

Study of Supply Chain of Fruits and Vegetables for Customer Satisfaction: A Case Study of Small Town

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Abstract: *The study has assessed the marketing system by comparing marketing cost, marketing margins, price spread, producer's share in consumer's rupee, marketing efficiency and marketing constraints of supermarket supply chain and traditional market supply chain in the Ujjain district of Madhya Pradesh. A questionnaire is being formed for judging the criteria on what basis a consumer should prefer a vegetable supermarket or a traditional market, also the expectations of the consumer with the running trend or are willing for a change. This study enlightens some suggestions and drawbacks from consumer's point of view.*

Keywords: Supermarkets, vegetable market, supply chain, traditional market

1. Introduction

A supply chain is essentially a network of suppliers at customer in which every customer is in turn a supplier to the next downstream organization until a finished product reaches the ultimate end customer. It consists of all parties involved, directly or indirectly in fulfilling customer's request. The supply chain not only includes the manufacturer or the supplier but also transporters, warehouses, retailers and customer themselves. It includes all the activities associated with the flow and transportation of goods from the raw material stage to the end users as finished products as well as associated information flow. From the above paragraph we get to know the basic definition of supply chain which will help us to co-relate with paper that will help us to study the supply chain in a vegetable supermarket and hence perform a comparative analysis with supply chain of traditional vegetable market. As we have written in the above paragraph that supply chain is flow of product from raw material stage to finished product in consumer's hand. So, our paper is based on determining the stages of supply chain involved in travel of vegetables in both fields, i.e. vegetable supermarket and traditional vegetable market. Supply chain of a traditional vegetable market varies with region to region on basis of its quality, hygiene, space, location, costs and other miscellaneous factors. These factors affect the traditional vegetable market in varied manner in different manner with respect to geographical locations of India. As per now we are concerned with our hometown Ujjain district of Madhya Pradesh. This region particularly has good range of crops and vegetables. So it is very important to study the basic trends of the traditional market and to work on how a vegetable supermarket can be established in competition with traditional vegetable market. It is to bring to your

sincere notice that we are not working against the traditional vegetable market but we want to remove the drawbacks and hence develop and improved atmosphere in terms of hygiene, hospitality and cleanliness. There are some other drawbacks which will be further discussed in this report. The comparative analysis between a vegetable supermarket and a traditional vegetable market was made out by conducting a survey on basis of a questionnaire which consisted of 20 questions and was sampled amongst people in the same town. This questionnaire was sampled amongst people visiting both to the traditional vegetable market as well as vegetable supermarket. The response on basis of questionnaire helped us to conclude what trend is existing now in the town, what are the advantages, what are the drawbacks and methods to solve the problems in both the concerned fields. The paper also emphasize on deciding that do a town like Ujjain really have a need of supermarket culture for vegetables and fruits after having an advantage of the demographic location, which provides it an upper hand over other places and even make it an exporter of vegetables and fruits. All such kind of questions will be answered at the end of this paper and the vision of the paper will be clear when the conclusion will be made on survey report and research methodology.

2. Literature Review

2.1 Supply chain

Supply chain is the entire process of accepting a customer order through to the delivery of the product to the customer inclusive of supply procurement and production of the product. A supply chain is a collection of interdependent step, when thoroughly followed gives rise to a certain objectives as meeting customer requirements. Supply chain

is simply the combination of tasks where in any company would like to perform to move services or product from supplier to customer. The supply chain not only includes the manufacturer and suppliers, but also transporters, warehouses, retailers and customers themselves. It includes all the activities associated with the flow and transportation of goods from the raw material stage to finished products to end users, as well as the associated information flow. Material and information flows both upward and downward in a supply chain. The supply chain thus includes all the systems of management such as purchasing, production, operations, assembly, scheduling, order processing, inventory management, transportation, and warehousing and customer service.

2.2 Supply chain management

A supply chain management (SCM) consists of all parties involved, directly or indirectly, in fulfilling a customer request. The supply chain includes not only the manufacturer and supplier, but also transporters, warehouses, retailers and even customers themselves. Within each organization, such as a manufacturer, the supply chain includes all functions involved in receiving a customer request. These functions include, but are not limited to, new product development, marketing, operations, distribution, and finance and customer service. A supply chain is dynamic process and involves the constant flow of information, product, and funds between different stages. The customer is an integral part of the supply chain. In fact, the primary purpose of any supply chain is to satisfy customer needs and, in process, generate profit for itself. The term supply chain conjures up images of product or supply moving from suppliers to manufacturers to distributors to retailers to customers along a chain. This is certainly part of the supply chain, but it is also important to visualize information, funds and product flows along both directions in the chain. The term supply chain also implies that only one player is involved at each stage. In reality, a manufacturer may receive material from several suppliers and then supply several distributors. Thus, most supply chains are actually networks. It may be more accurate to use the terms supply network or supply web to describe the structure of most supply chains.



A supply chain management is the combination of art and science that goes into improving the way your company finds the raw components it needs to make a product or service and deliver it to customers. The following are the five basic components of supply chain management:-

1) Plan-This is the strategic portion of supply chain management. You need a strategy for managing all the resources that go towards meeting customer demand for product or service. A big piece of planning is developing a set of metrics to monitor the supply chain so that it is efficient, costs less and delivers high quality and value to customers.

- 2) Source- Choose the suppliers that will deliver the goods and services you need to create your product. Develop a set of pricing, delivery and payment processes with suppliers and create metrics for monitoring and improving the relationships and put together the processes for managing the inventory of goods and services you receive from suppliers, including receiving shipments, verifying them, transferring them to your facilities and authorizing supplier payments.
- 3) Make- this is the manufacturing step. Schedule the activities necessary for production, testing, packaging and preparation for delivery. As the most metric-intensive portion of the supply chain, measure quantity levels, production output and worker productivity.
- 4) Deliver- this is the part that many insiders refer to as logistics. Coordinate the receipt of orders from customers, develop a network of warehouses, and pick carriers to get product to customers and supporting customers who have problems with delivered products.
- 5) Return- the problematic part of supply chain. Create a network for receiving defective and excess products back from customers and supporting customers who have problems with delivered products.

2.3 The Objective of Supply Chain Management

The objective of any supply chain is to maximize the overall value generated. The value a supply chain generates is the difference between the final worth of the product to the customer and the effort the supply chain expands in filling the customer's request. For most commercially supply chains, value will be strongly correlated with supply chain profitability, the difference between the revenue generated from the customer and the overall cost across the supply chain. Supply chain profitability or surplus is the total profit to be shared across all supply chain stage and intermediaries. The higher the supply chain profitability, the more successful is the supply chain. Supply chain success should be measured in terms of supply chain profitability and not in terms of the profits at an individual stage. The goal of supply chain management includes:-

- To cut cost
- Increase profits
- Improve performance in relationships with customers and suppliers
- Develop value added services that gives a company a comparative edge.
- To reduce inventory as much as possible, compatible with retaining the ability to fulfill customer demand.
- To eliminate waste from the supply chain. Waste can be defined as any activity during the supply chain process that adds cost to the supply chain without adding value to the product or service. [1]

2.4 Supermarket

A supermarket is a large form of the traditional grocery store and is a self service shop offering a wide variety of food and household products in a proper organized manner. It is larger in size and has a wider selection than a traditional grocery store, but is smaller and more limited in the range of merchandise.

2.5 Vegetable Supermarket

A vegetable supermarket is a place which has only fruits and vegetable and other such eatable products organized in a proper manner under a single roof. The examples of vegetable supermarket are- reliance fresh, easy day, subhiksha, etc. To explain the supply chain of vegetable supermarket, it is a simple process of successive steps which will be discussed. That will make the vision clear why supermarkets have a simple chain from supplier to customer. The following steps are:-

Farm - The vegetable and fruits grown in the farms are directly purchased by the collection centers of the respective vegetable supermarket that are passed on by their own vehicles which have all the facilities to keep the stuff nutritious, clean and hygienic so as to maintain the quality. As soon the farmers sell their produce they are paid hand to hand for their purchase by the collection centers.

Collection centers - It is the place where vegetables and fruits received from farmers and from other sources are stored for a while and then goes through processing process. Processing of fruits and vegetables means their cleaning; separating rotten ones and their packaging. Usually fruits and vegetables maximum storing duration in collection centre is one day, means in one day the complete recycling of fruits and vegetables does complete. It is easily understandable because in case of vegetables they start to rot after two or three days under normal condition. Objective of Collection Centre is to buy fresh and good quality of fruits and Vegetables from farmers directly.

Store – This is the final destination of a product from where it is ready to be purchased by the consumers. Here they are separated and neatly placed in a clean and hygienic ambience. [2]

2.6 Inventory control and management within a vegetable supermarket.

Inventory or stock refers to the goods and materials. Inventory objects could include any kind of physical asset: merchandise, consumables, fixed assets, circulating toolset. Inventory Control is the supervision of supply, storage and accessibility of items in order to ensure an adequate supply without excessive oversupply. It can also be referred as internal control - an accounting procedure or system designed to promote efficiency. An inventory control system is a process for managing and locating objects or materials. In this particular paper we will find out the measures how a smooth supply chain may help in inventory control and management and how the loss of inventory can be minimized in a vegetable supermarket supply chain. The control of inventory is a simple process in which the vegetable supermarket assigns an employee in the collection centre which is in direct contact with the employee in the supermarket. They maintain the record of inventory and the sold products are compensated from the collection centers to the vegetable supermarket via help of trucks in morning and evening time. The new trend in inventory management is to label inventory and assets with QR code, and use smart phones to keep the location of the vehicle's position. [2]



Figure 2.1: Unloading of goods
Source: Reliance Fresh

2.7 Customer service

Customer service refers to the combination of activities offered by retailers. If taken seriously, customer service is presented with the intention of enhancing service quality, so that customers perceive the shopping experience as more pleasant and even rewarding. For the purpose of this study, customer service is interpreted in terms of the four elements of the marketing namely product, place, price, promotion, and three additional elements namely people, processes and physical evidence, to include the widest possible spread of possible influencing variable. It is assumed that good customer service revolves around getting all the elements of the process right to prevent failure.

2.8 Customer service in terms of customer satisfaction

From a business point of view, customer satisfaction implies always doing the right things right. Customer satisfaction is essential for the survival of retailers because it enhances repeat purchase behavior. Evaluation is generally done within a framework of expectations to conclude a desires congruency (with what was expected), and either positive or negative disconfirmation, this can result after single, or brief encounters. Satisfaction can also refer to a state of fulfillment that involves reinforcement and arousal over time; this requires repetitive exposure and experience.

2.9 Customer service in terms of store loyalty

Store loyalty occurs when a customer intentionally chooses one store over others, irrespective of the offerings at the other stores. Consumer satisfaction however does not necessarily result in store loyalty; consumers who are highly satisfied with a store's customer service may for example still not be loyal. Well managed customer retention programs that are communication and tactics-driven and which strive to improve customer service are generally used to encourage customers loyalty in a competitive market place. [3]

2.10 Individual elements/attributes of customer service

Consumers generally look for tangible evidence of what they are about to experience in a given service. The elements of customer service that may contribute to service quality are now briefly discussed in terms of the traditional variables-

Product - This refers to the merchandise assortment as need-satisfying utilities, e.g. a supermarket's product offerings in terms of range, quality and availability, and also

includes packaging, because this eventually also contributes to the image of the store through its effect on shelf life, product image, communication of product information and affordability.

Place/physical surrounding - the store itself has thus become a fertile opportunity for market differentiations to the extent that store image (e.g. a safe, beautiful, hygienic environment) may be an important element of store satisfaction and store loyalty. It has been reported that customers nowadays desire multi-sensory, fantasy and emotive aspects of consumption that extend beyond the purpose of acquiring merchandise. Retailers therefore have to determine how much their target market will be willing to pay for atmosphere and physical resources such as convenient parking facilities.

Price The amount of money that is exchanged for the satisfaction of a need is generally considered acceptable if the value of the product purchased is perceived to be equal to, or exceeding the amount paid.

Irrational evaluation of price occurs when price is used as an indication of quality. Pricing strategies are often used to distract buyer decisions because most consumers are ill equipped to guard against them.

Promotion- All forms of marketing communication, in written, oral, auditory and/or visual format, used to draw attention to a store's offerings influence customers' decision to patronize the store or not. Vast amounts of money are spent annually to promote businesses. [4]

3. Problem Identification

3.1 Problems associated with traditional sabzi market

After reaching the sabzi market and having a look at full process of bidding of vegetables, there were many queries and questions arising in our mind that what is going on so early in the morning at the sabzi mandi. We waited till the process got over and then had a conversation with first the farmers and then the retailers. On basis of this conversation we got the aim of our paper and then the direction in which we have to work for improving the supply chain and thus the condition of sabzi market. We had conversation with 4-5 farmers who told that they do not directly sell their produce to the consumers neither they sell it directly to the retailers but there are one link of the supply chain who are called 'middlemen' or the 'commission agents' who auction the produce of the farmers every morning in their presence to the fixed retailers of the respective sabzi mandi and then collect the money at noon time from retailers for the products that they buy. These commission agents maintain a record of each and every retailer in terms of money and the vegetables that they buy. These commission agents take commission on daily basis from the farmers as their part of the sale of farmer's produce. Many a times it happens that the retailers are not able to pay the amount respective to the produce that they bought so that money is paid by the commission agents to the farmers and then the agents charge interest on the credit that is to be paid by the retailers to the agents. Not only this much but the suppliers, i.e., the farmers are paid for their money at the next day of the bidding, they

do not get the money hand to hand. So simply this conclusion is derived that the 'middlemen' or the 'commission agents' earns a dual profit and makes this supply chain process a bit complicated and less profitable to the major links of the supply chain, viz. the suppliers and the retailers, which directly affects the growth of these individuals.

These all things are the problems for which the Outcome will be found in this paper to make the aim of paper successful and hence give an idea to create a smooth and non-partial supply chain in which everyone has a chance to make growth in their fields, so that they can perform well and can keep the customer's satisfied. If these problems will be eliminated then there is a scope for upliftment of sabzi market and maintaining its value.

3.2 Problems associated with vegetable supermarket

This creation of modern or westernized and modern culture which was till now familiar in metro cities has now spread itself in small towns where it is not gaining success that it expected but still becoming choice for some of the consumer groups and becoming a tough competition for the sabzi market.

If we compare it on basis of supply chain, it is a simple concept of direct supplier to consumer relationship with only one link that is the supermarket outlet. Lesser the links included smoother the supply chain and more the quality of product. These basic ideas behind establishment of supermarkets have made it popular in its working in small towns.

These supermarkets have direct link with the farmers who sell supermarkets their produce and are paid hand to hand. Then the produce is carried to the collection centers where it is being processed and filtered, defective stuff is cleared and is transferred to supermarket for its sale. This simple technique makes it very profitable for farmers and the concerned topic of supply chain.

But there are some major problems with these supermarkets, viz. their availability, accessibility, parking, long queues, billing queues, compulsion of purchasing vegetables to a fixed cost, no scope of bargaining, lack of presence of seasonal crops.

So as to keep the working smooth and improve these factors of a supermarket, which has a great advantage and a salient feature of direct supplier to customer relationship. Along with these advantages it also has some drawbacks that we discussed that are problems in its functioning. So this is topic of basic concern and the Outcomes will be found out as the aim of the paper.

If these problems will be eliminated with the help of analysis that will be carried out then it will develop a new way of routine vegetable purchasing and selling that small towns have yet not witnessed.

We have conducted a survey of 17 farmers and have concluded how they work and about their knowledge of both

supply chain. This has helped us to shape our paper and to take out the problems faced by the farmers and what are the measures to control these problems which will help for the farmer's growth as well as proper working of supply chain which will help all the elements involved in the supply chain.

4. Methodology

For this study Ujjain district of Madhya Pradesh was purposively selected as it is involved in supplying of vegetables to traditional markets as well as modern retail outlet like 'Reliance fresh' by setting-up of collection centre in the production regions in the villages close to the city. The data related to marketing practices were collected using a pre-test questionnaire designed for the purpose, through personal interview of around 30 people from the Ujjain district. The collected data was analyzed to ascertain marketing cost, marketing margin and marketing efficiency of the prevailing marketing channels in the study area.

4.1 Work Plan

Work Plan for the study, the total marketing cost, price spread, marketing margin of a middleman and producer's share in consumer's rupee were calculated along with computation of marketing efficiency index. Following are the methods including formulas which will help us to find out the actual price values and the result will given-

(a) Total Marketing Cost

The total cost on marketing incurred in cash or kind by the producer and various intermediaries involved in the sale and purchase of the commodity till it reaches the ultimate consumer is computed by

Equation (1):

$C = C_f + C_{m1} + C_{m2} + C_{m3} + C_{m4} + \dots + C_{mn}$
 ... (1) where, C is the total cost of marketing of the commodity; C_f is the cost paid by the producer from the time the produce leaves the farm till it is sold; C_{m1} , C_{m2} , ..., C_{mn} denotes the cost incurred by different middlemen in the process of buying and selling the product; and n is the number of middlemen involved in marketing.

(b) Price Spread

Price spread is the difference between the price paid by the consumer and price received by the producer for an equivalent quantity of farm produce.

(c) Marketing Margin of a Middleman

This is the difference between the total payments (cost + purchase price) and receipts (sale price) of the middle men.

4.2 Description of Study Area

Ujjain district lies in west of Madhya Pradesh state. Major part of this district is covered by villages. Monsoon begins in July and carries till September. The average annual rain fall of this region is 723 mm. The average minimum and maximum temperature of this region is 14° to 41°C. Ujjain District is located on Bank of river Kshipra and 35 kms from dewas. Major Vegetables and fruits crop includes Spinach, tomato, Bottle Gourd, Methi Big, Bitter Gourd, Sugar baby melon, Cabbage, Aonla, Coriander, Potato, Onion, Garlic,

Ginger, Radish White, Brinjal Black Big etc. We also collected some data or take some observation from Ujjain fruit market, Ujjain central processing centre, ripening chamber and some store of reliance fresh. This is a kind of descriptive research study because it describes what is going on or what exists at collection centre.

4.3 The Team

The team size is being differentiate according to required data collection. Two members is taking data from vegetable supermarket and other two memebtrs at sabzi market for getting information about the supply chain process existing in both the fields. On the basis of our findings we got to know the procedure which made us clear about the working of supply chain, the problems occurring and the Outcomes to overcome these problems. Some constraints were fixed, on the basis of these constraints a comparative study was made and it gave us the idea about the shortcomings of both the supply chains and what measures must be taken to avoid the loss of capital, transportation, warehousing, storage, inventory, market efficiency, leisure, customer satisfaction. Our prime importance was to know the views of customers on both of these concerned aspects, so we carried out a survey to know how customers can be satisfied and better atmosphere can be provided in terms of both cost and quality.

4.4 Supermarket Supply Chain

Farmer — collection centre — distribution centre — retail outlet — consumer

In this channel, vegetables are purchased by the employees of a collection centre as per the indent under the supervision of a quality assessment in-charge. Quality standards for vegetables are defined in respect of their size, weight, color and appearance. The standardized produce of each member-farmer is pooled and sent to the distribution centre, where it is rechecked and categorized into three grades, viz. A (best), B (medium) and C (low) based on its quality.

The packed material is then moved to retail outlets by the operation team. Due to perishable nature of the produce, it is transported within 2-3 hours from a collection centre to the distribution centre from where it is distributed to retail outlets twice a day, at 7 am and at 5 pm. The marketing cost, transportation cost and other labor charges involved to transport the produce from a collection centre to retail outlets are borne by the procuring agencies. From these retail outlets, the leftover stock is taken back to the distribution centre backyard and is sold at low cost or dumped out. The daily market prices in the Ujjain (M.P.) wholesale market serve as the base price for producers. As the wholesale price varies according to the product quality, producers supplying to the collection centre are paid a model price plus `1-2 for the quality of the product. Spot payment to producer suppliers is a usual practice.

The collection centre does not share any price risk. Disputes arising among the farmers or between producers and collection centre, if any, are settled mutually.

This was the study made according to our visit at reliance fresh store at budhwaria in Ujjain district of Madhya Pradesh. The management staff was cooperative enough to make us clear about how the supply chain in a vegetable supermarket works.

This knowledge helped us to compare it with the supply chain of the traditional sabzi market and that is the objective of our paper on behalf of that we will deliver out the conclusions.

4.5 Traditional Market Supply Chain

Farmer — commission agent — retailer — consumer

In this existing traditional system of marketing, the operations take place as in channel-II. Since the produce is marketed through commission agents, quality gets no recognition. The commission agents do not take the title to the produce and they merely negotiate on the purchase and/or sale price.

In addition the traditional markets are poorly designed with nonexistent of infrastructural facilities essential for marketing functions like packing, grading, sorting and cold storage. The marketing channel starts with the vegetable farmer, passes through commission agent, wholesaler -cum-retailer, retailer and ends with consumer in the traditional marketing, whereas in the supermarket channel the produce is directly transferred from producer to consumer.

The details of marketing cost, margins, and producer's share in consumer's rupee and marketing efficiency in the selected district pertaining to supermarket supply chain and traditional market supply chain have been presented in Tables. This was the analysis and study that we made after visiting a sabzi market and having conversation with both retailers and farmer. They told us how a loss occurs regularly because of the middle man or commission agent trend existing in this sphere of vegetable supply chain.

This conversation played a major part in shaping the problem findings as well as giving an idea on what part to work and what are the Outcomes that will be our priority towards upliftment and betterment of supply chain and affect individuals involved in it.

4.6 Questionnaire

Here the questionnaire is a tool for analyzing the short comings that prevails in a sabzi market which affects the quality of the product in every term along with the infrastructure that includes hygiene, cleanliness and atmosphere.

Questionnaire format – Following are the questions that were formed to get the opinion of the people who frequently visit both traditional vegetable market and vegetable supermarket and hence generate a conclusion that what are the benefits and the shortcomings of both the fields and on basis of this minor survey we will find the Outcome for the problems occurring in supply chain of both the kind of markets.

1. How frequently do you visit Vegetable supermarket?

- a) Once in a week

- b) once in 15 days

- c) Once in a month d) once in 2-3 months

2. Which source made you to visit a vegetable supermarket?

- a) News paper
- b) F.M radio
- c) Social media/internet
- d) Friends/others

3. Why do you make purchase of products from Vegetable supermarket?

- a) Low price
- b) Better Quality
- c) Variety of products

4. How is the store space in vegetable supermarket for moving around for products?

- a) It's free space
- b) not free space
- c) Small space
- d) congested

5. How is the customer service in store, is it?

- a) Fast service
- b) slow service
- c) Not sufficient service
- d) not good service

6. Will vegetable supermarket offer any special, discount on prices?

- a) Yes season wise service
- b) no special offers

7. Are you waiting for a long time at the billing section at vegetable supermarket?

- a) Yes
- b) No

8. DO you prefer food courts & gaming section at vegetable supermarket?

- a) Yes
- b) No

9. What are your intentions to enter the store?

- a) Low prices
- b) product quality & availability
- c) customer service
- d) Seasonal offers & discounts
- e) Ambience

10. How is Vegetable Supermarket maintaining product Quality, Quantity compare to other local market?

- a) Good
- b) Normal
- c) Not good
- d) Poor

11. How do you feel (satisfied) after shopping at Vegetable supermarket?

- a) Feels very satisfied
- b) Satisfied
- c) Not satisfied

12. What makes you to purchase vegetables from local sabzi market then to a vegetable supermarket?

- Low price
- Ease of access
- Bargaining on price can be done on
- Even a single product can be purchased.

13. Where do you find the vegetables for purchasing are fresh and healthier?

- Vegetable supermarket
- local sabzi market
- None of them

14. Where do you find some frozen fruits and vegetables and products from other places?

- Vegetable supermarket
- sabzi market
- None of them

15. Do you think that the vegetable supermarket will soon over take local sabzi market?

- Yes very rapidly
- soon
- It will take years
- never

5. Questionnaire Results

A general questionnaire consisting of some questions on the marketing facilities, techniques, comfort, leisure while shopping, quality, etc was conducted in the Ujjain city amongst the people and some people gave their suggestions in accordance with the respective questions. This is well explained with the help of some pie chart and bar models:-

1. How regularly do the people visit a vegetable supermarket?

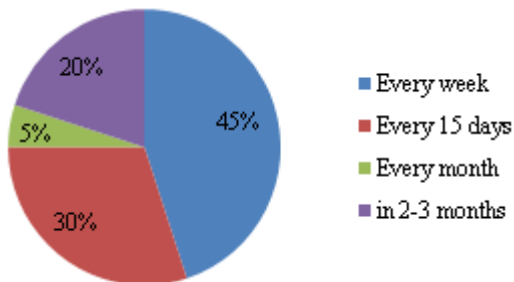


Figure 5(a)

Outcome – The above information tells us that the 45% of people visit to the vegetable supermarket every week. 30% of people visit to vegetable supermarket in every 15 days. 5% of people visit to vegetable supermarket every month and 20% of people visit to supermarket in 2-3 months. This could be clearly made out from the above information that the percentage of people visiting to supermarket regularly has increased to a great extent and soon this percentage will increase more as the vegetable supermarket will soon start working on the promotion, quality and service.

2. Which source generally makes people to visit a vegetable supermarket?

Source of visit

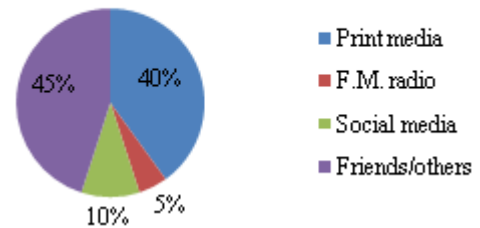


Figure 5(b)

Outcome - The above information tells us that the print media and friends and family is the most common source which makes a person to visit the vegetable supermarket as nearly everyone reads the news paper in which the advertisement makes the person to think to visit. If more will be the advertisement, number of people visiting supermarket will surely increase.

3. What makes the people to purchase products from the supermarket?

Reason to visit

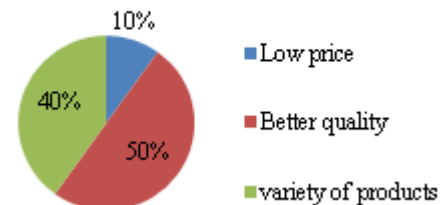


Figure 5(c)

Outcome - The above information clearly tells us that the people visit to a vegetable supermarket for having better quality and variety of food products. As the vegetable supermarkets are open for all type of people so they have variety of products and they maintain the quality as they are the brand and they will never let their brand value go down.

4. Do the wait long at the billing section in a vegetable supermarket?

Waiting time during bill

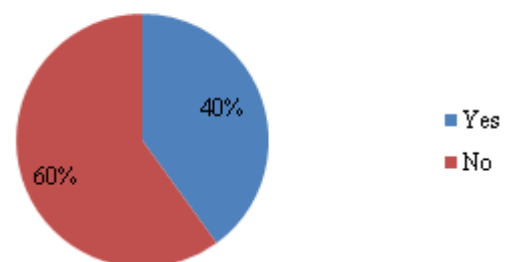


Figure 5(d)

Outcome - The biggest problem at the vegetable supermarket is standing in line at the billing section. This generally annoys the customer and sometimes the customer exits the supermarket without purchasing any product. This problem has also resulted as the reason not to visit a vegetable supermarket. The supermarket must lay emphasis on this and improve and increase the billing counters and must provide customer with the best service.

5. Availability of frozen food and products from other countries

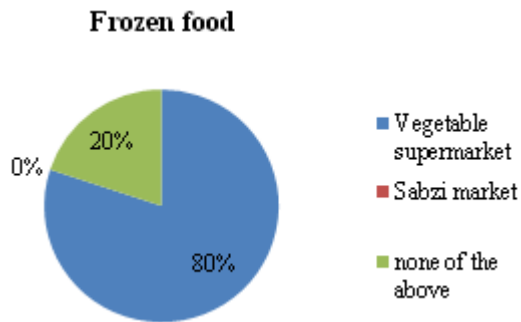


Figure 5(e)

Outcome - The above information tells us that the frozen food is available largely at the vegetable supermarket. As they are the brand so they even keep products from other country which is the uniqueness of the vegetable supermarket. This always attracts the customer and such products are very hard to find in a local sabzi market.

6. Satisfaction level of people after shopping at the vegetable supermarket

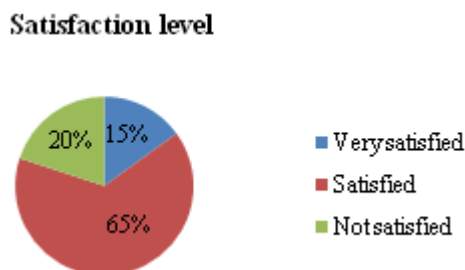


Figure 5(f)

Outcome - The above information tells us about that the people are still only satisfied. These supermarkets need to work hard to improve their supply chain and increase the level of satisfaction of the customer.

7. Which place does the find most suitable for the purchase of the vegetables?

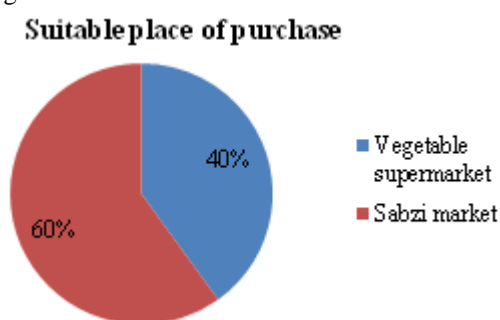


Figure 5(g)

Outcome - The people of a small town still prefer local sabzi market as more suitable for the purchase of vegetables as the sabzi market is easily accessible in small town and fresh vegetable can be obtained from there. Supermarket need to promote themselves with special offers and discounts according to the place and the crowd and need to emphasis on quality and service so as to get more customers as compared to the local sabzi market.

8. How do they find customer service at the vegetable supermarket?

Customer service

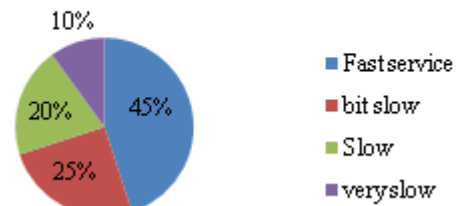


Figure 5(h)

Outcome - Although these Vegetable supermarkets keep attention on the customer and treat them well to give them the best customer service but still they need to improve the skills of the staff to get the better results.

9. Will vegetable supermarket soon overtake the local sabzi market?

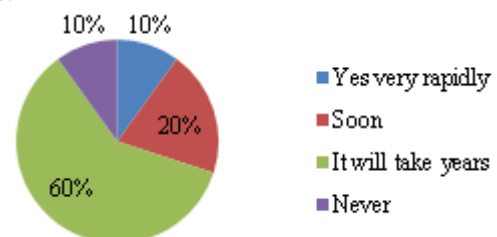


Figure 5(I)

Outcome - In metro cities of India the vegetable supermarkets have nearly overtaken the sabzi market because of increase of population and more distance to travel to the sabzi market but in small town the people think that still it will take years for the vegetable supermarket to overtake the sabzi market as the sabzi market are easily accessible in the small town.

10. Where do they find fresh and healthier fruits and vegetables?

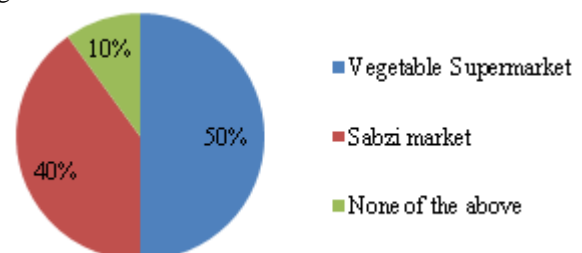


Figure 5 (j)

Outcome - The Fruits and the vegetables at the supermarket are found to be healthier as the vegetable supermarket has laid great emphasis on the quality of the product. They take the best grade from the produce but in a small town the vegetables are found to be fresh at the sabzi market because the villages are nearer and green vegetables are supplied daily to the market.

11. Do they prefer food courts and gaming section at the vegetable supermarket?

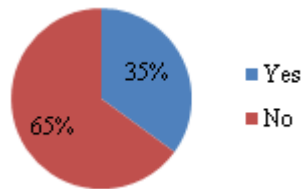


Figure 5 (k)

Outcome - Generally the people at the vegetable supermarket are there to purchase the products and move away. They are not in the favor of using gaming section and food courts because these things increase the time of purchase which is never liked by a customer. In other way some people like this too, when they are with their kids and family, they keep their children busy at the gaming section while purchase of vegetables so that they can concentrate on purchase.

11. Does the vegetable supermarket maintain quality and quantity?

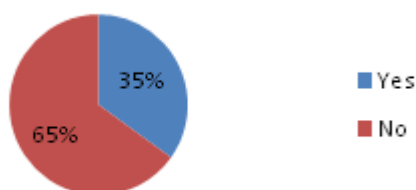


Figure 5 (L)

Outcome - From the above information it can be made out that the vegetable supermarkets maintain good quality of food. A person is now ready to even pay more for good quality and this quality is well maintain by the vegetable supermarket as the grading of vegetables is done twice in the collection centers. They have the best.

12. How is the store space at the vegetable supermarket?

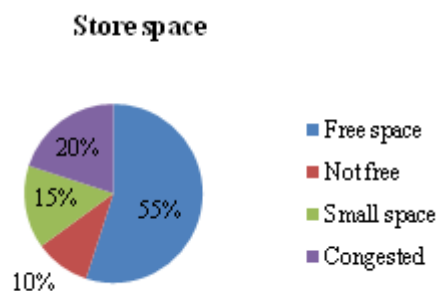


Figure 5 (M)

Outcome - The space in the store to roam around the products must be good so that it is easy for every one to purchase products. Vegetable supermarket store must arrange the products in a well mannered way which must be liked by everyone and they must make use of proper indication, direction and information about the products which makes it easier for the consumer to purchase products.

13. Intentions to enter the vegetable supermarket?

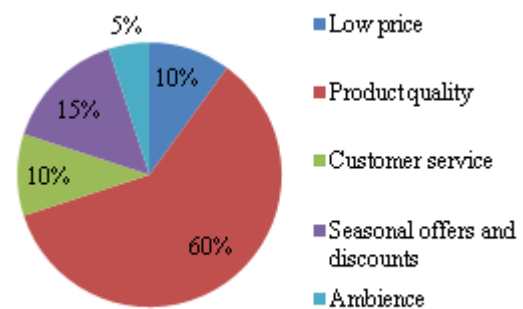


Figure 5 (N)

Outcome - The above information clearly tells us that a customer enters the supermarket to have the best quality of products. He gets a good service there. Ambience of the store is also good which supports the purchase process. The Supermarket must keep on informing their regular customers about the special offers so that they will visit them more frequently.

14. Does they offer discounts at the vegetable supermarket?

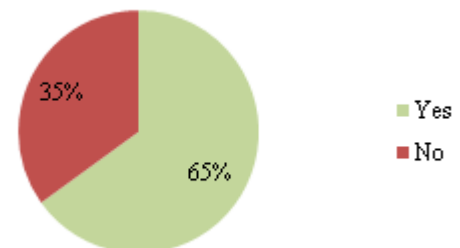


Figure 5 (O)

Outcome -The vegetable supermarkets always keep some offers on the purchase of some fixed amount and give the discount to the customer on every purchase. They have started making the cards of the customer which on every purchase gives them some points and they can redeem them at certain levels. Vegetable supermarkets must keep on promoting such offers and discounts so as to increase the number of customers.

15. What makes the people to purchase products from local market?

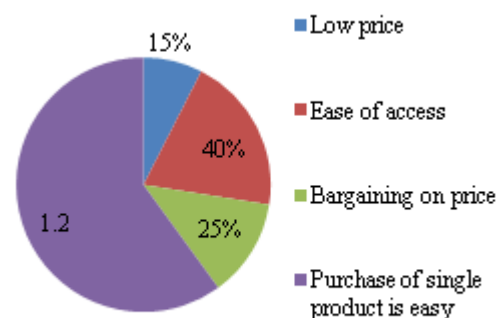


Figure (P)

Outcome - People in small towns and cities purchase vegetable from the local market because it is easy to access and bargaining can be done on the prices. A single product can be purchased from the sabzi market but it is difficult to purchase a single product from the vegetable supermarket. People in small town and cities never purchase vegetables in access because it is easy for them to visit sabzi market again and again and this is very difficult in metro cities, so people generally prefer purchasing vegetables in bulk. They get discount on them too.

6.1 A comparison of price spread in Supermarket and Traditional market

Table 1

SN	Particulars	Supermarket	Traditional Market
1.	Net price received by producer	More	Less
2.	Travel of goods	Less	more
3.	Grading of vegetables	Best	Not good
4.	Loading and unloading	Less	more
5.	Overall transportation	Less	more
6.	Market Fees	No fees	minimum
7.	Weighing accuracy	Good	Bad
8.	Commission	No	yes
9.	Wholesaler purchase price	No	yes
10.	Wholesaler selling price	No	yes
11.	Wholesaler margin	No	yes
12.	Consumer Purchase price	Less	more

6. Conclusion

As per the findings and the analysis done by studying the survey report, which is being depicted in form of pie-charts the conclusion of the following paper is made. As per the concerned topic 'study and analysis of supply chain of a vegetable supermarket' conclusions are derived that there is a big difference in supply chain of traditional sabzi market and vegetable supermarket. There are number of middlemen or links in supply chain of traditional sabzi market where there are almost negligible links in supermarket. Therefore, vegetable supermarket helps in establishing a direct relationship between customer and supplier which makes it advantageous over traditional market. The problems that we discussed in earlier in study shown how the interference of 'commission agents' disturb the functioning of supply chain in traditional market which is not at all observed in vegetable supermarket. If we talk about the city Ujjain, its condition is bit different. Ujjain being near to places which are very rich in crops and have a cultivable land it always gets wide range of vegetables at lower price and good quality. Although the supply chain in sabzi mandi being the same which is problematic for supplier and retailer because of the middlemen but if we look from customer's point of view, people are really very satisfied. But these nota at all implies that there is no need to bring a change in the supply chain. The supermarket are supporting zero middlemen policy which will smoothen the flow of goods increasing its quality, hygiene, cleanliness, thus the overall consumer value. As we seen in the results of the questionnaire there is a specific income group which prefers shopping in vegetable supermarket, may be because of hygienic and decent atmosphere, proper placing of vegetables, hospitality of staff members and quick service that is not common practice in

sabzi mandi. So the vegetable supermarkets have become a choice of high class and upper middle class of the society. But along with all these key factors attracting some particular sections of the society there are some factors that creates distance between the middle and lower income class of the society. The reasons are there it is necessary to purchase fixed amount of products in rupees, for eg. At some places it is necessary to buy vegetables at least worth 50rs. So someone with a need of just say coriander and chilies which will cost him round Rs 25-30 cannot buy it from supermarkets. These kinds of rules are a drawback of these supermarkets. Other than this, large queues at the billing counters also make people think if they are in a hurry. So this culture is still not in reach of common man. We have seen the conclusions that were being made on working, infrastructure, social, and status of the people. Now we will compare these two fields on the basis of their supply chains and will give conclusion for improvement of same. With help of study till now we got to know that supermarket culture is yet not established one and is in developing stage due to the demographic location of Ujjain but the flow of product that is the supply chain involved is an example of proper and smooth functioning that generates overall consumer value as well, most profitable from customer and store point of view. The kind of simplicity involved in flow of products is admirable and generate an idea how traditional sabzi markets should learn and take steps to improve their flow of products that affect the hygiene, quality, cleanliness, wastage and inventory of the vegetables, which will be a successful step in improving economy and reducing wastage in an considerable manner. Now both the vegetable supermarket and the traditional sabzi market have their advantages and disadvantages but the concern topic conclusion which was based on supply chain gave an indication to traditional sabzi market supply chain system to bring a change in orthodox model and learn from vegetable supermarkets to move towards modernity. First such kind of venture is going to be witnessed at the new sabzi mandi in front of Treasure Bazaar, Ujjain. The type of supply chain we are praising in supermarket system is going to be used in traditional mandi system. Now the study has discussed both the fields and their supply chains in an descriptive manner and have made conclusion that are enough to make the vision of paper clear in every sense.

7. Limitations of the Study

While working on the paper we realized that there were some major limitations which we have to consider while working on this paper. The problems, analysis and conclusion have been derived keeping in mind these limitations.

- This paper was carried out concerning the supply chain of a single commodity (vegetables & fruits).
- This paper's survey had a very low sample size for the conclusions to be derived upon, so there may be a variation in accordance with the sample size concerned for the survey.
- In the above paper only one aspect was concerned, that is the supply chain, there is a scope of working on other aspects included in the supply chain.

8. Acknowledgement

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