

# Factor Analysis Of Rural Consumers' Preference Attributes In The Purchase Of Cell Phone: An Empirical Analysis

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## INTRODUCTION

Earlier, most of the rural consumers lacked the general awareness and were not aware of the latest developments in technology as they lived in remote rural areas and inner towns, and at the same time, they were not sound in education. In recent times, there has been an improvement in the rural consumers' attitudes because of exposure to communication technology, education, job opportunities in town and abroad. The goal of the study is to identify the rural consumers' purchase attitudes.

## LITERATURE REVIEW

✿ **Schiffman and Kanuk (1991)** define consumer behavior display in searching for, purchasing, using, evaluating and disposing of products and services that they expect will satisfy their needs.

✿ **Kotler (1981)** identifies four interdependent factors that influence consumer behavior namely product, seller, situation and buyer. Apart from other characteristics, a buyer is influenced by psychological characteristics such as motivation and learning.

✿ **Mc Alister (1982)** demonstrated how an inventory of attributes of products may be used to understand the choice of products by customers. In the same token, an inventory of attributes should be established to understand how customers make choice between the products. In other words, a scale of preferences should be established to understand the preferences of customers.

✿ **Inman (2001)** demonstrates that variety seeking behavior is caused by product attributes than due to brand. This strengthens the need for creating an inventory of attributes; a scale of preference would be very useful to compare the first-time buyers with repeat buyers.

✿ **Kumar and Trivedi (2006)** find that consumers can be segmented on the basis of variety seeking behavior and each segment may be approached with a tailored marketing strategy.

## PURPOSE

The purpose of the study is to examine the rural consumers' preference attributes in the purchase of Cell Phone, and identified consumers' experience would be helpful to the marketers to improve their sales volume against the rural market and purchase.

## RESEARCH METHODOLOGY AND DATA COLLECTION

The respondents for this study included 375 consumers residing in rural communities at the Nagapattinam district, in Tamil Nadu. Rural communities were defined as rural and surrounding rural areas, so we are applying multi-stage sampling method, and stratified the respondents occupation wise like Agriculturists, Government workers, Private workers, Business people, and Students, from the each segmented in 75 samples. The respondents' ages ranged from 20 to above 60 years, the level of education was segmented from under secondary to professional in six categories, and family monthly income level was segmented as below ₹ 5,000 to above ₹ 20,000 in five categories. In this study,

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284 male and 91 female respondents participated. The questionnaire was administered on different items related to attitudes of the consumers. Respondents were to give rating on a L.L.Thurstione scale of 1-10; if a respondent gives maximum importance for an attribute, he/she may allot 10 against that attribute; whereas, if he/she gives least importance for an attribute, the respondent may allot 1 against that attribute. The questionnaires were pretested on a set of 50 respondents to assess validity and reliability of the questionnaire.

## FACTOR ANALYSIS OF RESPONDENTS' PREFERENCE ATTRIBUTES WHILE MAKING THE PURCHASE DECISION

A list of consumer preferences was prepared from primary and secondary data like magazines, newspapers, sales brochures, and annual reports. The factor analysis by Principle component analysis method is applied on 15 influence variables namely 1)Brand & Company name, 2)Model, 3)Product Durability/reliability/Quality, 4)Reliable Price, 5) After sales & Services, 6) Guarantee/ Warrantee, 7) Goodwill, 8) Advanced technical features, 9) Credit facility, 10) Performance, 11) Easy availability of spares, 12) Color/ good looking, 13) Size, 14) Resale value, 15)Show room display. Over all, 317(out of 375) respondents represented their ranking order of the above said attributes at the time of Cell Phone purchase.

**Table 1: Total Variance Of The Factors That Influence The Cell Phone Purchase**

Component	Initial Eigen value			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	7.383	49.223	49.223	7.383	49.223	49.223	5.081	33.870	33.870
2	4.107	27.379	76.601	4.107	27.379	76.601	4.232	28.215	62.085
3	1.588	10.589	87.190	1.588	10.589	87.190	3.766	25.105	87.190
4	0.517	3.448	90.638						
5	0.393	2.622	93.260						
6	0.281	1.872	95.132						
7	0.231	1.542	96.674						
8	0.199	1.327	98.001						
9	0.144	0.957	98.958						
10	0.095	0.633	99.591						
11	0.042	0.282	99.873						
12	0.015	0.100	99.973						
13	0.003	0.020	99.994						
14	0.001	0.006	100.000						
15	-8.20E-016	-5.47E-015	100.000						

Extraction Method: Principal Component Analysis

From the above table, we can interpret that the factor loading for after sales service is comparatively low to the turn of 75% of the total variance. However, the remaining 14 attributes have high factor loadings of above 87%. The high factor loading variance of attributes like Size of the product, Performance, Advanced technical features, and Reliable Price are scoring 98.4%, 93.7%, 93.4%, and 90.8% respectively. Factor 1 has five significant loadings while Factor 2 has four significant loading and Factor 3 has three significant loading.

**The first extracted factor - Product Reliable Price, After Sales & Services, Model, Brand & Company Name, and Product Durability/Reliability/Quality Is Accounted For -49.22% of the variance.**

**The second factor -Easy Availability Of Spares, Performance, Color/ Good Looking, And Credit Facility Is Accounted For -27.37% of the variance.**

**The Third Factor -Advanced Technical Features, Guarantee / Warrantee, And Goodwill Of Product Are Accounted For -10.58% Of The Variance.**

**Table 2: Communalities And Rotated Component Matrix For The Factors That Influence Cell Phone Purchase**

Attributes	Communalities		Rotated Component Matrix		
	Initial	Extraction	Component -1	Component -2	Component -3
Brand / company	1.000	0.847	<b>0.698</b>	-0.537	-0.266
Model	1.000	0.884	<b>0.706</b>	-0.530	-0.324
Durability/reliability/quality	1.000	0.816	<b>0.691</b>	-0.545	-0.206
Reliable Price	1.000	0.908	<b>0.758</b>	-0.524	-0.242
After sales service	1.000	0.759	<b>0.712</b>	-0.501	-0.041
Guarantee / warrantee	1.000	0.806	0.222	-0.094	<b>0.865</b>
Goodwill	1.000	0.808	0.054	-0.248	<b>0.862</b>
Advanced technical features	1.000	0.934	-0.067	0.219	<b>0.939</b>
Credit facility	1.000	0.913	0.049	<b>0.552</b>	0.778
Performance	1.000	0.937	-0.267	<b>0.925</b>	0.100
Easy availability of spares	1.000	0.885	-0.113	<b>0.933</b>	-0.033
Color/ good looking	1.000	0.854	-0.344	<b>0.822</b>	-0.245
Comfortable Size	1.000	0.984	-0.923	0.117	-0.345
Resale value	1.000	0.883	-0.852	0.040	-0.394
Show room display	1.000	0.860	-0.835	0.016	-0.404

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 8 iterations.

## FINDINGS

- ✿ It is found through this study of the rural consumers' Cell Phone purchase and preference attribute, the first extracted factor gives 49.22% of the variance.
- ✿ The second factor gives 27.37% of the variance.
- ✿ The third factor gives 10.58% of the variance.

## CONCLUSION

Through this study, the researchers have transparently identified that the status of the rural consumers' purchase attitude towards the Cell Phone. Based on the socio economic changes, the rural consumers are aware of the aspects of purchase. They have the analyzing capacity during the pre-purchasing of the product. The study presents the analytical factors influencing the purchase of cell phones and may be used by the marketers to make potential strategies for targeting the rural consumer and challenge the rural consumerism.

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