

**A STUDY ON  
PEPSI CONSUMERS BEHAVIOUR  
(WITH SPECIAL REFERENCE TO BIRGUNJ)**

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## **RECOMMENDATION**

This is to certify that Mr. Prakash Kumar Sah has prepared this thesis entitled "A STUDY ON PEPSI CONSUMERS BEHAVIOUR" (WITH SPECIAL REFERENCE TO BIRGUNJ) under my supervision.

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# DECLARATION

I here by declare that the work reported in this thesis entitled 'A Study On Pepsi Consumers Behaviour" (With Special Reference To Birgunj) Submitted to the Faculty of Management, R.R.Multiple Campus, Janakpur,Tribhuvan University is my orginal work done in the format of T.U, for the partial fulfillment of the Master's Degree in Business Studies (MBS) under the supervision and guidance of Mr. Jugeshwar Shah, Lecturer, R.R. Multiple Campus, Janakpur,Dhanusha.

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## ABBREVIATIONS

GM	-General Manager
Mkt.	-Marketing
Asst.	-Assistant
Pvt. Ltd.	- Private Limited
EPS	- Extended Problem Solving
LPS	- Limited Problem Solving
RPS	- Routine Problem Solving
T.V.	-Television
No.	- Number
SLC	- School Leaving certificate
Int	- Intermediate
d.f.	- Degree of freedom
Wei No.	- Weighted Number
F.M.	- Frequency Modulation
Res	- Respondents
Bus	- Business
Stu	- Student
Ser	- Service
Wei	- Weighted
R.Shop	- Retail Shop
UTC	- Under the Crown
CEO	- Chief of Executive Officer

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the study

The study of consumer behaviour enables marketers to understand and predict consumer's acquiring, consuming and disposing activities. Consumer behaviour is defined as the behaviour that consumers display in searching for, purchasing, using, evaluating, and disposing of products, services and ideas that they expect will satisfy their needs.

Consumers and customers are diverse in nature. Customers stand for those who regularly purchase from a particular store, company, organization or place. But consumers are those who regularly purchase and use by themselves. Customers may or may not be consumers, but consumers are always being customers.

Consumers are mainly of two types; individual consumers and organizational consumers. Individual consumers buy goods and services for their own use and for household use. Organizational consumers include profit and non-profit businesses, government agencies (local, state, and national) an institution. Both consumers purchase goods, services, and ideas for their own use. But in consumer behavior, individual consumers are the main focus of the study.

In general, consumers are both buyers and users. But in some extent, at least one or more person can play one or more than one role in purchasing and consuming. These roles may appear in the forms of initiator, influencer- buyer, and user. These roles are explained in Table-1.1 ( Zaltman and Buyer 1975:142)

**Table-1.1**

Role of Consumer Behaviour

Role as	Description
Initiator	The individual who determines that some needs or wants are not being met, and authorizes as a purchase to rectify the situation
Influencer	A person who by some intentional or unintentional words or actions influences the purchase decision, the actual purchase, and/or the use of the product or service
Buyer	The individual, who actually makes the purchase transaction
User	The person most directly involved in the consumption or use of the purchase

For example, a wife as an initiator and influencer may ask her husband (buyer) pick up a box of total cereal on his shopping trip because their child (user) said she wanted it. At another time the husband could act as the initiator, buyer, and user by purchasing a health spa membership for himself

Consumer behavior is an exciting and dynamic field of study. Consumer behavior is a young discipline; the first textbook was written in the 1960s. Its intellectual forefathers, however, are much older. For example, Thorstein Veblen talked about conspicuous consumption in 1899. Similarly, in the early 1900s writers began to discuss how psychological principles could be used by advertisers. (Ward and Robertson, 1973: 3-42)

Consumer behavior was a relatively new field of study. With no history or body of research of its own, the new discipline was borrowed heavily from concepts developed in other scientific disciplines, such as economics, psychology, social psychology, sociology, anthropology and demography. In psychology, we have to study the behavior and mental process of individuals. In sociology, we have to study the collective behavior of people in group. In social psychology, how individuals influence and are influenced by group is studied. In Economics, people's production,

exchange, and consumption of goods and services are dealt in. And, in Anthropology, how people are related to their culture is mentioned.

The study of consumer behavior has three levels of analysis: individual level, micro environmental level; and macro environmental level. Individual level of analysis focuses on identifying the processes that influence a person in the acquisition, consumption, and disposition. In fact problem recognition, information search and evaluation, purchasing problem, decision process, post purchase behavior, and feedback are studied in individual analysis. Micro environmental levels of study consist of those interpersonal and situational factors, which are outside of the person, that influence consumer behavior at any particular point of time. In it, we have to study on information processing, learning and memory, motivation and involvement, attitudes, personality, self-concept and leadership. Macro environment levels of study consist of the broad set of forces that influence a large number of consumers to act, similarly. The type of macro - environment includes the effects of culture, subculture, social class, social group, family and personal, economic and government conditions.

The study of consumer behaviour provides benefit for consumers, marketers, and even students. As consumers and marketers are diverse in nature, the reasons why people study consumer behaviour are also diverse.

Consumers' insight into their own consumption- related decision; what they buy, why they buy, how they buy, and the promotional influences that persuade consumer to buy by showing their behavior.

Marketers recognize why and how individuals make their consumption decisions by studying consumer behaviour. They can make better strategic marketing decisions. If marketers understand consumers' behavior, they are able to predict how consumers are likely to react various informational an environmental cues, and are able to shape their marketing strategies.

Marketers who understand consumer behaviour have great comparative advantage in the market place.

Students gain insights into why individuals act in certain consumption related ways and with learning what internal and external influences impel them to act as they do.

The interdisciplinary background in which the consumer behavior discipline is rooted, it is not surprising that academicians from a variety of contributing disciplines, including marketing itself have become interested in the study of consumer behavior not necessarily from a managerial or applied perspective, but simply to understand the consumer better. From the point of view of understanding consumption behavior and the meanings behind such behavior is called interpretivism.

*Interpretivists* have expanded the boundaries of study to include many subjective aspects of consumer behavior such as the effects of moods, emotions and type of situation on consumer behavior, the role of fantasy of play, of rituals, even of the sensory pleasures that certain products and services provide. Many interpretivists consider each purchase experience unique, because of the diverse set of variables that play at a particular moment in time. Because of its focus on the consumption experience, the interpretive approach is also known as *experimentalism*.

Despite the apparent diversity in context with consumer behavior, some common approaches should be taken into account while studying consumer behavior.

Consumer analysis provides the foundation of marketing management. It assists managers in designing the marketing mix: segmenting the market place; predicting product positioning and differentiation; performing environmental analysis; and developing market and research study.

) Consumer analysis plays a critical role on public policy development

- Knowledge of consumer behavior improves personal ability to be a more effective consumer.
- Consumer analysis provides Knowledge of human behavior.
- The study of human behavior provides three types of information. Consumer orientation, facts about behavior, and theories to recognize the thinking process.

Consumer decision process varies considerably in its complexity. Most of the decisions consumers require to make are probably rather simple ones, such as the purchase of staple foods. However, consumers also must make decisions that are comparatively complicated, such as buying durable goods. The range of difficulty of consumer decision process extends even further to problem solving that may be characterized as being highly complex, such as might well typify the consumer's purchase of a very expensive item like a home (Ludaon and Della Bitta, 1993:485-486)

The range of consumer problem solving approaches can be placed on a spectrum from routine problem solving to limited problem solving, and to extensive problem solving as follows: (Howard 1989:361-364)

### ***Routine problem Solving (RPS)***

In routine problem solving when consumers buy a new brand they have purchased before, it usually involves little or no information seeking and performed quickly. Consumers are brand loyal and tend to buy in a habitual, automatic, and unthinking way.

### ***Limited Problem Solving (LPS)***

In limited problem solving when consumers buy a new brand in a family product, it usually involves a moderate amount of information seeking and time in choosing.

### *Extensive Problem Solving (EPS)*

In extensive problem solving when consumers buy an unfamiliar product category, it usually involves the need to obtain substantial information and a longer time to choose. They must form a concept of the new product category and determine the criteria to be used in choosing a brand.

The examples of consumer decision-making cited above may be generalized toward a typical consumer problem-solving model consisting of four basic types of activities in the process of purchasing. The consumer's four steps are,

- Problem Recognition
- Information Search and Evaluation
- Purchase decision
- Post purchase Behavior

The assumption underlying this and other decision process approaches to consumer behavior seem to be the following. (Richard and Donald, 1979:6-93)

- 1) Two or more alternatives provide opportunity to consumers to make a choice.
- 2) Consumer evaluative criteria facilitate the forecasting of each alternative's consequences for the consumer's goals or objectives.
- 3) The consumer uses a decision rule or evaluative procedure to determine the chosen alternative.
- 4) Information obtained from external sources and/or memory is used in the application of the decision rule or evaluative procedure.

The characteristics of consumer problem solving approach is presented in Table 1.2

**Table 1.2**

**Characteristics of Consumer Problem Solving Approach**

	Routine Problem Solving	Limited Problem Solving	Extensive Problem Solving
Purchase Involvement level	Low	Medium	High
Problem Recognition	Automatic	Semi-Automatic	Complex
Information Search and Evaluation	Minimal	Limited	Extensive
Purchasing orientation	Convenience	Mix	Shopping
Post purchase processes	Very limited Habit Brand Loyalty	Limited inertia to repurchase Brand switching if dissatisfied	Complex Loyalty if satisfied Complain if dissatisfied

Consumer behavior is a broad field that studies how individuals, families and groups acquire, consume and dispose of goods, services, ideas, and experience. (Mowen, 1990)

## **1.2 Background of the company**

The Rs. 2.5 billion soft drinks market offers immense potential, as there are only two major players, Pepsi and Coke. There is tremendous

opportunity for these two companies as global population, income level, life style and consumption ratio are growing fast.

The total annual sales of aerated drinks in the market are estimated at some 6.5 million cases (each case contains 24 bottles). There is tremendous opportunity in this industry in Nepal because there is growing trend of drinking in Cinema Halls, Stadiums, consumers' daily travels, social gathering, etc.

Pepsi co. Inc., a New York based multinational company, which produces and sales its products in about 190 countries, began its operation in Nepal in 1986 through the local bottler, Swastika Aera led Pvt. Ltd. It was introduced to Nepalese market about 10 years later than Coca-cola. Now Pepsi products have been growing popularity and capturing its good market share.

The management of Pepsi bottler in Nepal was under taken by Varun Beverages (Nepal) Pvt. Ltd. In 1999, Varun Beverages (Nepal) Pvt. Ltd. was controlled and managed by Jaipuria Group India Its territorial head office and factory was situated at Sinamangal, Kathmandu. The purpose of Varun Beverages (Nepal) Pvt. Ltd. Is to make availability of deferent brands of beverage all over the kingdom to fulfill the consumers' taste and their changing preferences. Its target consumers mainly comprise the young generation across the country.

The seven hundred and fifteen employees working permanently and temporarily are presented in table 1.3 in the classified fashion. Table 1.3

#### **Employment Profile**

Employment	Permanent	Temporary	Total
Male	391	151	524
Female	125	48	173
Total	516	199	715

(Source: - Internal unpublished data of the company)

These employees are organized in flow chart structure, which is presented below:-

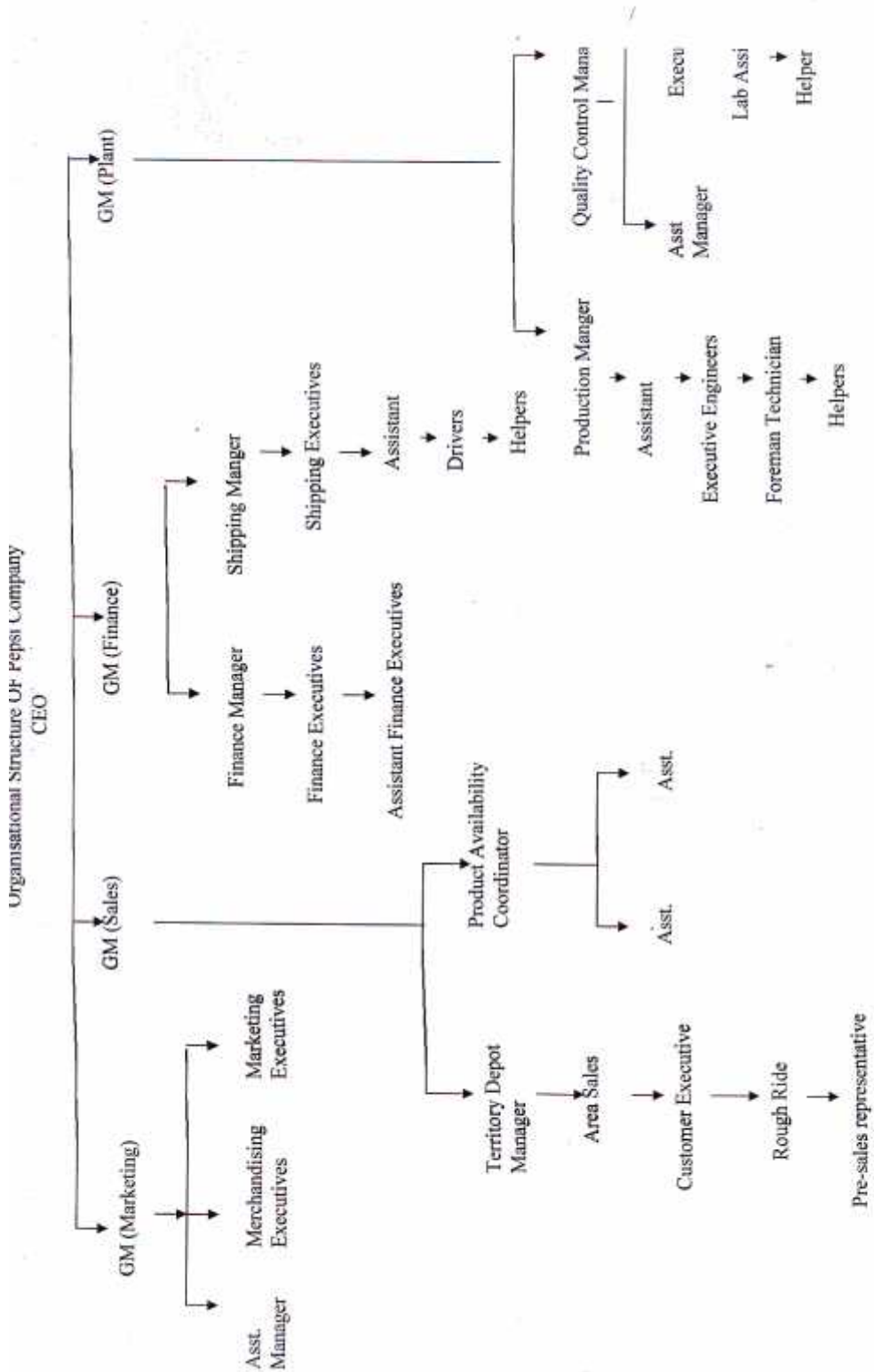


Figure 1.1 Organisational Structure of the Company (Source: Company's Unpublished Record)

Production capacity of Pepsi is 420 Bottle per minute (BPM) and its capacity utilization is 90, 70,000 crates. The producer of Pepsin in Nepal claims that it holds 35% of the market, and the rest by is coke.

The company has been the 'leader for producing new pack size such as 1.5 liters, 2 liters pet bottle and 200 ml. Phuchche flavors such as Slice and Mountain Dew, which have helped to increase market share. Now the company is producing seven brands in different flavor and pack, which are presented below.

**Table 1.4**  
**Brand, Flavor, and Pack Size of the Company's Products**

Brand	Flavor	Pack
Pepsi	Cola	200 ml, 250 ml, 300 ml, 1.5 ltr, 2 ltr, 1 ltr, 500 ml
Mirinda	Orange, Lemon	200 ml, 250- ml, 300 ml, 500 ml, 1.5 ltr, 2 ltr.
7'up	Lime	200 ml, 250 ml, 500 ml, 1.5 ltr, 2 ltr.
Slice	Mango	250 ml
Mountain Dew	Clear Lime	200 ml, 500 ml, 1 ltr, 2 ltr, 300 ml
Soda		250 ml,
Evervess Soda		500 ml, 1.5 ltr.

These products are distributed all over the kingdom through distributors and retailers. Most of distributors operate by direct observation of the company.

Its target customers mainly comprise the young generation across the country. In terms of competition, the different brands of Coca-Cola are its prime competitors.

Marketing strategy, Investment pattern, brand outlook, and acceptance of the brand by the public are all different from competitors. The company is also implementing deferent and very aggressive marketing strategies to enhance its competitiveness. Consumer schemes have always proved to be effective tools of promotion. The company has set different strategy than Coke, offered a pack of WAI WAI noodles for these customers who buy a 1.5 and 2 liter bottle of Pepsi. In other size bottles the company has offered Punta and Mama Bhujija (*Kamat, Shyam K., business age: vol 4, 2004*)

Since the establishment of the company, its flay ship brand Pepsi is doing very well. Mountain Dew has also proved to be a good flavor and attractive packaging. It has been very well received by consumers. Also, there is no competitor for Mountain Dew.

### 1.3 Statement of the Problem

Pepsi and Coke, are mainly two competitors in cold drinks market in Nepal.-The prestigious growth of the market between these Cola giants has been growing ever since Pepsi to Nepal in 1986. Since coke entered Nepal in 1997, it had been enjoying market leadership in soft drink industry. So coke had a sort of monopoly in the market till then.

The total annual sale of aerated drinks in the market is estimated at some 6.5 million cases. The producer of Pepsi in Nepal claims that the Pepsi holds 35% of the market. The rest is attributed to Bottler's Nepal (Shyam, 2004). So, the Varun Beverages (Nepal) Pvt. Ltd. must affectively use its marketing strategies for growing their market share. But to what extent it is effortful in boosting up Nepalese consumer's behavior in the intervals of time remains always a question to be answered from time to time\_ Therefore, this research starts with the following problems;

- What is the buying behaviour of consumers' (age group, sex group, and occupational group) ?
- Which are the most effective factors that consumers consider while making buying decision ?
- What are the consumption patterns of consumers' (age group, sex group, and occupational group) ?
- Are the Nepalese consumers of Pepsi product satisfied with what they get in the market ?

- Which are the important promotional activities carried out by the company?
- Which advertising media are most effective to remote consumer?
- Does the location, brand awareness, and shop awareness affect the purchase behavior of consumers?

## 1.4 Objectives of the Study

Keeping in view the statement of research problems, the objectives of the study are set as follows;

- ) To ascertain and compare buying behavior of age group, sex group and occupation group consumers.
- ) To find our consumption patterns of these categories of consumers.
- ) To ascertain the degree of satisfaction that consumers get from Pepsi products.
- ) To evaluate the effective promotional activities that the company uses.
- ) To measure the effectiveness of advertising media, used by the company.
- ) To examine to what extent the location, brand awareness, and shop awareness of consumers influence their purchasing decision.
- ) To evaluate factors that influence consumer purchase decision.
- ) To provide suggestions on findings of the study.

## **1.5 Research Hypothesis.**

This research has the following hypotheses:

Ho: There is no significant difference between the views expressed by different groups of respondents relating to consumption pattern, price, quality, quantity, Brand image, Advertising media, and promotional activities.

H<sub>A</sub>: There is significant difference between the views expressed by different groups of respondents relating to consumption pattern, price, quantity, quality, Brand image, advertising media, and promotional activities.

## **1.6 Significance of the Study**

Consumers are the gods of the market so consumers' satisfaction is the main motto of any organization or producer. Consumer's behavior plays a significant role in consumption patterns. Consumption is the optimum use of the product. For knowing the complexity of the consumers' behavior, studies are conducted from time to time.

The Nepalese market has been gradually heading towards cutthroat competition. In this context, different types of product with a large number of alternative brands are available in the market. It is essential for the manufacturers' and/or marketers of the products to know the buying behavior of target customers to achieve its goods.

The focus of the study, therefore, is on buying behavior of Pepsi products of different groups of customers having their own values, belief, and customs. The research, therefore, will occupy the following importance.

- This study will be a good asset for the library.
- This research will help other researchers while reviewing their literature.

- ) This study will also be useful for Varun Beverages (Nepal) Pvt. Ltd.
- ) The research will meet the partial requirement of completing master degree.

## 1.7 Limitations of the study

This research has the following limitations:

- ) Since convenience sampling is used, it may not reach some areas of true representation of soft drinks users.
- ) The findings have been derived from only those dates which were responded by the sampled consumers and the organization.
- ) The researcher limited the use of statistical tests because of small sample size.

## 1.8 Chapter Scheme

This thesis has been prepared under five specific chapters.

**The first chapter** includes background of the study, background of the company, statement of the problem, objectives of the study, research hypothesis, significance of the study, limitation of the study, and chapter scheme.

**The second chapter** contains review, and review of previous studies. Conceptual review includes introduction of consumer behaviour traditional models of consumer behaviour, and contemporary models of consumer behaviour, introduction of advertising of promotional activities.

**The third chapter** presents research design, nature and sources of data, sampling plan, data collection procedure, and analytical tools and procedure.

**The fourth chapter** It is also explanatory in nature and deals with consumption pattern of Pepsi consumers, degree of consumer satisfaction, effectiveness of promotional schemes of the company, effectiveness of the media advertising of the company, locations, stress, and brand awareness of the company, and factors influencing consumer purchase decision.

**The five chapter** provides summary, conclusions and major finding of the study, and recommendations.

In addition to these chapters, bibliography and references, and appendices have also been attached with at the end.

# CHAPTER TWO

## REVIEW OF LITE RATURE

The purpose of reviewing the literature is to develop some expertise in one's area, to see what new contributions can be made, and to receive some ideas for developing a research design.

Scientific research must be based on past knowledge. The previous studies cannot be ignored because they provide the foundation to the present study. In other words, there has to be continuity in research. This continuity in research is ensured by linking the present study with the past research studies.

Thus, the purpose of literature review is to find out what research studies have been conducted in one's chosen field of study, and what remains to be done. It provides the foundation for developing a comprehensive theoretical framework from which hypothesis can be developed for testing (*H.K. Wolf and P. R. Pant, 1999, 30*)

In this section, the researcher has tried to review the findings of a few past researches in consumer buying decision making along with the textual review.

### **2.1 Conceptual Review**

In this part, concept of the topic and its related meaning are presented, which help to know the research and its findings. In this study, conceptual review includes introduction of consumer behavior, and models of consumer behavior.

## 2.1.1 Introduction of Consumer Behavior

Consumer behavior, in simple terms, means the behavior shown by consumer before purchase, while purchasing and after purchase of the product. The term consumer behavior refers to searching for, purchasing, using evaluating and disposing of products and services that they expect will satisfy.

Consumer behavior is the study of the decision making units and processes involved in acquiring, consuming, and disposing of goods, services, experiences and ideas (*Mayan, .1. C, 2<sup>nd</sup> p5*)

Consumer or, buyer behavior is the process whereby individuals decide whether, what, when, where, how and from whom to purchase goods and services (*Walter, C. Glen and Paul, G.w*).

The term consumer behaviour refer to the behaviour of that consumers display in searching for purchasing, using, evaluating, and disposing of products and services that they expects will satisfy their needs (*Seiffman, L. G, 1995, 5<sup>th</sup>, P-7*).

Studying consumer behavior is quite complex, especially because of many variables involved and their tendency to interact. Consumer behaviour is an exciting and dynamic field of study. A wonderful aspect of taking a course in consumer behaviour is les are everywhere. Because all of us are consumers, we can draw on our everyday experiences in the market place to understand consumer behaviour concepts and theories.

In order to study consumer behavior, it is necessary o makeup one's mind with different behavioral models satiability of cold drink consumers briefed out.

In order to study consumer behaviour, it is necessary to make up one's mind with different behavioral models so that it will be easier to understand it. A model can be defined as a simplified representation of reality. It simplifies by incorporating only those aspects of reality that interest the model builder. Other aspects that are not of interest only add to the complexity of the situation and can be ignored. Thus an architect's model of a building may not show furniture arrangements if that is not important to the building's design. Similarly, in modeling consumers we should feel free to exclude any aspects that are not relevant to their behavior. Since we have defined consumer behavior as involving a decision process, models that focus on this process will be of considerable interest to us (\*Engel, James and Black well, 1993: p-599)

There are two types of consumer behavior models: Traditional models and contemporary models.

### **2.1.2 Traditional Models of Consumer Behavior**

The earliest comprehensive consumer models were actually devised by economists seeking to understand economic systems. Economics involves the study of how scarce resources are allocated among unlimited wants and needs. (Michael, 1965, p-4). Its two major disciplines - Macroeconomics and Microeconomics - have each developed alternative views of consumers.

- ) Economics Models
- ) Behavioral Model

#### **2.1.2.1. Economics Models- They are also of two types.**

- ) Micro Economic Model.
- ) Macro Economic Model.

### *Micro economic model:*

The classical microeconomic approach, developed early in the nineteenth century, focused on the pattern of goods and prices in the entire economy. It involved making a series of assumptions about the nature of the "average" consumer and then developing a theory useful in explaining the workings of an economy made up of many such people. Focus was placed on the consumer's act of purchase, which of course, is only a portion of what we have defined as consumer behavior. Thus micro economists concentrated on explaining what consumers would purchase and in what qualities these purchases would be made. The tastes and preferences leading to these purchases were assumed to be known already. Therefore, micro economists choose to ignore why consumers develop various needs and preferences and how consumers rank these needs and preferences.

The resulting theory was based on a number of assumptions about consumers. Primary among these were the following:

- Consumers' wants and needs are, in total, unlimited and therefore cannot be fully satisfied.
- Given a limited budget, consumers' goals are to allocate available purchasing dollars in a way that maximizes satisfaction of their wants and needs.
- Consumers independently develop their own preferences, without the influence of others, and these preferences are consistent over time.
- Consumers have perfect knowledge of the utility of an item; that is, they know exactly how much satisfaction the product can give them.
- As additional units of a given product or service are acquired, the marginal (additional) satisfaction or utility provided by the next unit will be less than the marginal satisfaction or activity provided by previously purchased units. This is referred to as the law of diminishing marginal utility.

- Consumers use the price of a good as the sole measure of the sacrifice involved in obtaining it, Price plays no other role in the purchase decision.
- ) Consumers are perfectly rational in that, given their subjective preferences; they will always act in a deliberate manner to maximize their satisfaction.

Given these assumptions, economists argued that perfectly rational consumers will always purchase the good that provides them with the highest ratio of additional benefit to cost. (Eagel, James, Reger, 1993: p 600-601).

### *Macroeconomic Models*

Macro economists focus on aggregate flows in the economy - the monetary value of goods and resources, where they are directed, and how they change over time (Richard, 1966, p-8). From such a focus, the macroeconomist draws conclusions about the behavior of consumers who influence these flows. Although the discipline has not generated a full unified model of consumers, it does offer a number of insights into their behavior.

One interest centers on how consumers divide their income between consumption and savings. This deals with two economic facts of life: higher-income families spend a smaller proportion of their disposable income than do lower - income families, but as economic progress raises all income levels over time these proportions do not seem to change. That is, lower-income groups do not significantly change the proportion of income devoted to spending as economic progress results in an increase in their income. The relative-income hypothesis explains this apparent contradiction by arguing that people's

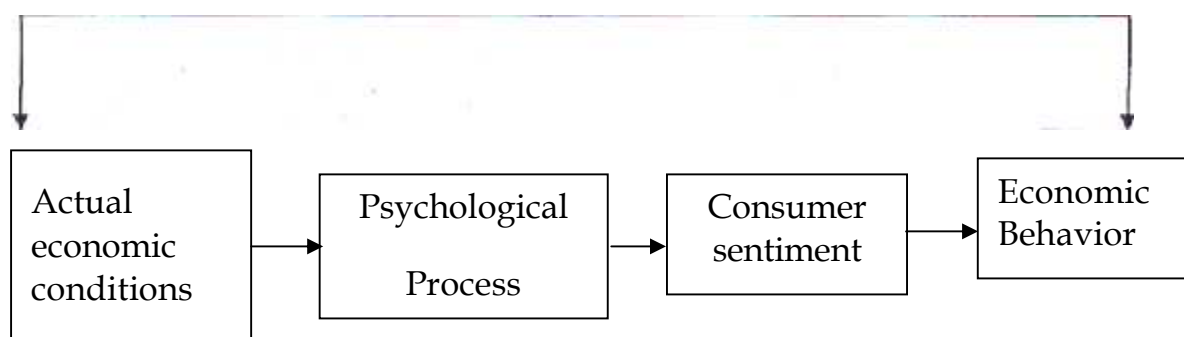
consumption standards are mainly influenced by their peers and social groups rather than their absolute income levels ( *J.J. Duesenberry, 1949*). Therefore, the proportion of a family's income devoted to consumption is expected to change only when an income change places the family in a different social setting. This will not happen when an income levels are rising at the same time.

Another macroeconomic proposition, the permanent-income hypothesis, explains why specific individuals are slow to change their consumption patterns even when their incomes do suddenly change. It proposes that consumers do not use actual income in any period to determine the amount of their consumption expenditures, but instead are influenced by their estimate of some average, long-term amount that can be consumed without reducing their accumulated wealth (*J. William: 1980, p-55-66*) Suddenly increases or decreases in income are viewed by the consumer as temporary and therefore are expected to have little influence on consumption activity.

### **2.1.2.2 Behavioral Economics Models**

Behavioral influences on consumers were viewed as complication factors which could be assumed to cancel each other out. George Katona found this approach lacking and argued that an appreciation of how psychological variables influence consumers could lead to a deeper understanding of the behavior of economic agents (Katona: 1963). Katona's viewpoint, now known as behavioral economics, was fostered by important changes, which occurred in our economy, especially after World War 11. Rising income levels had given a large number of consumer's significant discretionary income spending power available after necessities had been purchased, In short, our economy had changed from one characterized as "much for few" to one described as "more for many" (*Katona, 1980, -6*)

A very simplified representation of Katonah, viewpoint appears in Figure, 2.1. As in traditional models, actual economic conditions are shown as influencing consumers. These economic conditions include the rates of interest, inflation, and unemployment, the level of the GNP, as well as more personal economic situations such as the household's current status regarding taxes, income, and debt. However, as the diagram shows with modulating arrows, rather than directly influencing the consumer, these actual economic conditions are modified by psychological factors, which include consumer's motivations knowledge, perceptions, and attitudes.



*Figure 2.1 A simplified representation of Katons's behavioural economics perspective.*

### **2.1.3 Contemporary Models of Consumer Behaviour**

As the study of consumer behaviour evolved into a distinct discipline, newer approaches were offered to describe and explain what influenced consumer behaviour. These contemporary views are quite different from previous models because of their concentration on the decision process that consumers engage in when deliberating about products and services. Therefore contrary to the economic models, emphasis is placed on the mental activity that occurs before, during and after purchases are made.

A second distinguishing characteristic of contemporary models is the extensive borrowing from material developed in the behavioural

science. In fact most of the variables discussed in these models were originally identified in the field of psychology and sociology.

A large number of contemporary consumer models have been developed, varying considerably in terms of their sophistication, precision, domain and scope. However due to space limitations only a few of the more widely quoted models will be reviewed here.

### **2.1.3.1 Nicosia Model**

Francesco Nicosia was one of the first consumer-behavior modelers to shift focus from the act of purchase itself to the more complex decision process that consumers engage in about products and services (Nicosia: 1966). The model is presented in flow-chart format, resembling the steps in a computer program. Also, all variables are viewed as interacting, with none being inherently dependent or independent. Thus the model describes a circular flow of influences where each component provides input to the next.

The model is viewed as representing a situation where a firm is designing communications (ads, product, etc.) to deliver to consumers, and consumers' responses will influence subsequent actions of the firm. Generally, as shown in figure 1.2, the model contains four major components or fields:

- The firm's attributes and outputs or communications and the consumer's psychological attributes.
- The consumer's search for and evaluation of the firm's output and other available alternatives.
- The consumer's motivated act of purchase.
- The consumer's shortage or use of the product.

Nicosia assumes that the consumer seeks to fulfill specific goals and that initially there is no history between the consumer and the firm, so no positive or negative predispositions toward the firm exist in the consumer's mind.

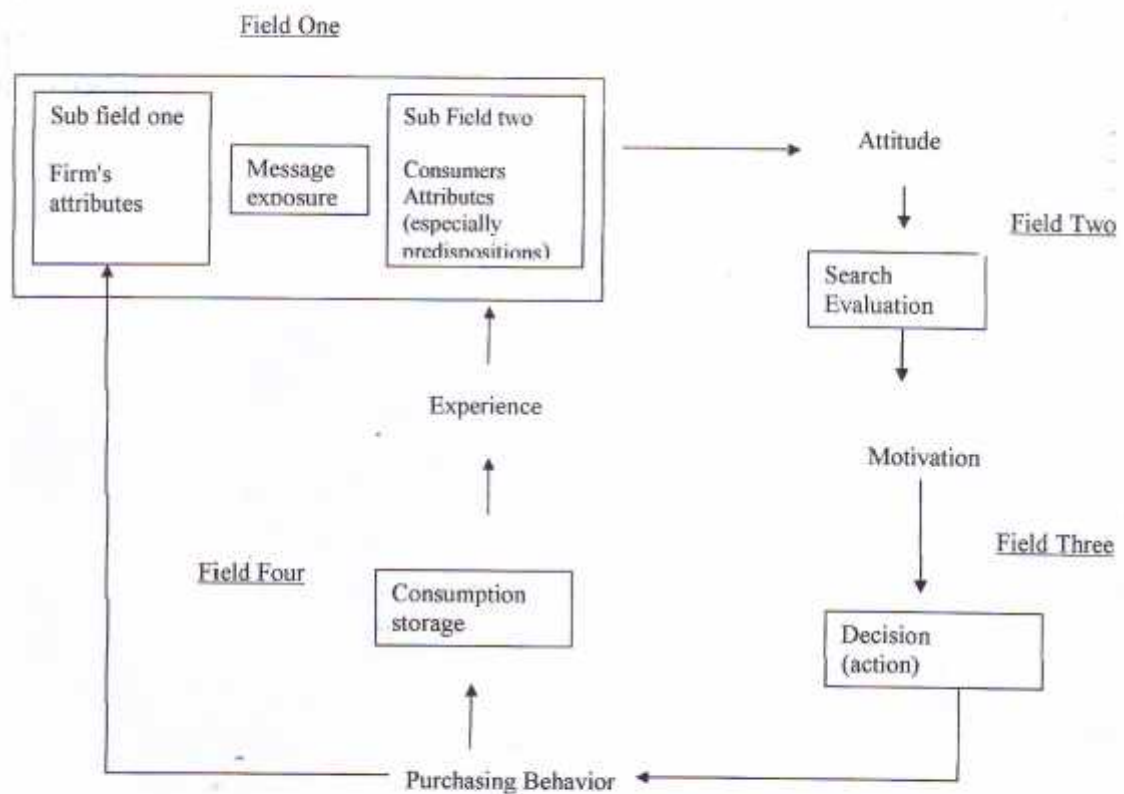


Figure-2.2 A summary view of the Nicosia model of consumer behavior.

As shown in the figure, the firm produces some communications that the consumer is exposed to Attributes of the message and the consumer determine the nature of the consumer's exposure to it and it influence on him. One consequence is that the message will influence the consumer's attitude toward the brand. This attitude is the input to field two.

The consumer will probably become motivated to gain information at that point, and search activity is likely to occur. Some search activity will involve searching internal memory for relevant information about the communication. External search may also occur, where the consumer visits store, reads, etc. This is likely to lead to evaluation. If the consumer processes relevant information and begins to favor the firm's brand he will be motivated toward it. If nothing intervenes,

this motivation is likely to lead to sopping activity and purchase of the brand. At this point a number of outcomes can occur. One outcome is that the firm receives feedback and another is that the consumer s attitudes towards the brand may change because he gains experience with the product during its storage and use. This product experience is feedback to the consumer's predispositions.

### **2.1.3.2 Howard - Sheth Model**

The Howard-Sheth model, depicted in figure 2.3, serves as an integrating framework for a very sophisticated comprehensive theory of consumer behavior (Howard and Sheth, the theory of Buyer Behavior, 1969). It should be noted that the authors actually use the term "buyer" in their model to refer to industrial purchases as well as ultimate consumers. Thus, it can be seen that their interest was to develop a unified theory useful for understanding a great variety of behaviors.

The model attempts to depict rational brand choice behavior by buyers under conditions of incomplete information and limited abilities. It distinguishes three levels of decision making:

#### ***\*Extensive Problem solving***

Expensive problem solving is the early stages of decision making in which the buyer has little information about brands and has not yet developed well defined and structured criteria by which to choose among products (Choice Criteria)

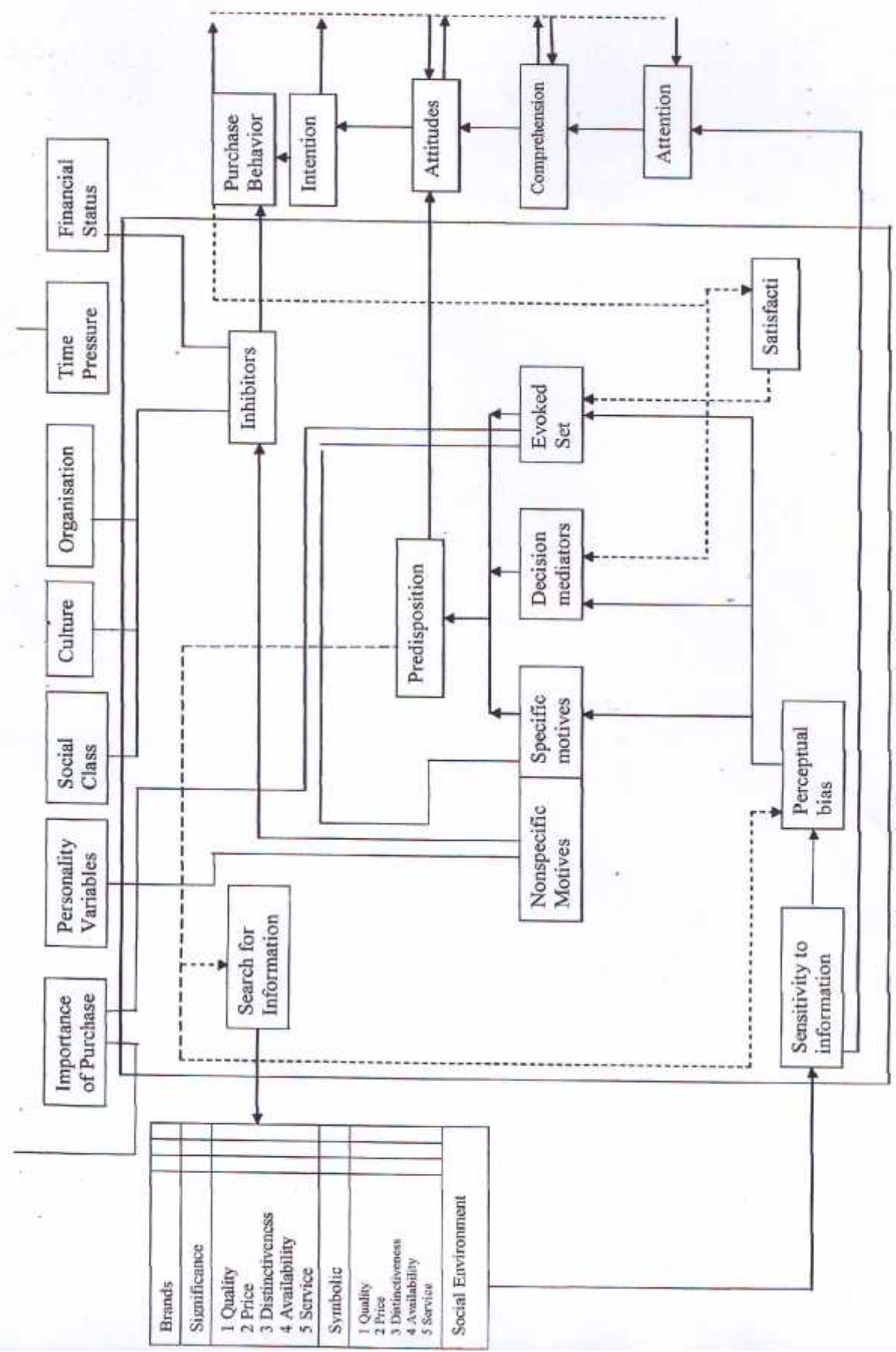


Figure 2.3 The Howard-Sheth Model of Buyer Behaviour.

### *\*Limited Problem Solving*

In this more advanced stage choice criteria are well defined but the buyer is still undecided about which set of brands will best serve him. Thus, the consumer still experiences uncertainty about which brand is "best"

### *Routinized Response Behavior*

In routinized response behavior, buyers have well defined choice criteria and also have strong predispositions towards one brand. Little confusion exists in the consumer's mind and he is ready to purchase a particular brand with little evaluation of alternatives.

The models borrowed from learning theory concepts to explain brand choice behavior over time as learning, takes place and the buyer moves from expensive to routinized problem solving behavior. Four major components have been explained as under.

### **Input Variables**

Input variable are shown in the left portion of the model as stimuli in the environment. Significant stimuli are actual elements of brands that the buyer confronts, while symbolic stimuli are generated by producers representing their products in symbolic form, such as in advertisements. Social stimuli are generated by the social environment including family and group.

### *Output variables*

Out put variables in the right hand portion of the model are the buyer's observable responses to stimulus inputs. They are arranged in order from attention to actual purchase and are defined as follows:

**Attention** - The magnitude of the buyer's information intake.

**Comprehension-** The buyer's store of information about a brand.

**Attitude-** The buyer's evaluation of a particular brand's potential to satisfy his or her motives.

**Intention-** The buyer's forecast of which brand he or she will buy.

**Purchase behavior -** The actual purchase act, which reflects the buyer's predisposition to buy as modified by any inhibitors.

**Hypothetical constructs**

A number of intervening variables are proposed, represented by hypothetical constructs in the large rectangular central "Box" Show in figure.2.3 They are categorized into two major groups.

- Perceptual constructs which deals with information processing.
- Learning constructs which deals the buyer's formulation of concept.

The three perceptual constructs of the model are as follows:

***Sensitivity to information-*** The degree to which the buyers regulates the stimulus information flow.

***Perceptual bias -*** distorting or altering information.

***Search for information-*** active seeking of information about brands or their characteristics.

The buyer's six learning constructs are defined as:

***Motive -*** general or specific goals impelling action.

***Brand potential of the evoked set-*** the buyer's perception of the ability of brands in his or her evoked set (those that are actively considered) to satisfy his or her goals.

*Decision mediator*- the buyer's mental rules for matching and ranking purchase alternatives according to his or her motives.

*Predisposition* - a preference toward brands in the evoked set expressed as an attitude toward them.

*Inhibitors* - environmental forces such as price and time pressure which restrain purchase of a preferred brand.

*Satisfaction* - the degree to which consequences of a purchase measure up to the buyer's expectation for it.

### **Exogenous Variables**

At the top of the black box the model lists a number of external variables that can significantly influence buyer decisions. These variables are not as well defined as other aspects of the model because they are external to buyer.

Although there are various aspects of the model that are beyond the scope of this report, a brief review of its operation is appropriate. The process starts when the buyer confronts an input stimulus and it achieves attention. The stimulus is subjected to perceptual bias as a result of the influence of the buyer's predispositions as affected by his or her motives, decision mediators, and evoked set. The modified information will also influence these variables which, in turn, will influence his or her predisposition to purchase.

The actual purchase is influenced by the buyer's intentions and inhibitors which are confronted. A purchase leads the buyer to evaluate his or her satisfaction with it, and satisfaction increases the buyer's predisposition toward the brand; As the buyer acquires more information about brands, he or she engages in less external search for information and exhibits more routine purchase behavior.

### 2.1.3.3 Eagle - Blackwell - Miniard Model

The Eagle-Blackwell-Miniard model was originally developed in 1968 by Eagle, Kollat, and Blackwell and has gone through numerous revisions (Eagle, Kollat, Blackwell; consumer behavior; 1990). Most recently the model has been developed by Miniard in conjunction with Engel and Blackwell (Engel, Blackwell and Miniard, consumer behaviour; 1990).

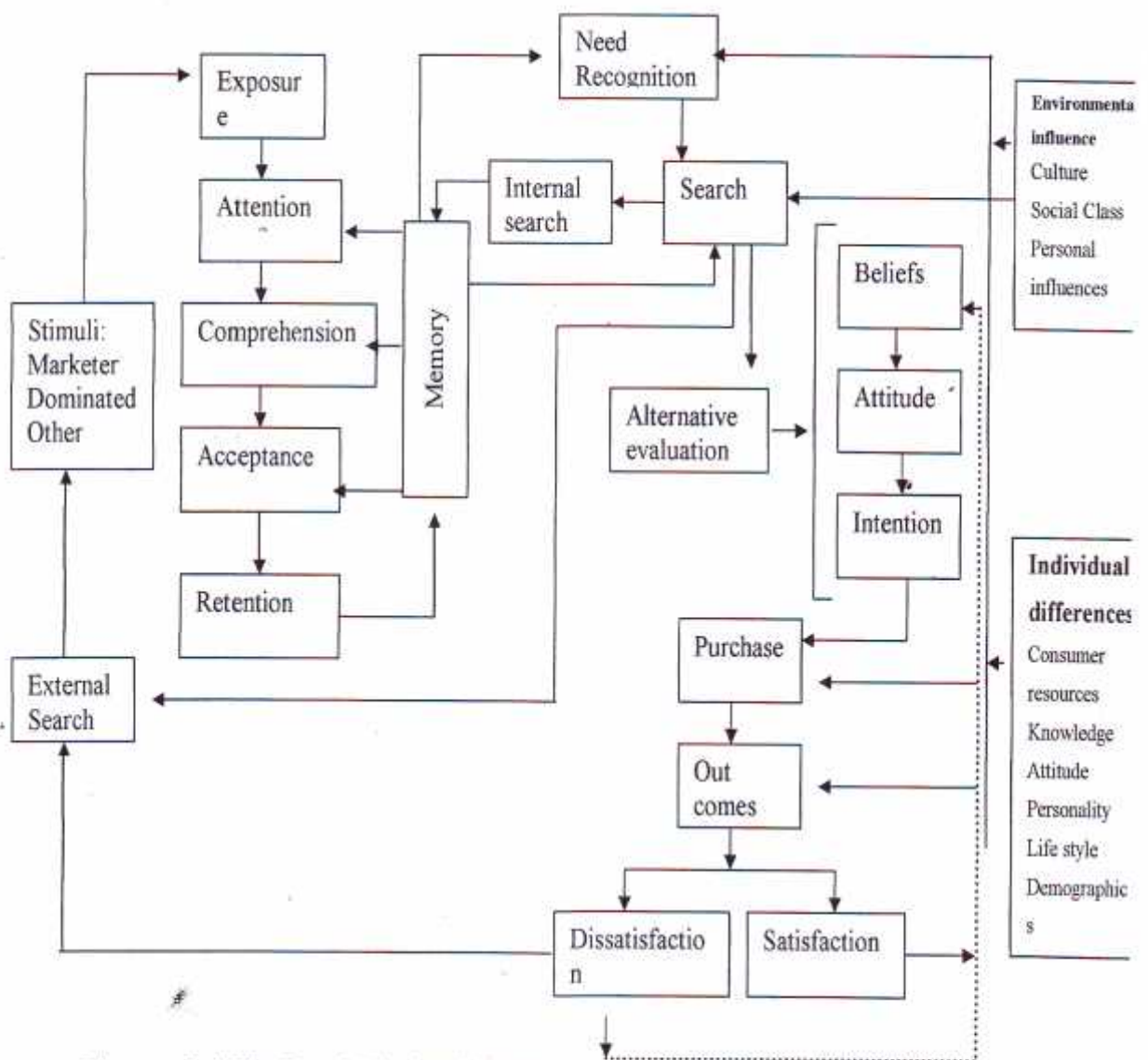


Figure – 2.4 The Engel Blackwell Miniard Model. of consumer behavior

Similar to the Howard-Sheth, Engel, Blackwell and Miniard model recognize to significantly different modes of operation by consumer. One is describe as extended problem solving behavior (EPS), which is characterize by high levels of involvement and/ or high levels of perceived risk. Under EPS the product evaluation process will be rigorous and if necessary the consumer will shop at many outlets. In addition, satisfaction with the brand is crucial for continued commitment to use the brand. In limited problem-solving behavior (LPS) the consumer is operation under low levels of involvement and/ or low levels of perceived risk. Consequently, he has low motivation to search for brand information and is only wiling to engage in a no rigorous evaluation of alternatives. He is not motivated to shop at many outlets and satisfaction with the purchase will encourage repurchase because of inertia, not real loyalty with the product.

First, the consumer searches internal memory to determine what is known about the alternatives and how auto choose among them. External search for information will be activated if the consumer dies not feel comfortable with his existing knowledge. The likelihood of external search is also affected by characteristics of the individual (low risk takers will tend to seek more information, etc) and environmental influences such as the urgency of need.

Any informational inputs are subject to information processing activities, which the consumer uses to derive meaning from stimuli The first step in processing involves exposure to such stimuli. Exposure can happen on an involuntary basis-such as when one sees a billboard next to a highway- or through the active search for information. After exposure, stimuli must capture the consumer's conscious attention to significantly influence extensive problem solving. The attention stage is highly selective since it tends to ignore most stimuli and admits only those that the individual believes are important. The comprehension stage then involves deriving meaning from information that has been attended to, and holding this meaning in what is termed

short-term memory where it can be retained briefly to allow further processing. The final two steps of information processing are related to the third stage of the decision process-alternatives evaluation. The alternative evaluation; stage involves comparing information about alternative brands gained through the search process to evaluative criteria which are product judging standards that have been stored in permanent memory. The first information-processing step associated with this evaluation task is termed acceptance. Acceptance occurs when information is compared to evaluative criteria and, as a result, existing beliefs held in permanent memory are either reinforced or changed. Whether the information tends to reinforce or to change existing beliefs is a function of how consistent it is with the beliefs and the degree to which the consumer generates supportive or negative thoughts about the information being received. In either case, acceptance results in the retention of information in permanent memory, while a lack of acceptance results in the loss of such information.

Generally, the most common path is the information acquired is used to evaluate alternatives and this leads to changes in beliefs about the brands. This, in turn, leads to changes in attitudes and intentions to purchase.

Brands Judged against evaluative criteria are likely to have some features either positive or negative. In EPS these results tend to compensate for one another so that the consumer develops an overall weighted judgment of each brand.

The alternative evaluation process leads to an intention to make a purchase of the most favorably evaluated brand. Unless situations (lack of money, uncertainty about future income, etc) intervene to postpone or stop the process, intentions will lead to actual purchase behavior. At this point the consumer begins to use the products and evaluation continues by comparing performance to expectations. One outcome is satisfaction but if the alternative does not meet expectations, dissatisfaction is the result. These results may lead to further search for

information about the brand and/or changes in beliefs. Thus, the process is seen as a continuous one that does not stop with a purchase.

In limited problem-solving situations, the consumer is not highly involved and a number of the stages are shortened or pursued by the consumer with less vigor. For example, need recognition often occurs because the consumer has just run out of the product. External search is also likely to be minimal and often information is acquired by just seeing ads and "running into" the sources of product information. Alternatives are often evaluated by determining whether they meet some minimal level of acceptability, and purchase is made with minimal deliberation. If the brand meets expectation, repurchase is likely but brand loyalty is not likely due to the lack of involvement.

**Bettman's Information Processing Model of Consumer Choice** (*Bettman, 1990:P. 659-663*)

The Bettman's model has seven basic components;

- i. Processing capacity.
- ii. Motivation.
- iii. Attention and perceptual encoding.
- iv. Information acquisition and evaluation.
- v. Memory.
- vi. Decision processes.
- vii. Consumption and learning processes.
- viii. Scanner and interrupt mechanisms.

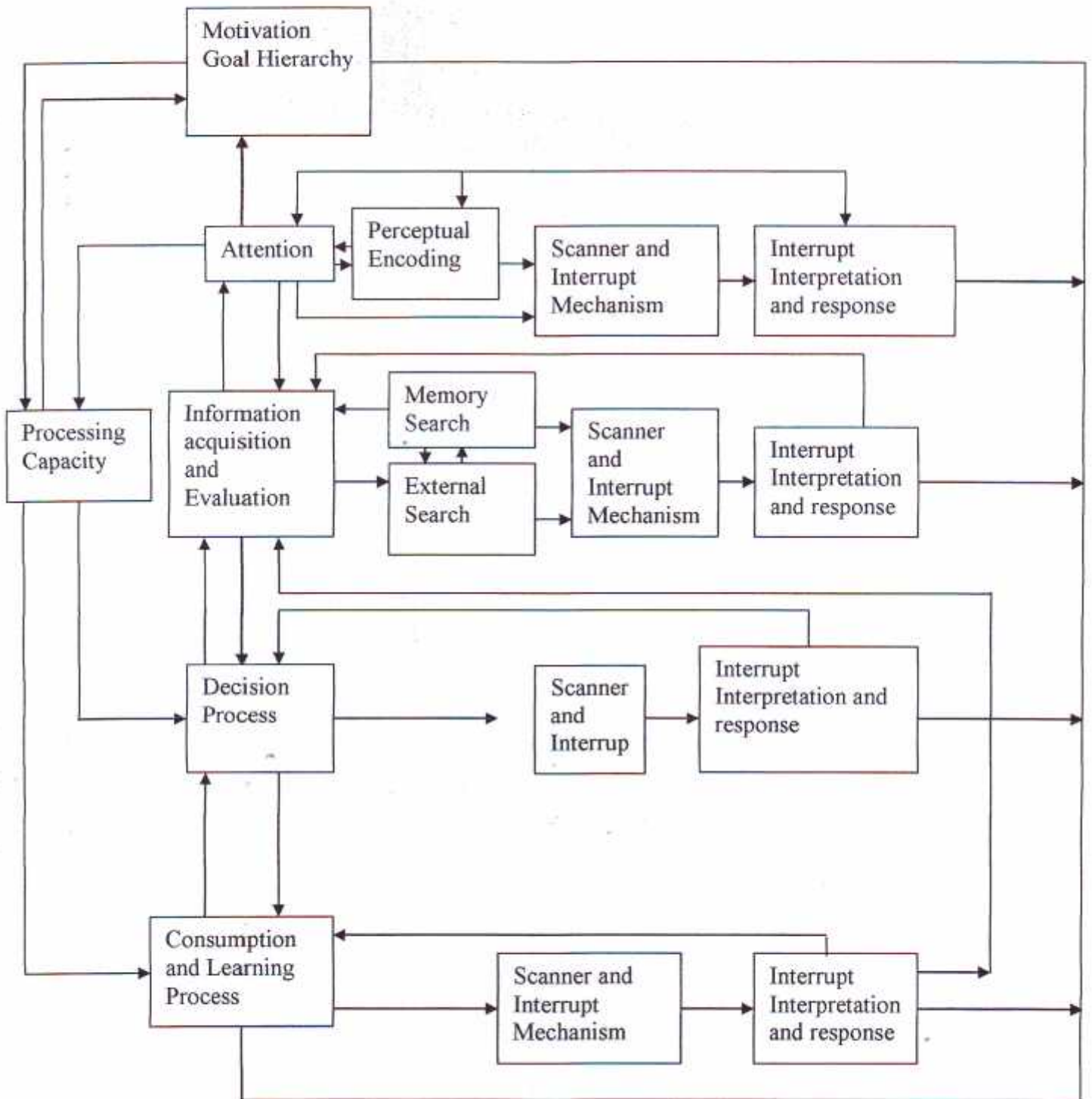


Figure 2.5 Bettman's Information Processing Model of consumer choice.

### Sheth- Family Decision Making

The Sheth-family decision making model considered the family as the appropriate consumer decision making unit and it suggests that joint decision making tends to prevail in families that are middle class, newly married and

close-knit, with few prescribed family roles. In terms of product specific factors, it suggests that joint decision making is more prevalent in situation of high perceived risk or uncertainty, when the purchase decision is considered to be important, and when there is an ample time to make a decision (*Sehiffman and Kanuk, 1993-p.571-583*).

### **Sheth-Newman- Cross Model**

The Sheth-Newman-cross Model of consumption value was recently developed to explain why consumers make the choice they do. The model concentrates on accessing consumption-relevant value that explain why consumer choose to buy or not to buy (to use or not to use) a specific product, why consumer choose one product type over another and to durable, consumer durable, industrial goods and services (Sheth, Newman and Cross). The Sheet-Newman-cross model is rooted in three central propositions.

- i. Consumer choice is a function of a small number of consumption values.
- ii. Specific consumption values make differential contribution in any given choice situation.
- iii. Different consumption values are independent.

This model of consumer choice behavior identifies the five consumption values, namely.

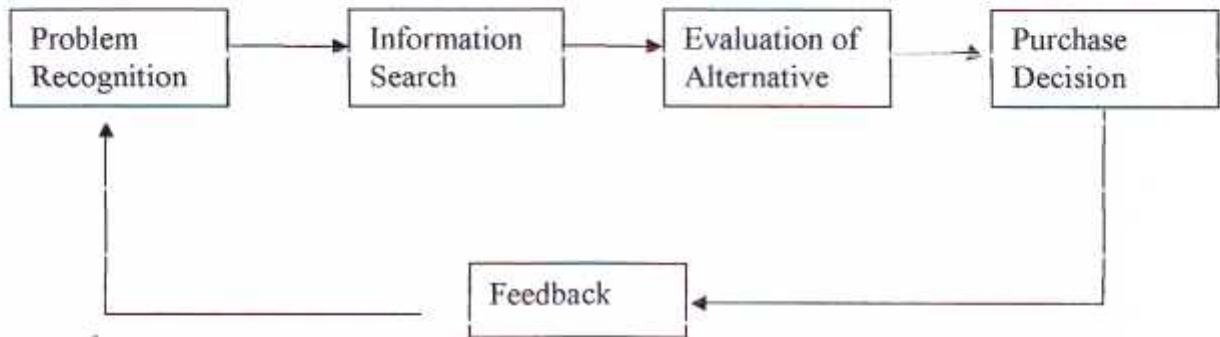
- a. Functional value
- b. Social value
- c. Emotional value
- d. Epidemic value
- e. Conditional value

Of the entire consumer behavior model presented here, only the Howard and Sheth model have been subjected to more than a minimum of systematic testing. The Engle, Kollat, Blackwell model ha received only modest small scale testing and the Nicosia and Bettman model have

not been tested at all (*Schiffman and Kanuk, 1992:p. 66-*). Sheth family decision model deals family decision-making and Sheth, Newman- cross model is concerned with consumption values especially why consumers choose to buy or not to buy a specific product, or a specific brand.

Although the number and complexity of operations carried out by a consumer varies with the type of purchase involved, the consumer buying in general has been regarded as a problem solving i.e. extensive problem solving, limited problem solving and routinized response behavior, the consumer decision process involves myriad of decisions made with respect to the choice of the product, brand, vendor, buying quantity, delivery time, mode of payment etc.

A normative consumer decision process model as postulated by Howard and Sheth (1969), Nicosia (1969), Engel, Kollat and Blackwell (1968) and Andreasen (1966) involves five step of problem recognition, information search, alternative evaluation, choice and outcomes. As argued by Bettman (1978) these steps however need not be sequential. According to him it is too simplistic a view to say that decisions are made after all necessary information regarded has been gathered because choice and information acquisition occur simultaneously. Moreover the stages decision processes are also affected by decision inputs (Marketing mix offered by the forms) and socio -cultural background of the decision maker (Schiffman and Kanuk 1990). The chief assumption of such flow chart model of consumer decision-making is that alternatives exist for a buyer and he/she is rational enough to judge the consequences of each action on him/her by evaluating them on the basis of information available either in their memory or from external sources of information A brief description of different components of consumer decision process follows which might be able provide an understanding of the entire complete scale of consumer decision and the specific aspects thereof reviewed in this chapter .



*Figure 2.6 A simplified summary of consumer decision process*

***Problem Recognition***

The existence of a problem (ungratified needs) trigger off a series of activities that end up with a choice made by the buyer's consumer's need for a product or product class may be aroused either by internal stimuli such as hunger, thirst or sex or by internal stimuli resulting from consumer's interaction with the external environment for example, raining may cause a consumer consider the purchase of a raincoat or umbrella.

***Information Search***

Unlike in routinized response behavior in which problem recognition automatically leads to choice behavior due to previous learning in the purchase of low involvement items like groceries in a unique purchase situation devoid of previous learning and experience, problem recognition leads to search for information either form internal sources (memory) or from external sources such as friends, relatives, colleagues, reference groups, advertisements, dealers, product testing organization etc.

information search enables consumers to develop a set of buying alternatives from among which they can make a choice. The emergence this situation pushes them ahead to the next step of decision process.

#### *Evaluation of Alternative.*

Having come up with a set of buying alternatives, consumers tend to evaluate each of them on their attributes and their relative worth to them to arrive at the final choice. Consumers may use various compensatory and non compensatory models while evaluating alternatives on different dimensions. No matter how they are evaluated, consumers at this stage are able to come up with the decisions as to the brand they would buy.

As indicated by the previous research works, consumers also tend to use simplifying strategy and instead of making rigorous comparisons of alternative brands, simply choose a brand on the basis of the recommendation of other.

#### **Purchase Decision and outcomes.**

Consumers evaluate their preferences across alternative brands and they are likely to choose the brand, which is most preferred. At this stage, consumers execute their purchase intention.

Satisfaction or dissatisfaction with the newly bought product may be the outcomes of the execution of purchase intention. While positive experiences tend to routinized decision process, the negative experience may stimulate buyers to consider new alternatives and undertake increased amount of search in similar buying situation if future.

To the best of our knowledge, no attempt has been made so far to empirically test the validity of flow chart process of consumer decision making as theorized by Howard and Sheth and others. Some of its components have been empirically examined. In particular, search and choice behavior are the aspects.

#### 2.1.4. Introduction of Advertising

Advertising is directed toward a group of people who are also called prospects to influence in the buying decision. This view may be clear by the view of Kenneth A. Longman. He has said, "when a persuasive communication is directed toward large group of individuals it is called advertising."

Advertising media is the vehicle through which advertiser's message goes to target audiences. It is the vital connection between the company the company that manufacturing a product and consumers who buy it. Advertising media is a type of communication. Producers want to give a lot of information about his products but he cannot do so by his personal efforts by personal contact or by mail. "The advertising media is the carrier of the advertising message" (C.H. Sandage and Vernon Fry Burger, 1985).

i. Newspapers	vi. Outdoor
ii. Magazine - Customers Magazines - Business Publications - Professional Journals	vii. Other - Dealers Display - Packages, Labels, Insert - Theaters, Screen - Novelties
iii. Radio	
iv. T.V.	
v. Direct Mail	

"The medium or communications channels can be impersonal or interpersonal" (Leon G. Schiffman, Kanuk, Lazor, 2002). Mass media consists.

Newspapers, magazines, billboards, radio, T. V. internet, and interpersonal media are an internal/external conversation between a sales persons and customers. In this study, the researcher wants to evaluate the effectiveness of mass media used by the company.

#### **2.1.5.1 Introduction of Promotional Activities.**

Promotion, one of the four major variables with which the marketing manager work, is communication information between seller and buyer with a view to changing attitudes and behavior. The marketing manager's job is to tell target customers that the right product is available at the right place, at the right price.

"Promotion is the ingredient used to inform and persuade the market regarding a company's product. Advertising, personal selling, and sales promotions are the major promotional activities. " (W.J. Stanton and Futrell, 1998, p56)

The major promotional methods include personal selling, mass selling, and sales promotion. Personal selling involves direct face to face relationship between sellers and potential customers. Mass selling is design to communicate with large number of customers at the same time. Advertising is the main form of mass selling, but it also involves publicity. Sales promotion refers to specific activities that complement personal and mass selling such as point of purchase displays, booklets, leaflets, and direct mailing.

Companies face the task of distributing the total promotion budget over the five promotional tools advertising, sales promotion, public relations and publicity, sales force and direct marketing. Within the same industry, companies can differ considerably in how they allocate their promotional

budget. It is possible to achieve a given sales level with varying promotional mixes. (*Philip riottler, 1980, p622*).

It is the variable that communicates to the consumer about other variable of marketing mix for their need of satisfaction. It consists of advertising, publicity, personal selling and sales promotion. In this study, promotion schemes are under the crown (UTC), X percent quantity extra or free, X item free with purchase of pet bottle, rupees X discount oil popular music concert and submission of special wrapper launched by the Organization.

(Note: X denotes certain)

## **2.2 Review of Previous Studies in Nepal**

Some researchers have conducted research on consumer behavior in Nepal. The researchers have tried to highlight only on a single aspect of cold ormxs consumer oenavior or their market.

A dissertation entitled "**The Marketing of Cold Drinks in Narayanghat**" has addressed on the following major objectives (*Ratna Prasad, 1998*)

- ) To examine the potential consumers in purchasing cold drinks.
- ) To identify the purchase behavior of consumers who purchase cold drinks.
- ) To estimate demand of cold drinks in Narayanghat.
- ) To identify the best choice of consumers on cold drink the basis of selecting brands and advertising, habitual testing, asking questions and personal inspection.
- ) To find the relationship between the brand preference and advertising.

- ) To find out the popular media of advertising for the cold drinks which can easily attract the potential consumers on each company's branded cold drink.
- ) To estimate sale of cold drinks in Narayanghat.

The major findings of the study are:

- ) Pepsi-cola is increasing gradually while Coca-cola is highly increased among the cold drinks due to different advertising strategies.
- ) Advertisement expenditure of Coca-cola is much higher than that of Pepsi-cola in each fiscal year.
- ) Most of the consumers have been found consuming cold drinks of Coca-cola brand in the market.
- ) NTV is the most popular media in Narayanghat city, while Radio Nepal holds the second position and wall painting the third.
- ) Consumers give more preference to the brand but less preference to the quality and taste.
- ) Advertisement of Coca-cola in NTV and on Radio is much more attractive than that of Pepsi-cola.
- ) Cinema halls advertising techniques also have greater influence of Coca-cola's consumers.

Another dissertation entitled "**Advertising Through Television: Impact on Consumer Behaviour**" has presented on the following major objectives (*Ram Bahadur, 2000*).

- ) To identify the present situation of TV, advertising of NTV
- ) To know what kind of advertising they prefer.
- ) To know how the different group of people perceive the advertisement from television and their reaction about advertising.

The major findings of the study are:

- ) Mostly children, young age, and old age people prefer musical advertisement where as others prefer good wording advertisements.
- ) Considering the education factor of the people mostly below S.L.C., S.L.C and uneducated people prefer musical advertisements where as other people prefers good wording advertisements.
- ) Considering the sex, female consumer prefers musical advertisement rather than advertisement with good wording and vice-versa.
- ) Most people gave first preference to advertisement from TV. Followed by newspaper, radio, magazine, and cinema respectively.
- ) Many people watch the NTV advertisements.
- ) Most of the people buy the products when they need and watch the advertisement.
- ) Repetition of advertisement attracts people's attention.
- ) Few TV advertisements are good, few are boring.
- ) People prefer to choose advertised products, if the price and quality of both products are same.
- ) Advertisement helps to recall the brand or product name while buying.

One another dissertation entitled " **A Study on Buyer's behaviors of Indian Gorkhas and local people: With Special Reference to the Vyas Municipality, Thanahau**" has addressed on the following major objectives (*Jagat Timilsina 1998*)

- ) To find out the brand preference and purchase frequency of the clothing approval.
- ) To find out the shop awareness, purchase frequency of the clothing approval.
- ) To find out the criteria used by the Indian-Gorkha and local people for choosing a particular brand, product and shop and their importance.

- ) To compare the buying behavior of the Indian-Gorkha and the local people.

The major findings of the study are:

- ) Majority of respondents used Indian and Chinese branded clothing apparels. The main reasons for selecting these brands were price, quality, and easily availability of Nepalese clothing apparels in wide range of variables high risk for Nepalese brand. Foreign brand is considered as quality brands.
- ) Clothing apparels were bought on either the half - yearly or the yearly basis.
- ) So far as the shop awareness was concerned majority of Indian Gorkhas and local people have low level of awareness regarding name and brand.
- ) Concerning to the purchase location, local market seems to be the favorite place for purchasing.
- ) So far as the criteria used to choose a product is concerned, price, quality, durability seemed to be the most prominent decisive criteria for a brand choice.
- ) Availability of wider varieties of clothing apparels attracts large number of customer in the shop.
- ) Majority of Indian Gorkhas and local people were involved in bargaining and have a favorite attitude towards bargaining.
- ) The behavior of shopkeeper was an important determinant for favorable response from customers.

### **Research Gap:**

From the above literature ,the research on the study of consumer behaviour related with soft drinks have not been made yet.so,the consumer behaviour of pepsi in birgunj will be the relevant study in this field.so,I have selected the topic “ pepsi consumers behaviour ” (with special reference to birgunj) for my master’s degree thesis.

## CHAPTER THREE

# RESEARCH METHODOLOGY

Research is the systematic and scientific effort in order to identify the truth. It is a fact-finding action. Thus research is searching and answers to questions. It is a systematic and organized effort to investigate a specific problem that needs a solution (*Sekaran, 1992*)

Methodology is the set of research methods used to collect information, analyze and interpreted the data and test the hypothesis. Therefore, methodology can be designed as a systematic procedure of solving the problem. It may be understood as a science of studying how research is done scientifically.

In this study, the research methodology includes Research design, Nature and sources on data, Sampling plan, Data collection procedure, and Data procedures, which are explained and presented below:

### **3.1 Research Design**

Research design is scheme for doing research work. It is the plan, structure, and strategy of investigation conceived so as to obtain answers to research questions and to control variance.

It is always purposeful scheme of action purposed to be carried out in a sequence during the process of research, focusing on the management problem to be tackled (*Michael, 2000*)

Research design is the plan, structure, and strategy of investigation conceived so as to obtain answers to research questions and to control variance (*Karlinger, 1986; 275*)

Basically, the research design has two purposes. The first purpose is to answer the research question or test the research hypothesis. The second purpose of a research design is to control variance. Several typologies have suggested for classifying a wide variety of research designs used in social science research. Mc Grath (1970) suggested five models of different types of research designs; controlled experiment, study, survey, investigation, and action research. Seltzer and others (1962) suggested three broad categories of research design; formative or exploratory studies, and studies testing causal hypothesis, Boyd, West, Stasch.

There are mainly two type of research design- exploratory and descriptive. Exploratory design is essential for formulating hypothesis. It is done to investigate possible cause and effect relationship by exposing one or more control group to one or more treatment conditions and comparing the results to one or more control, groups but not receiving the treatment. Descriptive research design is a type of fact-finding research. It is conducted under respondents' options.

The descriptive research designs will be followed in the study. Such designs provide a description of a specific situation in such a ways as to help the researcher identify cause and effect relationship.

The study is basically based on survey research. To examine the consumption behavior of student, businessman, and service holder on Pepsi products is the main objective of the study. Therefore, a survey research design was applied to fulfill this objective.

### **3.2 Nature and Sources of Data**

Data are mainly two types, one is primary and another is secondary. Primary data are the first hand data, generated by original research to solve the specific and current research questions the major advantage of primary data is that the information is specific, relevant, and up-to-date. There are two principle methods of collecting primary data; observation and questionnaire.

Secondary data are information that are already collected for other purposes and is readily available. The major advantage of this type is its easy availability. The major advantage of this type is its availability and lower cost than primary data. For this study, both primary and secondary data and information are used. But the research is mainly based on primary data or original data collected direct through questionnaire,

### **3.3 Sampling Plan**

Sampling is the practice of selecting group of consumers considered to be representative of the entire population, because it is neither feasible nor practical for research to contact to all the members of a population.

Sampling plan consists the target population, sampling unit, and sample method.

#### **3.3.1 Target Population**

The target population of this study consists of three distinct groups of consumers; the student, the businessman, and the service holder, who are consumers of Pepsi products.

### 3.3.2 Sample Unit

The target population is very large; therefore from the whole population 100 samples were taken. It is expected to provide a useful basis for understanding consumer behavior of Pepsi product.

Sampling units for this study were occupational groups of consumers, business, students and service, who are located in The sample profiles are presented below, categorizing them into sex, age, and education groups.

**Table 3.1**  
**Sex Group of Consumers**

Occupation	Business	Student	Service	Total
Sex	No. (%)	No. (%)	No. (%)	No. (%)
Male	10 (40)	30 (60)	10 (40)	50 (50)
Female	15 (60)	20 (40)	15 (60)	50 (50)
Total	25 (100)	50 (100)	25 (100)	100 (100)

**Table 3.2**  
**Age Group Of Consumer**

	Business	Student	Service	Total
	No.(%)	No.(%)	No.(%)	No.(%)
16-20	0 (0)	22 (44)	4 (16)	26 (26)
21-30	15 (60)	26 (52)	14 (56)	55 (55)
31-40	5 (20)	2 (4)	5 (20)	12 (12)
41 to above	5 (20)	0 (0)	2 (8)	7 (7)
Total	25 (100)	50 (100)	25 (100)	100 (100)

**Table 3.3**  
**Educational group of Consumers**

	Business	Student	Service	Total
	No(%)	No(%)	No(%)	No(%)
Under SLC	0 (0)	10 (20)	3 (12)	13 (13)
SLC/Int.	10 (40)	20 (40)	5 (20)	35 (35)
Graduate	10 (40)	20 (40)	7 (28)	37 (37)
Above Graduate	5 (20)	0 (0)	10 (40)	15 (15)
Total	25 (100)	50 (100)	25 (100)	100 (100)

### 3.3.3 Sampling Method and Procedure

Sampling methods are classified into two broad categories; probability sampling, and non-probability sampling.

Probability samples consists of simple random sampling, stratified random sampling, cluster sampling, and systematic sampling. Non-probability sample consists of convenience sampling, quota sampling, and judgmental sampling.

The respondents are identified and served a set of structured questionnaire. The respondents are chosen on personal contact basis. The respondents are randomly selected from different academic background (under SLC to above graduate), different sex group (male and female), and different occupational group (businessman, student, and service holder).

### **3.4 Data Collection Procedure**

The data have been collected through a self-administrated questionnaire survey at respondents place at mutually convenient time. The respondents were supported by oral explanation at that point where they got confused or unable to understand content of the questionnaire. Sample of the questionnaire is given in annex A. Besides, the researcher had personally observed the buying activities of the consumer's of Pepsi products.

### **3.5 Analytical Tools and Procedure**

The primary data and information collected from survey method are grouped into homogeneous nature. After that required tables have been prepared in an understandable form. In course of tabulation, the collected data have been presented by giving them different ranks. Similarly, the secondary data have been rearranged in tabular foim according to need.

Statistical tools such as percentage and Chi-square test are used. They are as follows.

- a) Percentage (%)-Percentage is mostly used measurement tools. It helps to analyze comparatively
- b) Chi-square test ( $\chi^2$ )

The chi square test is used basically to test the significant difference between the actual (observed) frequency and the expected frequency based on the null hypothesis. In other words, it is used to test whether more than two population are classified into several categories with respect to two attitudes. It can be used a chi-square test to determine if the two attributes are independent of each other. If we have a set of observed frequencies and we want to test

whether a particular distribution support of hypothesis  $X^2$ . Test is used to test the goodness of fit.

### Steps in computing Chi- Square ( $X^2$ ) test (S C Gupta, 1990)

**Step 1** Complete the expected frequencies  $E_1, E_2, \dots, E_n$  corresponding to the observed frequencies  $O_1, O_2, \dots, O_n$ , under some theory or hypothesis.

**Step 2** Complete the deviation  $(O-E)$  for each frequency and then square them to obtain  $(O-E)^2$

**Step 3** Divide the square of the deviation  $(O-E)^2$  by the corresponding expected frequency to obtain  $(O-E)^2/E$

**Step 4** Add the values obtain in step 3 to complete  
$$X^2 = \sum [(O-E)^2/E]$$

**Step 5** Under the null hypothesis that the theory first the data well, the above statistic follows,  $X^2$  distribution =  $(n-1)$  d.f

**Step 6** Look up the tabulated values of  $X^2$  for  $(n-1)$  d.f at certain level of significance, usually 5% from the table. {Significance value of  $X^2$  at different d.f. are given in the table}

Critical region of  $X^2$  test statistic is obtained from the  $x^2$  table, which is given for combination of the level of significance ( $\alpha$ ) and the corresponding degrees of freedom (d.f). In case of testing the independence among the attributes in contingency table the d. f =  $(r-1)(c-1)$ , where  $r$  is the no. of rows and  $c$  is the number of columns. If the calculated value of  $X^2$  obtained is less than the corresponding tabulated value, it is said to be non significant at the required level of significance. It means data. not provide any evidence against the null hypothesis, which may therefore be speed at the required level of significant and we may conclude that there is good fit between theory and practice.

## CHAPTER FOUR

# DATA PRESENTATION AND ANALYSIS

Since this chapter is analytical and interpretive in nature, it consists of various activities that the researcher has undertaken. First, collected data were sorted out in accordance with their homogeneity. Then they were presented in suitable tables with appropriate headings to provide clear picture of what was intended to show. While preparing these tables, it was tried to the best to remove complexities. In course of analysis, both the mathematical and statistical tools, which were previously explained in the third chapter, were used. The researcher interpreted the tabled data taking into account three angles. In the first angle, simply the exact figurative explanation ,was made, In the second angle, what these data meant for was drawn to. But in the last angle, various causes why certain occurrences took place were explored.

This chapter, particularly, consists of the analysis and interpretation of the following:

- Consumption pattern of Pepsi consumers.
- Degree of consumers' satisfaction.
- Effectiveness of promotional schemes of the company.
- Effectiveness of advertising media of the company.
- Location, store, and brand awareness of consumers
- Factors influencing consumer's purchase decision.

#### 4.1 Consumption Pattern of Pepsi Consumers

The opinion survey undertaken by the researcher, relation to their consumption pattern and consumption time, reveals that the respondents have varying consumption behavior. The data have been presented in Table 4.1. And Chart 4.1 makes it more obvious.

**Table 4.1**  
**Consumption pattern of Pepsi Consumers ( In a week)**

Respondent No. Of Time	<b>Business Group</b>	<b>Student Group</b>	<b>Service Group</b>	<b>Total</b>
	No. (%)	No (%)	No. (%)	No (%)
1to 3 times	5 (20)	12 (34)	5 (20)	22 (22)
4to 7 times	10 (40)	25 (50)	10 (40)	45 (45)
8to 11 times	8 (32)	8 (16)	5 (20)	21 (21)
12 to above Times	2 (25)	5 (10)	5 (20)	12 (12)
Total	25 (100)	50 (100)	25 (100)	100 (100)

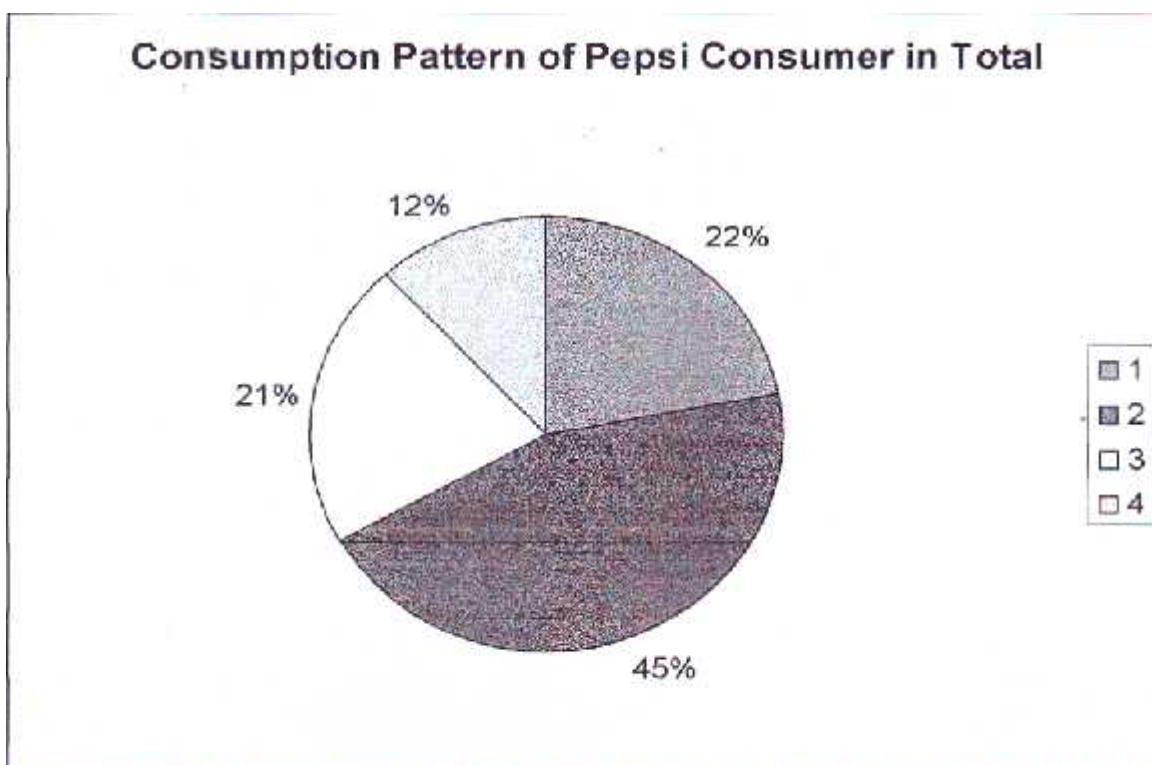
The above table shows that among business group, twenty percent respondents opined that they used Pepsi products 1 to 3 times, forty percent expressed their opinion that they used to drink 4 to 7 times, thirty two percent respondents expressed their opinion that

they consumed these products 8 to 11 times, and only eight percent of them were found drinking them 12 and above times within a week.

Those representing students have also more or less the same behaviour. Twenty four percent student group of Pepsi consumers drink 1 to 3 times, fifty percent respondents 4 to 7 times, sixteen percent respondents 8 to 11 times, and only ten percent of them were likely to drink these products 12 and above times in a week.

Those who are under service group expressed different opinions. Twenty percent of them used Pepsi products 1 to 3 times, forty percent consumers 4 to 7 times, twenty percent of them 8 to 11 times, and 12 and above times respectively within a week.

**Chart 4.1**



Out of total consumers forty five percent were found drinking Pepsi products 4 to 7 times, twenty two percent consumers 1 to 3 times, twenty one percent respondents drink these products 8 to 11 times, whereas twelve percent consumers drank either 12 times or more within a week.

From above explanation, it is clear that most of consumers consume Pepsi products 4 to 7 times in a week. However, more or less the consumers consume these products 1 to 3 times and 8 to 11 times respectively.

When the hypothesis was tested taking into account  $\chi^2$  test, the calculated value came 5.8684 (Appendix - B). The table value for 6 degree of freedom (d.f) at 5% level of significance is 12.59 (Appendix - A), which is greater than the calculated value. So, the null hypothesis is accepted. It means there is independent response of the occupational group.

About time related consumption behaviour, the researcher again got various responses, which are shown in Table 4.2.

**Table 4.2**

**Time - Related Usage Behaviour of Pepsi Consumers**

<b>Respondents</b>	<b>Business Group</b>	<b>Student Group</b>	<b>Service Group</b>	<b>Total</b>
<b>Time</b>	<b>No. (%)</b>	<b>No. (%)</b>	<b>No. (%)</b>	<b>No. (%)</b>
Noon	17 (68)	42 (84)	19 (76)	78 (78)
Evening	4 (16)	14 (28)	4 (16)	12 (123)
Night	3 (12)	2 (4)	2 (8)	7 (7)
Morning	1 (4)	2 (4)	-	3 (3)
<b>Total</b>	25 (100)	50 (100)	25 (100)	100 (100)

Table 4.2 shows that out of total consumers, 68% business group respondents, 84% student group consumers, and 76% service group consumers preferred Pepsi products to use at noon. But in aggregate, 78% of total respondents used to drink these products at that time. In this way, it can be said that consumers were likely to drink Pepsi at noon.

The above table also shows that 16% business group respondent, 28% student group respondents, and 16% service group consumers were likely to use Pepsi products in the evening. Among total respondents, only 12% consumers preferred to drink these products at that time. Evening is the secondly preferred time to take Pepsi products by the consumers.

So far as the consumption pattern is concerned, 12% of the total business group respondents, 4% of total student group consumers, 8% of service group respondents, and 7% of aggregate consumers prefer to consume Pepsi products at night time. From this explanation, it is clear that according to the respondents, nighttime was the third most preferred time to take Pepsi products.

While studying consumer behavior of different groups of Pepsi users on the basis of morning time, only 4% business group and student group respondents were in favor of using at that time. In totality, only 3% of total consumers were likely to drink Pepsi products at morning. As above analysis, morning time is lastly preferred to drink Pepsi products by the consumers.

In order to test the hypothesis,  $\chi^2$  was used. The calculate value of  $\chi^2$  at 5% level of significance appeared 14.4687, and the table value of  $\chi^2$  test for 6 d.f. at 5% level of significance is 12.59 (Appendix A). Since calculated value of  $\chi^2$  is grater than the table value, the null hypothesis ( $H_0$ ) is rejected or

alternative hypothesis ( $H_A$ ) is accepted. In another words, the views expressed by respondents group were significantly different.

#### 4.2 Degree of Consumer Satisfaction

In this study, the researcher categorized the degree of consumer satisfaction into five parts; highly satisfied, satisfied, normally satisfied, dissatisfied, and highly dissatisfied. Here, the researcher tried to measure the degree of consumer's satisfaction with available Pepsi products. Table 4.3 represents the responses obtained.

**Table 4.3**  
**Degree of Consumer's Satisfaction with Available Pepsi Product**

Degree of Satisfaction	Respondents	Business Group	Student Group	Service Group	Total
	of	No. (%)	No (%)	No (%)	No (%)
Satisfied		8 (32)	19 (38)	12 (48)	39 (39)
Normal		9 (36)	16 (32)	7 (28)	32 (32)
Highly Satisfied		4 (16)	10 (20)	3 (12)	17 (17)
Dissatisfied		2 (8)	2 (4)	2 (8)	6 (6)
Highly Dissatisfied		2 (8)	3 (6)	1 (4)	6 (6)
<b>Total</b>		<b>25</b> <b>(100)</b>	<b>50</b> <b>(100)</b>	<b>25</b> <b>(100)</b>	<b>100</b> <b>(100)</b>

Among the business group, 32% respondents opined that they were satisfied, 36% expressed that they were normally satisfied, 16% said that they were highly satisfied with the available Pepsi products in the market. Both the consumers, who were dissatisfied and highly dissatisfied with the available Pepsi products in the market, represented 8% each. From above analysis, we can say that most of the business group consumers were normally satisfied and satisfied with available Pepsi products.

Twenty percent of student group opined that there is not necessary for improving the product or they are highly satisfied with available Pepsi products. Similarly, thirty eight percent respondents were satisfied with available Pepsi products, whereas thirty two percent consumers were normally satisfied with them. Only four percent respondents opined that they were dissatisfied with them, and six percent of them were found highly dissatisfied with the available Pepsi products. In this way, it is evident that student group consumers of Pepsi products satisfied with available Pepsi products in the market.

Service group consumers have been found responds the same behaviour as was found with respect to student group consumers. Out of total service group consumers. 12% respondents opined that they were highly satisfied, 48% simply satisfied, and 28% expressed their opinion that they were normally satisfied with the company's products. However, 8% of respondents were dissatisfied with the Pepsi products and only 4% of total were highly dissatisfied with these products.

From above explanation, it is clear that most of the consumers were satisfied with available Pepsi products but only 12% respondents were dissatisfied with them.

For testing dependency between respondents' professions, chi-square test ( $X^2$ ) was used. Calculate value of  $X^2$  test was 2.743 (*Appendix -B*), which is less

than the table, i.e.  $X^2_{8 \text{ d.f. } 0.05} = 15.51$  (*Appendix A*). So the null hypothesis is accepted or the view expressed by the respondents' professions is independently related.

### 4.3 Effectiveness of Promotional Schemes of the Company

The researcher also tried to find out the effectiveness of the promotional schemes, which are used by the company. Five major promotional schemes are preferred by the company for boosting up sales. The responses have been presented in Table 4.4.

**Table 4.4**

**Weighted Response Of the Respondents About the Promotional Schemes**

<b>Respondents</b>	<b>Business Group</b>	<b>Student Group</b>	<b>Service Group</b>	<b>Total</b>
<b>Promotional Schemes</b>	<b>Wei No. (Rank)</b>	<b>Wei No. (Rank)</b>	<b>Wei No. (Rank)</b>	<b>Wei No. (Rank)</b>
Under the Crown(UTC)	46(1)	113(1)	48(1)	<b>207(1)</b>
X% quantity Extra	75(3)	118(2)	57(2)	<b>250(2)</b>
X Item Free	61(2)	142(3)	73(3)	<b>276(3)</b>
Rs X discount on popular music consult	85(4)	163(4)	89(4)	<b>337(4)</b>
<b>Submission of Special wrapper</b>	108(5)	214(5)	108(5)	<b>430(5)</b>
<b>Total</b>	<b>375</b>	<b>750</b>	<b>375</b>	<b>1500</b>

The above table shows that all of the occupational groups placed the first rank to Under the Crown scheme (UTC). X% quantity extra scheme appears in the second rank for student and service respondents against X item extra scheme in the third rank. But business group respondents placed X% quantity extra scheme in the third position.

Again, all of the respondents groups assigned fourth rank to Rs. X discount on popular music consult scheme. Similarly, submission of special wrapper scheme is the last priority (Fifthly ranked) by the entire consumers group.

From the above explanation, we know that to Under the Crown scheme is in the first priority and X% quantity extra, X item free, Rs. X discount on popular music consult and submission of special wrapper scheme.

In other orders of preference, the calculated value of  $\chi^2$  test arrived 7.042 (Appendix B), whereas the table value at 0.05 for 8 d.f is 15.51. The calculated value of  $\chi^2$  test is lesser than tabulated value. So the null hypothesis is accepted or the respondents' opinions are independently related.

#### **4.4 Effectiveness of the Media Advertising of the Company**

The company mostly uses four advertising media. The responses relating to their effectiveness are presented in appendix C, but Table 4.5 represents total no of weighted responses.

**Table 4.5**

**Weighted Responses of the Respondents about the Advertising Media**

<b>Respondents Advertising Media</b>	<b>Business Group</b>	<b>Student Group</b>	<b>Service Group</b>	<b>Total</b>
	<b>Wei No. (Rank)</b>	<b>Wei No. (Rank)</b>	<b>Wei No. (Rank)</b>	<b>Wei No. (Rank)</b>
TV	53 (2)	73 (1)	51 (2)	177 (1)
FM/Radio	49 (1)	115 (2)	51 (1)	214 (2)
Press	61 (3)	142 (3)	71 (3)	274 (3)
HoardingBoard	87 (4)	170 (4)	78 (4)	335 (4)
<b>Total</b>	<b>250</b>	<b>500</b>	<b>250</b>	<b>100</b>

Business group and service group respondents preferred t F.M. / Radio medium the most, but student group T.V media the most. In total, T.V. medium stood in the first rank of preference.

Television medium stood in the first rank of preference.

Television m appeared in the second ank for business and service group respondents as against F.M./Radio media for student group respondents. In total, F.M. media stood in the second rank of preference.

All the respondents of Pepsi products put the third rank to press media and fourth to Hording Board.

In aggregate, T.V. advertising medium has taken the first priority and the most effective advertising medium; majority of the respondents placed the press medium in the third rank, whereas hoarding board in the fourth.

The calculated value of X" test came 8.3 (Appendix B), whereas the table value at .05 for 6 d.f. is 12.592. Since the table value of x<sup>2</sup> test is greater than the calculated value, the null hypothesis is accepted. In

another words, the views expressed by the respondent groups have no significant difference.

#### 4.5 Locations, Store, and Brand Awareness of Consumers

In Course of finding out locating, store, and brand awareness of consumers, the researcher converted the obtained responses into weighted form for the analysis purpose. But the original responses have been presented in appendix C.

**Table 46**

**Weighted Responses of Pepsi Consumers about the Location.**

<b>Respondents</b>	<b>Business Group</b>	<b>Student Group</b>	<b>Service Group</b>	<b>Total</b>
<b>Advertising Media</b>	<b>Wei No. (Rank)</b>	<b>Wei No. (Rank)</b>	<b>Wei No. (Rank)</b>	<b>Wei No. (Rank)</b>
Retail Shop	67 (2)	110 (1)	7 (2)	<b>250</b> <b>(2)</b>
Restaurant and Bar	57 (1)	125 (2)	61 (1)	<b>243</b> <b>(1)</b>
Home	98 (5)	157 (3)	88 (5)	<b>343</b> <b>(4)</b>
Street Side	84 (4)	176 (4)	77 (4)	<b>337</b> <b>(4)</b>
Anywhere	69 (3)	182 (5)	76 (3)	<b>327</b> <b>(3)</b>
<b>Total</b>	<b>375</b>	<b>750</b>	<b>375</b>	<b>1500</b>

Table 4.6 depicts that business group and service group consumers along with total consumers of Pepsi products, have reflected the same behaviour. They preferred to rank the Retail shop, Restaurant & Bar, Home, Street Side, and elsewhere the 2<sup>nd</sup>, the 1<sup>st</sup>, the 5<sup>th</sup> the 4<sup>th</sup> and the 3<sup>rd</sup> for choosing place for buying.

But the student group respondents were likely to take Pepsi products at Retail Shop and others at home, at street side and at elsewhere in that order.

For testing the hypothesis, calculated value of  $\chi^2$  test came 12.703 (Appendix B) whereas table at 0.05 for 8 d.f. is 15.5 (Appendix A). So, the views expressed by the respondents were independently related.

Consumers buying store have been categorized into only three types-grocery, departmental store, and home delivery jobbers. The responses where from they buy or which types they prefer are presented in Table 4.7.

**Table 4.7**  
**Consumers Usually Buying Store**

<b>Respondents</b>	<b>Business Group</b>	<b>Student Group</b>	<b>Service Group</b>	<b>Total</b>
	<b>No.</b> <b>(%)</b>	<b>No</b> <b>(%)</b>	<b>No.</b> <b>(%)</b>	<b>No</b> <b>(%)</b>
<b>Stores</b>				
Grocery	16 (64)	42 (84)	18 (72)	<b>76</b> <b>(76)</b>
Departmental Store	7 (28)	7 (14)	6 (24)	<b>20</b> <b>(20)</b>
Home delivery	2 (8)	1 (2)	1 (4)	<b>4</b> <b>(4)</b>
<b>Total</b>	<b>25</b> <b>(100)</b>	<b>50</b> <b>(100)</b>	<b>25</b> <b>(100)</b>	<b>100</b> <b>(100)</b>

Out of total business group consumers of Pepsi products, 64% consumers used to buy from grocery store, 28% respondents from Departmental store, and 8% of them used to purchase these products from home delivery jobbers.

Among the student group consumers of Pepsi products, 84% used purchase from grocery store, 14% from departmental store, and only 2% from home delivery jobbers.

Out of the aggregate service group consumers, seventy two percent consumers used to buy from grocery store, six percent from departmental store, and four percent from home delivery jobbers respectively.

In aggregate, most of the consumers (76%) preferred to buy the Pepsi products from grocery store, and only twenty percent respondent from departmental store and only four percent from home delivery jobbers.

For testing the hypothesis the calculated value of  $\chi^2$  test arrived 3.922 (Appendix-B) where as the table value of  $\chi^2$ , 0.05,4 d.f is 9.49(Appendix A), so relating to their responses, there is no relationship between occupational groups responses.

The researchers also tried to measure the brand awareness level of Pepsi product consumers. Their responses have been included in appendix C, but here the total weighted responses have been presented in Table 4.8

**Table 4.8**

**Brand Awareness and Rank Order of Responses**

<b>Respondents</b>	<b>Business Group</b>	<b>Student Group</b>	<b>Service Group</b>	<b>Total</b>
<b>Brand</b>	<b>Wei No. (Rank)</b>	<b>Wei No. (Rank)</b>	<b>Wei No. (Rank)</b>	<b>Wei No. (Rank)</b>
Pepsi Cola	53 (1)	95 (1)	51 (1)	<b>199 (1)</b>
Mirinda	79 (3)	134 (2)	70 (3)	<b>283 (3)</b>
7'up	100 (5)	195 (4)	91 (4)	<b>386 (4)</b>
Mountain Dew	69 (2)	147 (3)	67 (2)	<b>283 (2)</b>
Soda	129 (6)	266 (6)	137 (6)	<b>532 (6)</b>
Slice	95 (4)	213 (5)	109 (5)	<b>417 (95)</b>
<b>Total</b>	<b>525</b>	<b>1050</b>	<b>525</b>	<b>2100</b>

The above table shows that the entire respondents assigned the first priority to Pepsi-Cola for purchasing and using. Mountain Dew stood in the second rank as all the respondents under business group and service group, along with the total sampled respondents expressed their priority for this rank.

Similarly, the business group and the service group respondents placed Mirinda in the third rank. So was ranked by the total respondents. But the student group of respondents assigned Mountain Dew the third rank.

7'up is fourthly preferred item by student group, service group, and total respondents of Pepsi product consumers. But business group consumers placed Slice in the fourth rank.

Slice appears in the fifth rank for the students and service respondents as against 7'up for business group business. In total, Slice stood in the fifth rank of preference.

All the respondents of Pepsi products ranked sixth position to Soda. When hypothesis was tested taking into account  $\chi^2$  test, the calculated value arrived 3.9614(appendix-B) whereas the table value at 0.005 for 10 degree of freedom (d.f.) is 18.3 (Appendix-A), which is greater than the calculated value. So the null hypothesis accepted. It means the responses are independently interested.

#### **4.6 Factors Influencing Consumers Purchase decisions**

When an opinions survey was made relating to factors affecting consumers which quality remained the prime factor. The obtained responses have been shown in Table 4.9

**Table 4.9**  
**Factor Influencing the Scheme of Pepsi Products**

<b>Respondents</b>	<b>Business</b>	<b>Student</b>	<b>Service</b>	<b>Total</b>
	<b>Group</b>	<b>Group</b>	<b>Group</b>	
<b>Factors</b>	<b>No.</b> <b>(%)</b>	<b>No</b> <b>(%)</b>	<b>No.</b> <b>(%)</b>	<b>No</b> <b>(%)</b>
Low Price	3 (12)	3 (6)	2 (8)	<b>8(8)</b>
Good Quality	9 (36)	31 (62)	13 (52)	<b>53 (53)</b>
Convenient Quality	4 (16)	7 (14)	4 (16)	<b>15 (15)</b>
Convenient Availability	4 (16)	6 (12)	2 (8)	<b>12 (12)</b>
Enjoy scheme associated with the item	5 (20)	3 (6)	4 (16)	<b>12 (12)</b>
<b>Total</b>	<b>25 (100)</b>	<b>50 (100)</b>	<b>25 (100)</b>	<b>100 (100)</b>

Among the business group respondents, 12% consumers of Pepsi products preferred price, 36% of them preferred good quality, 16% respondents emphasized on convenient quality and convenient availability respectively, But 20% respondents under this group preferred it due to enjoying schemes associated with the item.

Out of total sampled students, 6% gave importance to price factor, 62% to quality, 14% to convenient quality, 12% to convenient availability, and the rest to enjoying schemes associated with the item in selecting the Pepsi products.

Out of The total respondents in service group, 52% were influenced by quality, 16% by convenient quality and by enjoying schemes associated with the item, where as only 8% of the respondents preferred to convenient availability and the rest 8% the price.

In aggregate, most of the respondents preferred the Pepsi items due to good quality, and convenient availability.

For testing dependency between respondents professions chi-square test ( $\chi^2$ ) was used. Calculated value of  $\chi^2$  test is 6.7807(Appendix-b), which is greater than table, i.e.  $\chi^2_{8d.f 0.05}=15.51$  (Appendix A). So the null hypothesis is accepted. In other words, there is no significance difference between the views expressed by the respondents groups.

## CHAPTER FIVE

# SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This is the last chapter of this study. In this section, the researcher tried to present the aggregate view expressed by specially the consumers of the Pepsi products and on that basis, the findings and recommendation have been concluded. Especially this chapter includes summary, conclusions and recommendation.

### **5.1 Summary**

Consumer is the king on modern business, the success and failure of any business firm entirely depends on consumer's reaction to its offers. It is, therefore, essential for the marketers or manufactures of the products and services to understand the consumer buying behavior for long term survival on today's changing and competitive business environment. However, understanding of consumer behaviour is becoming more complex and complicated day by day; it requires continuous efforts of investigation and exploration of consumers. But such practices of investigation and exploration on consumers buying behaviour are too rare or entirely absent in Nepalese business perspectives.

Varun Beverages (Nepal) Pvt. Ltd. has been producing Pepsi product under technical celebration with Pepsi Co., New York. The company is producing seven brands within different flavors and packs. Pepsi Co. has its competition with cola in terms of Coca Cola Vs Pepsi Cola, Mirinda Vs Fanta,

7'up Vs Sprite, Soda Vs Teem, and Slice Vs Juice. But there is no competitor brand of Mountain Dew, so it keeps the monopoly market in soft drinks.

Nepal is a small and poor country and so Nepalese consumers seem bias and they use any products depending upon availability. Most of the marketing policies, strategies, and work forces are heavily borrowed from India. However, Nepalese market is small, the researcher tried to enhance or support to understand the consumer's behavior in Nepal

This study or research is very small. So, the researcher has set limited objectives, In this study the researcher has tried to find out the consumption pattern of consumers, degree of consumers satisfaction, effectiveness of promotional schemes, effectiveness of advertising media, locations, store and brand awareness of consumers, and factors influencing consumers purchase decision.

Review of literature includes conceptual review and review of previous studies. In conceptual review includes introduction and models of consumer behaviour, introduction of \_ promotional activities, and introduction of advertising.

In this study, the research methodology includes research design, nature and sources of data, sampling plan, data collection procedure, and data analysis procedure. In data analysis only two tools (i.e. percentage, and chi-square test) and pie chart are used.

## **5.2 Conclusions and Major Findings of the study**

Consumers have their own interesting using various types of goods through most of them have almost the same type of nature for consuming. From the investigation, the researcher has concluded various findings, which are presented below.

- ) Most of the consumers consume Pepsi products in four to seven times within a week.
- ) Seventy Eight percent respondents consume Pepsi products at noon time
- ) Most of the consumers are satisfied with available Pepsi products. And only twelve percent consumers are dissatisfied.
- ) Under the Crown (UTC) schemes were highly preferred and then X% quantity extra, X item free, Rs. X Discount on popular music concert and Submission of special wrapper schemes are respectively preferred.
- ) Respondents firstly prefer to T. V. media, and then F.M. /Radio media, Press media, and Hoarding board are respectively preferred second, third and fourth.
- ) Respondents prefer to drink Pepsi products first at Restaurant & Bar, and then Retail Shop, Anywhere, Street side and at Home respectively.
- ) Seventy Six percent or more than seventy percent consumers are usually buying Pepsi products from Grocery Store.
- ) Majority of the respondents have placed Pepsi- Cola the first priority and other Pepsi products like Mountain Dew, Mirinda, 7'up, Slice and Soda in that order.
- ) Most of the Consumers (50%) were influenced by the quality. So the quality is the most effective factors to increase interest of consumers.

### **5.3 Recommendations.**

On the basis of analysis and findings the study has forwarded some recommendations, which are presented below.

- ) Pepsi products are not available in urban area; therefore, the company should employ its effort to enlarge its branches in remaining urban areas. It should also focus on distributing to the remote areas.

- ) Most of the people preferred to further improvement in quality of the available brands, so this expectation should rightly be considered.
- ) Advertising of the company is dependent on Indian origin but in Nepal, it should be focus on Nepali origin. In advertising, visuals and slogans should also be oriented towards Nepalese origin.
- ) Promotional schemes are not efficient; they are only focusing to dealers. Therefore, the company should improve their promotional policy.

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## APPENDICES

### APPENDIX A

#### Questionnaire

Dear Respondent,

The researcher, Prakash Kumar Sah, MBS Students of "Tribhuvan University", is conducting a research on "A Study On Pepsi Consumer Behaviour" with special reference to Birgunj.'

This questionnaire is presented for your valuable information about the Pepsi products consumption patterns and your expectation. Without your kind co-operation it will be difficult to complete the research.

The research assures that the data and information provided by you will be kept most confidential.

Please fill up these questions.

1. Age :-                    16-20 [ ]                    21-30 [ ]                    31-40 [ ]
  
2. Sex.                    Male [ ]                    Female [ ]
  
3. Occupation: - Businessman [ ] Students [ ]                    Service [ ]
  
4. Education :-                    Below S.L.C. [ ]                    S.L.C./ Intermediate [ ]  
  
                                 Graduate [ ]                    Above Graduate [ ]

5. Have you taken Pepsi Products? Yes[ ] No[ ]

If yes, Please tick or write number on the box, i. e. [√] or [ 1 ]

6. Which products item do you like most?(Please rank them from higher to lower i.e.1,2,3 .....6)

Pepsi Cola [ ] Mirinda[ ] 7'up[ ]

Mountain Dew[ ] Soda[ ] Slice[ ]

7. How often do you use cold drinks within a week? (Please tick any one)

1 to 3 times[ ]

4 to 7 times[ ]

8 to 11 times[ ]

12 to above times[ ]

7. Why do you select Pepsi products ?(Please tick any one) Low Price[ ]

Low Price [ ]

Good Quality /test[ ]

Convenient quantity[ ]

Convenient availability[ ]

8. When do you drink cold drink?(Please tick any One)

At morning[ ]

At noon[ ]

At Evening[ ]

At midnight[ ]

9. Which advertising Media have dominance on such effect? Please rank them from higher to lower i.e. 1,2,3.....5)

T.V.[  ]

F.M./Radio[  ]

Press [  ]

Hoarding Board/Wall Paper [  ]

10. Which promotional schemes affect most in your bung decision? Please rank them from higher to lower i.e.1,2,3 ..... 5)

Under the Crown(UTC) [  ]

X% quantity extra[  ]

X items free with purchase of pet bottle[  ]

Rs X discount on popular music concert[  ]

Submission of special wrapper[  ]

11. Where do you most likely to drink cold drinks? Please rank them from higher to lower i.e.1,2,3.....5)

In any retail shop [  ]

In restaurant and bar [  ]

At Home [  ]

On The street side [  ]

Anywhere[  ]

12.From where do you usually buy? (Please tick anyone)

Grocery Store (Kirana)[  ]

From Departmental Store[  ]

Through Home delivery jobbers[  ]

13. Do you want to suggest the manufactures and enhance both the organizational and product image? If yes what are they?

.....

.....

.....

Thanks for your kind cooperation.

## APPENDIX-B

### Chi-Square( $\chi^2$ ) Test

The table value [Shrestha, Sunita and Silwal, Dhruva Prasad(2059, p-416)] and calculated value of chi-square ( $\chi^2$ ) test is as follows:

Table No.	Degree of Freedom (d.f)	Tabulated values at 5% Level of Significance	Calculated value
4-1	6	12.59	5.8984
4-2	6	12.59	14.4587
4-3	8	15.51	2.743
4-4	8	15.51	7.042
4-5	6	12.59	8.3
4-6	8	15.51	12.703
4-7	4	9.49	3.922
4-8	10	18.31	13.3614
4-9	8	15.51	6.787

### Appendix - C

Calculation of chi-square(x2) values.

Calculation of Expected Frequency(E)n =  $\frac{\text{RowTotal} \times \text{column total}}{\text{GrandTotal}}$

*GrandTotal*

Table No. 4.1 (Consumption Pattern of Pepsi Consumers)

$E(5) = \frac{22 \times 25}{100} = \frac{550}{100} = 5.5$	$E(8) = \frac{21 \times 50}{100} = \frac{1050}{100} = 10.5$
$E(10) = \frac{45 \times 25}{100} = \frac{1125}{100} = 11.25$	$E(5) = \frac{21 \times 50}{100} = \frac{600}{100} = 6$
$E(8) = \frac{21 \times 25}{100} = \frac{525}{100} = 5.25$	$E(5) = \frac{22 \times 50}{100} = \frac{550}{100} = 5.5$
$E(2) = \frac{12 \times 25}{100} = \frac{300}{100} = 3$	$E(10) = \frac{45 \times 25}{100} = \frac{1125}{100} = 11.25$
$E(12) = \frac{22 \times 25}{100} = \frac{1100}{100} = 11$	$E(5) = \frac{21 \times 25}{100} = \frac{525}{100} = 2.25$
$E(25) = \frac{45 \times 25}{100} = \frac{2250}{100} = 22.50$	$E(5) = \frac{12 \times 25}{100} = \frac{300}{100} = 3$

#### Computation of Chi-square(x2) Value

Observed Frequency (o)	Excepted Frequency (E)	(O-E)	(O-E) <sup>2</sup>	(O-E) <sup>2</sup> /E
5	5.5	-0.5	0.25	0.0455
10	11.25	-1.25	1.5625	1.3889
8	5.25	2.75	7.5625	1.4405
2	3	-1	1	0.3333
12	11	1	1	0.0909
25'	22.50	2.5	6.25	0.2778
8	10.5	-2.5	6.25	0.5952
5		1	1	0.1667
5	5.5	-0.5	0.25	0.0455
10	11.25	-1.25	1.5625	0.1389
5	5.75	-0.25	0.0675	0.0119

5	3	2	4	1.3333
				$\sum(O - E)^2 = 5.8684$
				E

Table No. 4.2(Time Related Usage Behaviors of Pepsi Consumers)

$$\begin{aligned}
 E(1) &= \frac{3 \times 25}{100} = \frac{75}{100} = 0.75 & E(2) &= \frac{3 \times 25}{100} = \frac{150}{100} = 1.5 & E(0) &= \frac{3 \times 25}{100} = \frac{75}{100} = 0.75 \\
 E(17) &= \frac{78 \times 25}{100} = \frac{1950}{100} = 19.50 & E(42) &= \frac{78 \times 25}{100} = \frac{3900}{100} = 39 & E(19) &= \frac{78 \times 25}{100} = \frac{1950}{100} = 19.50 \\
 E(4) &= \frac{12 \times 25}{100} = \frac{300}{100} = 3 & E(14) &= \frac{12 \times 50}{100} = \frac{600}{100} = 6 & E(4) &= \frac{12 \times 25}{101} = \frac{300}{101} = 3 \\
 E(3) &= \frac{7 \times 25}{100} = \frac{175}{100} = 1.75 & E(2) &= \frac{7 \times 50}{100} = \frac{350}{100} = 3.5 & E(2) &= \frac{7 \times 25}{100} = \frac{175}{100} = 1.75
 \end{aligned}$$

### Calculation of Chi-square(x<sup>2</sup>) Value

Observed Frequency (o)	Expected Frequency (E)	(O-E)	(O-E) <sup>2</sup>	$\frac{(O - E)^2}{E}$
1	0.75	0.25	0.0625	0.0833
17	19.50	-2.5	6.25	0.3205
4	3	1	1	0.3333
3	1.75	1.25	1.5625	0.8929
2	1.50	0.5	0.25	0.1667
42	39	3	9	0.2308
14	6	8	64	10.6667
2	3.5	1.5	2.25	0.6429
0	0.75	-0.75	0.5625	0.75
19	19.5	-0.5	0.25	0.0129
4	3	1	1	0.3333
2	1.75	0.25	0.0625	0.0357
				$\frac{(O - E)^2}{E} = 14.4689$

$$\begin{aligned}
 \text{Degree of Freedom (d.f)} &= (r-1)(c-1) \\
 &= (4-1)(3-1) \\
 &= 6
 \end{aligned}$$

Table No. 4.3(Degree of Consumer Satisfaction With Available Pepsi Products)

$$\begin{array}{lll}
 E(4) = \frac{17 \times 25}{100} = 4.25 & E(10) = \frac{17 \times 25}{100} = 4.25 & E(3) = \frac{17 \times 25}{100} = 4.25 \\
 E(8) = \frac{39 \times 25}{100} = 9.75 & E(19) = \frac{39 \times 50}{100} = 19.75 & E(12) = \frac{39 \times 25}{100} = 9.75 \\
 E(9) = \frac{32 \times 25}{104} = 8 & E(19) = \frac{32 \times 50}{102} = 16 & E(7) = \frac{32 \times 25}{103} = 8 \\
 E(2) = \frac{6 \times 25}{102} = 1.5 & E(2) = \frac{6 \times 50}{100} = 3 & E(2) = \frac{6 \times 25}{101} = 1.5 \\
 E(1) = \frac{6 \times 25}{100} = 1.5 & E(3) = \frac{6 \times 50}{100} = 3 & E(1) = \frac{6 \times 25}{100} = 1.5
 \end{array}$$

Calculation of Chi-square value

Observed Frequency(O)	Expected Frequency(E)	(O-E)	(O-E) <sup>2</sup>	(O-E) <sup>2</sup> /E			
4	4.25	-0.25	0.0625	0.0147			
8	9.75	-1.75	3.0625	0.3141			
9	8	1	1	0.125			
2	1.5	-0.5	0.25	0.1667			
1	1.5	-0.5	0.25	0.1667			
10	8.5	1.5	2.25	0.2647			
19	19.5	-0.5	0.25	0.0128			
16	16	0	0	0			
	3	1	1	0.3333			
3	3	0	0	0			
3	4.25	-1.75	1.5625	0.3676			
12	9.75	2.25	5.0625	0.5192			
7	8	-1	1	0.125			
2	1.5	0.5	0.25	0.1667			
1	1.5	-0.5	0.25	0.1667			
				<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="text-align: center;">(O - E)<sup>2</sup></td> <td rowspan="2" style="vertical-align: middle;">= 2.743</td> </tr> <tr> <td style="text-align: center;">E</td> </tr> </table>	(O - E) <sup>2</sup>	= 2.743	E
(O - E) <sup>2</sup>	= 2.743						
E							

$$\begin{aligned}
 \text{Degree of Freedom (d.f)} &= (r-1)(c-1) \\
 &= (5-1)(3-1) = 8
 \end{aligned}$$

Table 4.4 (Effectiveness of Promotional Scheme)

$$\begin{array}{lll}
 E(46) = \frac{207 \times 25}{1500} = 51.75 & E(133) = \frac{207 \times 750}{1500} = 103.50 & E(48) = \frac{207 \times 375}{1500} = 51.75 \\
 E(75) = \frac{250 \times 375}{1500} = 62.5 & E(118) = \frac{250 \times 750}{1500} = 125 & E(57) = \frac{250 \times 375}{1500} = 62.5 \\
 E(61) = \frac{276 \times 375}{1500} = 69 & E(142) = \frac{276 \times 750}{1500} = 138 & E(73) = \frac{276 \times 375}{1500} = 69 \\
 E(85) = \frac{337 \times 375}{1500} = 84.25 & E(163) = \frac{337 \times 750}{1500} = 84.25 & E(89) = \frac{337 \times 375}{1500} = 84.25 \\
 E(108) = \frac{430 \times 375}{1500} = 107.50 & E(214) = \frac{430 \times 750}{1500} = 215 & E(108) = \frac{430 \times 375}{1500} = 107.50
 \end{array}$$

Computation of Chi-Square  $\chi^2$  value

Observed frequency (O)	Expected frequency (E)	(O-E)	(O-E) <sup>2</sup>	$\frac{(O-E)^2}{E}$
46	51.75	-5.75	33.0625	0.6389
75	62.50	12.50	156.25	2.5
61	69	-8	64	0.9275
85	84.25	0.75	0.5625	0.0677
108	107.50	0.5	0.25	0.0233
113	103.50	9.5	90.25	0.8720
118	125	-7	49	0.392
142	138	4	16	0.1159
163	168.50	-5.5	30.25	0.1795
214	215	-1	1	0.0465
48	51.75	-3.75	14.0625	0.2717
57	62.50	-5.5	30.25	0.1795
73	69	4	16	0.2319
89	84.25	4.75	22.5625	0.2678
108	107.50	0.5	0.25	0.0233
				$\frac{(O-E)^2}{E}$ -7.042

$$\begin{aligned}
 \text{Degree of Freedom (d.f)} &= (r-1)(c-1) \\
 &= (5-1)(3-1) \\
 &= 8
 \end{aligned}$$

Table 4.5 (Effectiveness of Advertisement Media)

$E(53) = \frac{177 \times 250}{1000} = 44.25$	$E(73) = \frac{177 \times 500}{1000} = 88.5$	$E(51) = \frac{177 \times 250}{1000} = 44.25$
$E(49) = \frac{214 \times 250}{1000} = 53.5$	$E(115) = \frac{214 \times 500}{1000} = 107$	$E(50) = \frac{214 \times 250}{1000} = 53.5$
$E(61) = \frac{274 \times 250}{1000} = 68.5$	$E(142) = \frac{274 \times 500}{1000} = 137$	$E(71) = \frac{274 \times 250}{1000} = 68.5$
$E(87) = \frac{335 \times 250}{1000} = 83.75$	$E(170) = \frac{335 \times 500}{1000} = 167.5$	$E(78) = \frac{335 \times 250}{1000} = 83.75$

Calculation of Chi-Square ( $\chi^2$ ) Value

Observed Frequency (O)	Expected Frequency	(O-E)	(O-E) <sup>2</sup>	$\frac{(O-E)^2}{E}$
53	44.25	8.75	76.5625	1.73
49	53.50	-4.50	20.25	0.38
61	68.50	-7.5	56.25	0.82
87	83.75	3.25	10.5625	0.13
73	88.50	-15.5	240.25	2.72
115	107	8	64	0.60
142	137	5	25	0.18
170	167.50	2.5	6.25	0.04
51	44.25	6.75	45.5625	1.03
50	53.50	-3.5	12.25	0.23
71	68.50	2.5	6.25	0.04
78	83.75	-5.75	33.0625	0.40
				$\sum \frac{(O-E)^2}{E} = 8.3$

Degree of Freedom (d.f) = (r - 1) (c - 1)  
 = (4-1)(3-1)  
 = 6

Table 4.6 (Location Affects Their Buying Decision)

$E(67) = \frac{250 \times 375}{1500} = 62.50$	$E(110) = \frac{250 \times 750}{1500} = 125$	$E(73) = \frac{250 \times 375}{1500} = 62.50$
$E(57) = \frac{243 \times 375}{1500} = 60.75$	$E(125) = \frac{243 \times 750}{1500} = 121.5$	$E(61) = \frac{243 \times 375}{1500} = 60.75$
$E(98) = \frac{343 \times 375}{1500} = 85.75$	$E(157) = \frac{343 \times 375}{1500} = 171.5$	$E(88) = \frac{343 \times 375}{1500} = 85.75$
$E(84) = \frac{337 \times 375}{1500} = 84.25$	$E(176) = \frac{337 \times 375}{1500} = 168.5$	$E(77) = \frac{337 \times 375}{1500} = 84.25$
$E(69) = \frac{327 \times 375}{1500} = 81.75$	$E(182) = \frac{327 \times 370}{1500} = 163.5$	$E(76) = \frac{327 \times 375}{1500} = 81.75$

Computation of Chi-Square Test

Observed Frequency (O)	Expected Frequency (E)	(O-E)	(O-E) <sup>2</sup>	$\frac{(O-E)^2}{E}$
67	62.50	4.5	20.25	0.324
57	60.75	-3.75	14.0625	0.232
98	85.75	12.25	150.0625	1.75
84	84.25	-0.25	0.0625	0.001
69	81.75	-12.75	162.5625	1.99
110	125	-15	225	1.80
125	121.5	3.5	12.25	0.101
157	171.5	-14.5	210.25	1.226
176	168.5	7.5	56.25	0.334
182	163.5	18.5	342.25	2.093
73	62.5	10.5	110.25	1.764
61	60.75	0.25	0.0625	0.001
88	85.75	2.75	5.0625	0.059
77	84.25	-7.25	52.5625	0.624
76	81.75	-5.75	33.0625	0.404
				$\sum \frac{(O-E)^2}{E} = 12.703$

Degree of Freedom(d.f) = (r - 1)(c - ) = (5-1)(3-1) = 8

**Table 4.7 (Consumers Usually Buying Stores)**

$$\begin{array}{lll}
 E(16) = \frac{76 \times 25}{100} = 19 & E(42) = \frac{76 \times 50}{100} = 38 & E(18) = \frac{76 \times 25}{100} = 19 \\
 E(7) = \frac{20 \times 25}{100} = 5 & E(7) = \frac{20 \times 50}{100} = 10 & E(6) = \frac{20 \times 25}{100} = 5 \\
 E(2) = \frac{4 \times 25}{100} = 1 & E(1) = \frac{4 \times 50}{100} = 2 & E(1) = \frac{4 \times 25}{100} = 1
 \end{array}$$

**Calculation of Chi-Square Value**

Observed Frequency(O)	Expected Frequency(E)	(O-E)	(O-E) <sup>2</sup>	$\frac{(O - E)^2}{E}$
16	19	-3	9	0.474
7	5	2	4	0.8
2	1	1	1	1
42	38	4	16	0.421
7	10	-3	9	0.474
1	2	-1	1	0.5
18	19	-1	1	0.053
6	5	1	1	0.2
1	1	0	0	0
				$\Sigma \frac{(O - E)^2}{E} = 3.922$

Degree of Freedom, (d.f) = (r - 1) (c - 1)  
 = (3-1)(3-1)  
 = 4

**Table 4.8 (Brand Choice Behaviour of Consumers)**

$E(53) = \frac{199 \times 525}{2100} = 49.75$	$E(95) = \frac{199 \times 1050}{2100} = 99.50$	$E(51) = \frac{199 \times 525}{2100} = 49.75$
$E(79) = \frac{283 \times 525}{2100} = 70.75$	$E(134) = \frac{283 \times 1050}{2100} = 141.50$	$E(70) = \frac{283 \times 525}{2100} = 70.75$
$E(100) = \frac{386 \times 525}{2100} = 96.50$	$E(95) = \frac{386 \times 1050}{2100} = 193$	$E(91) = \frac{386 \times 525}{2100} = 96.50$
$E(69) = \frac{283 \times 525}{2100} = 70.75$	$E(147) = \frac{283 \times 1050}{2100} = 141.50$	$E(67) = \frac{283 \times 525}{2100} = 70.75$
$E(129) = \frac{532 \times 525}{2100} = 133$	$E(266) = \frac{532 \times 1050}{2100} = 266$	$E(137) = \frac{532 \times 525}{2100} = 133$
$E(95) = \frac{417 \times 525}{2100} = 104.25$	$E(213) = \frac{417 \times 525}{2100} = 208.50$	$E(109) = \frac{417 \times 525}{2100} = 104.25$

**Calculation of Chi-Square Value**

Observed Frequency(O)	Expected Frequency(E)	(O-E)	$\frac{(O - E)^2}{E}$
53	49.75	3.25	0.2123
79	70.75	8.25	0.962
100	96.50	3.5	0.127
69	70.75	-1.75	0.0433
129	133	-4	0.1203
95	104.25	-9.25	0.8207
95	99.50	-7.5	0.2035
134	141.50	2	0.3975
195	193	5.5	0.0207
147	141.50	0	0.2138
266	266	4.5	0
213	208.50-	1.25	0.0971
51	49.75	-0.75	0.0314
70	70.75	-5.5	0.008
91	96.50	-3.75	0.3135
67	70.75	4	0.1988
137	133	2.75	0.1203
109	106.25		0.0712
			$\sum \frac{(O - E)^2}{E} = 3.9614$

$$\begin{aligned}
 \text{Degree of Satisfaction (d.f.)} &= (r-1)(c-1) \\
 &= (6-1)(3-1) \\
 &= 10
 \end{aligned}$$

Table 4.9(Factors Influencing in Selecting Pepsi Products)

$E(3) = \frac{8 \times 25}{100} = 2$	$E(3) = \frac{8 \times 50}{100} = 4$	$E(2) = \frac{8 \times 25}{100} = 2$
$E(9) = \frac{53 \times 25}{100} = 13.25$	$E(31) = \frac{53 \times 50}{100} = 26.5$	$E(13) = \frac{53 \times 25}{100} = 13.25$
$E(4) = \frac{15 \times 25}{100} = 3.75$	$E(7) = \frac{15 \times 50}{100} = 7.5$	$E(4) = \frac{15 \times 25}{100} = 3.75$
$E(4) = \frac{12 \times 25}{100} = 3$	$E(6) = \frac{12 \times 50}{100} = 6$	$E(2) = \frac{12 \times 25}{100} = 3$
$E(5) = \frac{12 \times 25}{100} = 3$	$E(3) = \frac{12 \times 50}{100} = 6$	$E(4) = \frac{12 \times 25}{100} = 3$

Calculation of Chi-Square Value

Observed Frequency(O)	Expected Frequency(E)	(O-E)	$\frac{(O - E)^2}{E}$
3	2	1	0.5
9	13.25	-4.25	1.363
4	3.75	0.25	0.017
	3	1	0.333
5	3	2	1.333
3	4	-1	0.25
31	26.5	4.50	0.764
7	7.5	-0.5	0.033
6	6	0	0
3	6	-3	1.5
2	2	0	0
13	13.25	-0.25	0.0047
4	3.75	0.25	0.017
2	3	-1	0.333

4	3		0.333
			$\Sigma \frac{(O - E)^2}{E} = 6.7807$

Degree of Freedom (d.f.) =  $(r-1) (c-1)$   
 $= (5-1) (3-1)$   
 $= 4 \times 2$   
 $= 8$