. By F-Statistics, long term relationship has been shown between variables and negative impact has been found between packet size and inventory turnover.

Table 1: Regression Estimations

Dependent Variable		Predictor
		Packet size
Inventory turnover	Beta	-0.808
	T-Stats	-23.712
	Sig.	0.000
R-Square		0.654
F-Statistics		562.277

A confidence interval was considered at 95% where as mean and standard deviation has been found 11.98 and 6.87. Hypothesis was also found in two-tailed that helped to composed normal distribution chart in order to provide clear view of normal observations and outliers.

Table 2: Normal distribution

Given: Mean = 11.98: Standard deviation = 6.87: (Variance =47.1969)
Two-tailed

95.0%

2.5%   2.5%

-1.4852   11.98   25.4452

5. DISCUSSIONS AND CONCLUSION

Smaller the packet size, faster the consume. Result revealed negative impact of packet size on inventory turnover of FMCG products in Pakistan context. It means that people mostly prefer to buy sachet and then quarter pack and then half pack and full pack. It can be a reason of unusual increase in price of commodities due to inflation, economy crash or devaluation of currency that are reducing buying power of consumer. People cannot arrange enough money to buy large pack of commodity so instead of they go for small pack in order to fulfill their temporary need. It can be a factor of saving because a person spends whatever he has and he can see. So people like to buy small pack in order to reduce their consumption. As a result of it several companies have introduced different packet sizes for making people comfortable in buying pattern. It cannot be neglected that it is a fear factor of any economy that people will decrease their standard of living and it will be cause of crime and a big disrespect of opposite gender.

REFRENCES

Takayasu M., Watanabe T. & Ueno H., (2010) Life-span distributions of supermarket products, *Journal of Physics*: Conference Series, 221, 012 – 018

Yee KL & Shah N. (1997). Scheduling of multistage fast-moving consumer goods plants. *Journal of operational research society,* 48, 1201-1214

Webster M., Beach R. & Fouweather I., (2006) E-business strategy development: an FMCG sector case study, *Supply Chain Management: an International Journal*, 11 (4), 353 – 362

Gaur V., Fisher M. L. & Raman A., (2005) An econometric analysis of inventory turnover performance in retail service, *management science,* 51 (2), 181 – 194