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A STUDY ON COMPARATIVE ANALYSIS OF PRODUCT SALES WITH REFERENCE TO THE SELECTED STORES

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Abstract: In this study, Retail marketing is the process of bringing a product directly to the customers through stores involves planning, promotion and presentation of the product. We specified the constructing sales places and receiving motivation balance each other out when carried out in developing nations, which impacts how well sales duties are performed overall. Due to the connection between commission-based jobs and performance, managers may place more focus on these duties. The development of long-term connections were largely dependent on sales staff with business partners, including customers and suppliers. Since the connection serves as the main channel between the buyer and the seller, it has the potential to have a significant impact on how the buyer views the seller's dependability, the worth of their services and ultimately, how interested they are in maintaining the relationship. Previous researchers typically made the assumption that every review of a product has the same chance of being read by consumers when examining the effect of online reviews on product sales. The availability of information play a part in consumer decision-making, according to information processing and decision-making theories. In order to study the relationship between online reviews and product sales, which are represented by sales rank data, we incorporate the idea of review visibility. Here we examined three different ways i.e. (1) the case where we assume that every online review has the same chance of being viewed; (2) the case where we assume that consumers sort online reviews by the most helpful mechanism; and (3) the case where we assume that consumers sort online reviews by the most recent mechanism. By receiving the three cases of data we compare the product sales of different retail stores in Andhra Pradesh.

Keywords: Stores, SPSS software, Cross tab, Chi-square.

I. INTRODUCTION:

Retailing in India is gradually increasing its way towards becoming the next boom industry. In Retail marketing, a retailer is a person or a business organization who typically do not manufacture their own items but purchase goods from a manufacturer or a wholesaler and sell these goods to customers in small quantities in exchange for money. Retail field consists of super markets, departmental stores, chain stores and authorization stores etc. It can include grocery, beverages, drug, dairy products, health and beauty aids, cleaning products, clothing, necessities, customized gifts, sports and many more. Depending on the location and the population, the size of these retail stores can vary from a small family market to a large super market.

Retail Marketing is the process of bringing a product directly to the customers through stores which involves planning, promotion and presentation of the product. The four golden standards of retail marketing are product, price, place and promotion (the 4 P's of Retail marketing). Retailing is one of the pillar of Indian economy and accounts for about 10 percent of its GDP and one of the top five retail markets in the world by economic value. India has one of the fastest growing retail markets in the world with 1.2 billion people and retail is growing 25 percent annually. The future of Indian Retail industry looks promising with the growing of the market, the government policies becoming more favourable and the emerging technologies facilitating the operations.

A large number of young working population from nuclear families in urban areas, along with increasing working women population and emerging opportunities in the service sector are the key factors in the growth of retail sector in India. It also provides around 8 percent of the employment in the Indian economy. Indian retailers need to take the advantage of the growth and aiming to grow, diversify and introduce new formats of how to pay more attention to the brand building process. In the preparation to face fierce competitive pressure, Indian retailers must come to recognize the value of building their own stores as brands to reinforce their marketing positioning, to communicate quality as well as value for money. Sustainable competitive advantage will be dependent on translating core values combining products, images and reputation into a coherent retail brand strategy. Here our goals is to see what kind of the retail store is mostly preferred by the people in relation to a particular state of India i.e., Andhra Pradesh.

II. REVIEW OF LITERATURE:

- **Aniali Panda (2013):**

Retailing in India is going through an evolutionary stage and is one of the largest sectors in the global economy, the current estimated value of the Indian retail sector is about 500 billion USD and expected to reach 1.3 trillion USD by 2021. Indian is termed as the nation of shopkeepers with about 15 million retail outlets of all kinds, but it is dominated by small neighbourhood grocery stores termed as small scale industry (Kirana stores). Food and Grocery constitute the major portion of Indian household consumptions. The understanding of the patronage behaviour helps the modern retailers to focus and strengthen the elements of the retail offerings which is more valued by customers. An important factor which can lead to increased patronage at the modern retailers is customer relationship management activities like loyalty, bonus or discounts, special customer cards, free parking facility and so on.

- **Anil Kumar, Piyali Ghosh and Vibhuti Tripath (2010):**

The phenomenal growth of retail in India is reflected in the rapid increase in number of supermarkets, departmental stores and hypermarkets in the country. However, this unperfected growth trend has been challenged by the shadow of the current economic slowdown, which has raised a fear of dip in consumption and slowdown of growth for Indian organized retailers. Success will lie with those retailers that can drive customer loyalty by responding to the demands of the discerning consumer. Retailers designing their outlets

with store attributes that would meet the expectations of the shopper and thus motivate them towards store patronage decisions.

III. METHODS AND MATERIALS:

3.1 Data Collection:

1. The scope of this study is limited to collecting the data from the respondents by questionnaires about retail stores within Andhra Pradesh State. These questionnaires are sent through social media via Google forms.
2. There might be some bias included in the data collected. The data collected here are only primary data which is tabulated and presented from prior to interpretation. Due to the capacity of time, the study is conducted only on consumers and not through the retailers.
   https://docs.google.com/forms/d/e/1FAIpQLScO1tbF3iwLMe_VY7R1BjBAIc6aMoIhe-vUiQP8Btid1my-TA/viewform

3.2. About The SPSS Software:

SPSS is powerful statistical software, which was earlier known for its applications in social sciences only. It is a comprehensive integrated system for flexible statistical data analysis and data management solution. SPSS is a computer program used for survey authoring and deployment, data mining, text analytics and collaboration and deployment. It has all major analytical tools for handling a large volume of data as well as complicated multivariate analyses. The current version in use are **IBM SPSS 16.0, 20.0**.

3.3. Statistical Tool

To analyse and interpret the collected data, the researcher had used the tool called Chi-square test of Independence and goodness of fit. A five point Likert scale also has been used to measure the level of satisfaction by customers about the stores and Chi-square test.

3.3.1 Chi- square Test:

A chi square (χ^2) statistic is a test that measures how a model compares to actual observed data. The data used in calculating a chi- square statistic must be random, raw mutually exclusive drawn from independent variables and drawn from large enough sample.

The Chi square goodness of fit test is a statistical hypothesis test used to determine whether a variable is likely to come from a specified distribution or not. It is often used to evaluate whether sample data is representative of the full population. This test checks whether your sample data is likely to be from a specific theoretical distribution. We have a set of data values and an idea about how the data values are distributed. The test gives us a way to decide if the data values have a "good enough" fit to our idea.

$$\chi^2_c = \Sigma \frac{(Oi-Ei)2}{Ei}$$

Where: O = Observed frequency

E = Expected frequency

3.3.2 Chi- square Test in SPSS:

From the main menu, we select
Analyze ⟶ **Descriptive Statistics** ⟶ **Cross tab**
To open the main **Cross Tabulation** window.

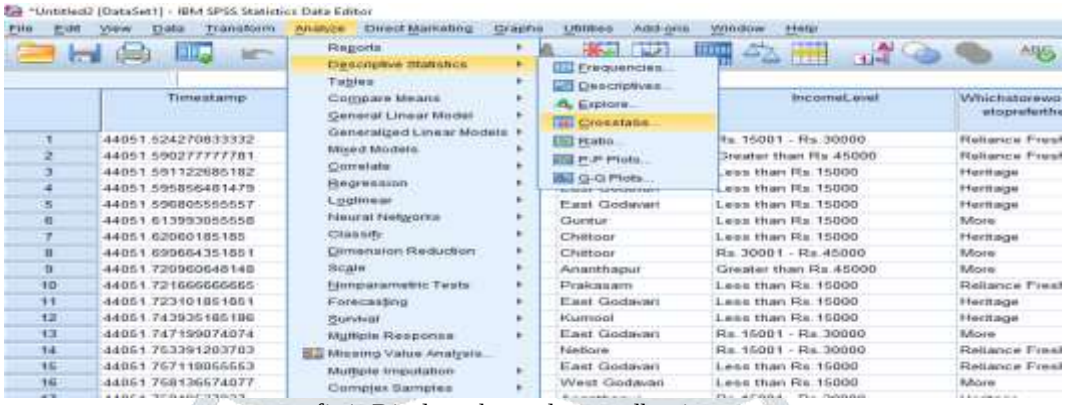

fig1: Displays the analyze toolbar in spss

When variables are moved into **Row(s)** and **Column(s)** panel, the **Statistics** pushbutton becomes available. Selecting the **Statistics** pushbutton opens the **Statistics Display** window. We select the **Chi-square** cell in **Statistics** panel. Then click on **Continue** button to go back Cross tabs window.

Fig2: shows the crosstab dialogue box in spss

After selecting the **Chi-square** test in **Statistics** panel in Crosstabs window, finally select the **OK** pushbutton and then it will display the Output for the given data.

fig3: displays the crosstab window

IV.RESULTS AND DISCUSSIONS:

In this section, Chi-square test is used to test the significance variances between the locality and store preference.

table 1 : assocation between the locality and store preference.

TABLE : loc * store prefer Cross tabulation						
			Store preference			
			Heritage	More	Reliance Fresh	Total
Loc	Ananthapur	Count	1	2	0	3
		Expected Count	.9	1.0	1.1	3.0
	Chittoor	Count	12	4	11	27
		Expected Count	8.2	8.9	9.9	27.0
	East Godavari	Count	8	6	6	20
		Expected Count	6.0	6.6	7.4	20.0
	Guntur	Count	1	4	2	7
		Expected Count	2.1	2.3	2.6	7.0
	YSR Kadapa	Count	1	2	2	5
		Expected Count	1.5	1.7	1.8	5.0
	Krishna	Count	2	0	0	2
		Expected Count	.6	.7	.7	2.0
	Kurnool	Count	3	5	3	11
		Expected Count	3.3	3.6	4.0	11.0
	Nellore	Count	2	4	5	11
		Expected Count	3.3	3.6	4.0	11.0
	Prakasam	Count	0	4	4	8
		Expected Count	2.4	2.6	2.9	8.0
	Srikakulam	Count	0	0	1	1
		Expected Count	.3	.3	.4	1.0
	Visakapatanam	Count	0	1	0	1
		Expected Count	.3	.3	.4	1.0
	Vizianagaram	Count	0	0	1	1
		Expected Count	.3	.3	.4	1.0
	West Godavari	Count	2	3	4	9
		Expected Count	2.7	3.0	3.3	9.0
Total		Count	32	35	39	106
		Expected Count	32.0	35.0	39.0	106.0

table 1.1: chi- square test:

TABLE : Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	25.456[a]	24	.381
Likelihood Ratio	29.954	24	.186
Linear-by-Linear Association	3.842	1	.050
N of Valid Cases	106		
a. 33 cells (84.6%) have expected count less than 5. The minimum expected count is .30.			

Interpretation:

The above table reveals that there was no significant between the location of the respondents and their Store preferences. Here, the Asymptotic significance value obtained is 0.381 which is greater than 0.05. So, we accept Null hypothesis and reject Alternative hypothesis.

table 2 : assocation between the accessibility and purpose of purchase

TABLE: accessibility * purpose Crosstabulation					
			purpose		
			Personal	Business	Total
Accessibility	Very Dissatisfied	Count	0	1	1
		Expected Count	.1	.9	1.0
	Dissatisfied	Count	1	2	3
		Expected Count	.3	2.7	3.0
	Neutral	Count	4	30	34
		Expected Count	3.2	30.8	34.0
	Satisfied	Count	5	50	55
		Expected Count	5.2	49.8	55.0
	Very Satisfied	Count	0	13	13
		Expected Count	1.2	11.8	13.0
Total		Count	10	96	106
		Expected Count	10.0	96.0	106.0

table 2.1: chi- square test:

TABLE : Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3.688[a]	4	.450
Likelihood Ratio	4.283	4	.369
Linear-by-Linear Association	1.958	1	.162
N of Valid Cases	106		
a. 6 cells (60.0%) have expected count less than 5. The minimum expected count is .09.			

Interpretation:

The above table reveals that there was no significant between the Accessibility and Purpose of purchase. Here, the Asymptotic significance value obtained is 0.45 which is greater than 0.05. So, we accept Null hypothesis and reject Alternative hypothesis.

table 3 : assocation between the price and quality

TABLE : price * quality Crosstabulation							
			quality				Total
			Very Dissatisfied	Neutral	Satisfied	Very Satisfied	
price	Very Dissatisfied	Count	1	1	0	0	2
		Expected Count	.0	.4	.9	.6	2.0
	Dissatisfied	Count	0	1	0	0	1
		Expected Count	.0	.2	.5	.3	1.0
	Neutral	Count	0	10	7	6	23
		Expected Count	.2	5.0	10.4	7.4	23.0
	Satisfied	Count	0	11	40	21	72
		Expected Count	.7	15.6	32.6	23.1	72.0
	Very Satisfied	Count	0	0	1	7	8
		Expected Count	.1	1.7	3.6	2.6	8.0
Total		Count	1	23	48	34	106
		Expected Count	1.0	23.0	48.0	34.0	106.0

table 3.1: chi- square test

TABLE: Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	78.822[a]	12	.000
Likelihood Ratio	34.645	12	.001

Linear-by-Linear Association	23.906	1	.000
N of Valid Cases	106		
a. 15 cells (75.0%) have expected count less than 5. The minimum expected count is .01.			

Interpretation:

The above table reveals that there was significant between the Price and Quality. Here, the Asymptotic significance value obtained is 0.0001 which is less than 0.05. So, we reject Null hypothesis and accept Alternative hypothesis.

V. CONCLUSION:

Today retailers must differentiate themselves by meeting the needs of their customers better than their competitors. Retailer should prepare a marketing plan that would influence the satisfaction level of the customers through different way such as the physical characteristics of the stores, location, store personnel and many more.

The following suggestions are offered to improve the retail business in Andhra Pradesh

1. The parking facility near the stores should be convenient and easy to access.
2. The frequent buyers should be made with the personalized list.
3. The customers expect best shopping experience. So, the management should take care about the environment like the key factors such as store ambience, accessibility, parking facility, store timings and employee behaviour.

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