

**EVALUATION OF BUSINESS PROCESSSS FOR REDESIGNING -
A STUDY IN FOOD SERVICE INDUSTRY**

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COIMBATORE-641003**

2015

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*Thesis submitted in part fulfillment of the requirements for the
Degree of **MASTER OF BUSINESS ADMINISTRATION** to the
Tamil Nadu Agricultural University, Coimbatore – 03.*

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CERTIFICATE

This is to certify that the thesis entitled “**EVALUATION OF BUSINESS PROCESS FOR REDESIGNING -A STUDY IN FOOD SERVICE INDUSTRY**” submitted in part fulfillment of the requirements for the degree of **MASTER OF BUSINESS ADMINISTRATION** to the Tamil Nadu Agricultural University, Coimbatore is a record of bonafide research work carried out by **Mr.P.ARUN KUMAR** under my supervision and guidance and that no part of this thesis has been submitted for the award of any other degree, diploma, fellowship or other similar titles and that the work has not been published in part or full in any scientific or popular journal or magazine.

Place: Coimbatore.

Date:

(Dr.S. Moghana Lavanya)

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Acknowledgement

ACKNOWLEDGEMENT

*I would like to express my deep sense of gratitude and indebtedness to my Chairman, **Dr.S.Moghana Lavanya**, Assistant Professor, and Department of Agricultural and Rural Management for her constructive comments, cordial treatment and excellent guidance rendered during the course of my study.*

*I wish to express my gratefulness to the members of the Advisory committee **Dr.K.Mahendran**, Professor and Head, Department of Agricultural and Rural Management, and **Dr.S.Senthilkumar**, Associate Professor, Department of Trade and Intellectual property rights for their constant encouragement throughout my study period.*

*I acknowledge the valuable suggestions and encouragement rendered by **Dr.S.D.Sivakumar**, Professor, **Dr.N.Venkatesa Palanichamy**, Professor, **Dr.S.Hemalatha**, Assistant Professor, **Dr.V.M.Indhumathi**, Assistant Professor, and all the staff members of the Department of Agricultural and Rural Management. I place on record my sincere thanks to **Dr.P.Balaji**, Assistant Professor and **Dr. Rohini**, Assistant Professor, Department of Agricultural and Rural Management and PG Coordinator for all the help provided during the period of study. I also wish to acknowledge the help provided by the other members (non-teaching) of the Department of Agricultural and Rural Management.*

*It is my pleasant privilege to place my deep sense of gratitude to **Mr.K.Karthikeyan**, Executive Assistant, Atchayam Business Solutions., Chennai and for his learned counsel and instant help who assign me the valuable project study. I extend my heartfelt thanks to Atchayam Business Solutions, Chennai for providing financial support during my tenure of this project. My profuse thanks go to all the Customers, and officials in the study area for their co-operation during the study period. I will be failing in my duty if I fail to express my sincere thanks to my junior friends **Mr.M.Midhunraj**, **Mr.S.Raghavendran**, and **Ms.Neeraja Unni** who have constantly helped me in embellishing this study period. I would like to express my fervent gratitude to my parents and brother for their esteem and mellifluous love, which encouraged me a lot throughout the study period.*

Above all, I thank the almighty for providing me the energy, determination and wisdom to complete my course work.

(P. Arun Kumar)

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Abstract

ABSTRACT

EVALUATION OF BUSINESS PROCESSSS FOR REDESIGNING -A STUDY IN FOOD SERVICE INDUSTRY

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2015

The concept of serving food from the multiple restaurants through a single outlet involves a complex process. In order to explore the critical issues in the food service industry, the present study was conceived with the overall objective of evaluating the process design of the case firm and to evolve a suitable framework for implementation.

Chennai metropolitan was selected as the study area based on the operational area of the case firm. The sales outlets were located at two areas namely, DLF IT Park, Porur, and Central Railway Station, Chennai. For this study, 50 respondents in each of the two outlets and 5 suppliers were selected by simple random sampling method. The primary data was collected through well-structured interview schedule. The various tools such as percentage analysis, process charts and cause and effect diagram was used for analyzing the collected information.

The data collected from the consumers covered details like age, gender, educational status, income, etc., which will have profound influence on the purchase of foods, frequency of purchase and preference. Majority of sample consumers (62.00 per cent) belonged to age group of 18-30 years. Majority of consumers at both retail outlets in Central railway station (50 per cent) and DLF IT Park (74 per cent) were young adults. About 56.00 percent

of the respondents were males. The share of males who purchased food was considerably higher at DLF IT Park (68 per cent) and female share was higher (56 per cent) at Central Railway Station. All the sample consumers were literates and majority (52 per cent) of them were graduates. Majority (71 per cent) of total respondents were employed. All the consumers at DLF IT Park were employed since the outlet was located inside IT Park. Railway station being a common place comprised of different category of consumers. Majority of the respondents (36 percent) earned Rs. 35001- 45000 per month. About forty four per cent of the sample respondents in Central railway station and more than eighty per cent of respondents in DLF IT Park have previously purchased from the case firm sales outlet.

The Case firm has partnered with five restaurants /suppliers namely, Adayar Ananda Bhavan, Anjappar Chettinadu, Moti Mahal Deluxe, Charminar Hyderabad Biriyani, and Mr. Chows. All the suppliers were found to have vast experience in food business. Batch system of production was followed by the suppliers. The presence of production facility is varying only in case of A2B as the supplier has chain of restaurants; the food production is made from a centralized kitchen. only one supplier i.e. Motimahall supplied both vegetarian and non-vegetarian food varieties . Adayar Anadha Bhavan supplied only vegetarian food and remaining three suppliers provide only Non vegetarian food. Majority of the respondent (54 per cent) preferred Non-vegetarian food. Quick service was ranked first by the consumer in Central railway station as they were on the move. Majority of the respondent preferred Anjappar (42.00 percent) followed by Adyar Anandha Bhavan (21.00). The respondents' at central railway station gave maximum score for Food Quality (4.26) followed by Taste. Price had lowest mean score of 3.08 followed by food quantity. DLF IT park respondents were satisfied with ease of ordering (menu, order placement etc.) during purchase (4.23 mean score) whereas the consumers at the CRS opined that it took some time to understand the menu and method of placing the order.

The various processes involved in moving the products namely, Information to the suppliers about the requirement of various products required, Production of food, transportation to the sales outlet and sales were depicted using the process Chart. The case firm analyzed the requirements for each day and the information such as

quantity, variety required was sent to the suppliers individually through the production order. The case firm has categorized the sessions into five namely, Breakfast, Lunch, Late Lunch, Dinner and Late Dinner. The production order was sent to the supplier before three hours. The material for packing will be supplied to the supplier before two weeks by the case firm. After the products are produced they are packed in food trays. The food trays had barcodes which was generated during the production time. The prepared and packed foods were then transported to the sales outlet. Around 20 trays were packed into each container. The suppliers delivered the food products in outlet and collected receipts and packaging containers. The case firm employees at the sales outlet immediately uploaded the food trays into the dispenser in the machine within in 15 minutes and scanning mode was activated. The consumers order involved two steps such as selection of food, payment using any credit or debit card or cash to get a printed bill with an order code. Then consumers picked the bill and watched the screen for the order number and then collected the food coming out on the conveyer belt.

To identify the bottle necks, the information about the ordering time, production time and supply time for three months were collected and analyzed. Majority of delay was with the supplier Anjappar followed by Adayar Anadha Bhavan. The various issues in packing were due to lack of packing materials, delay in packing and sealing. Lack of communication was another reason for delay in the process. Lack of communication between the suppliers and case firms affected the entire chain of activities. The case firm have to take adequate measures to reduce these issues so the process could be smoothened. The cause and effect analysis was used to analyze the causes which reduced the sales.

Various process redesigning strategies were formulated to enhance the sales of the case firm were introduction of weekly purchase orders o avoid the problems. The confirmation on production order can be done on daily basis. Case firm may introduce the automated packing machine or can offer training to the employees of the supplier firms on the functioning of existing semi-automated machine to improve the speed of packing and sealing of the food trays.. Introduction of the new purchase ordering system will reduce the existing communication gaps. The suppliers can be insisted to allocate a separate person to handle the orders of the case firm. The case firm needs to

redesign the packing machine with safety standards. The case firm can also provide training to employees to improve the packing speed and safe packing measures. Implementation of the third party software services such as BITRIX and Sales force.com will enhance the existing business process. Food Box has a plan to open 30 more stores in India, capturing of customer data and business data will help them to improve the business in upcoming stores.

Introduction

CHAPTER I

INTRODUCTION

The services sector is emerging as the largest and one of the fastest-growing sectors of the Indian economy with around 52 per cent contribution to the Gross Domestic Product (GDP) in 2014-15. The services sector is not only the dominant sector in India's GDP, but has also attracted significant foreign investment flows, contributed significantly to exports as well as provided large-scale employment. India's services sector covers a wide variety of activities such as trade, hotel and restaurants, transport, storage and communication, financing, insurance, real estate, business services, community, social and personal services, and services associated with construction.

In India, service sector is classified into three categories: Trade, Hotels, Transport and Communication as first category contributing 12.5 per cent to the GDP in the year 2014. In the second category which included Financing, Insurance, Real estate and Business services contributed about 5 per cent to the GDP in 2014. Third category, other services along with Public Administration, defense, Health and Education sectors contributes around 12.6 per cent to the GDP in 2014. (Source: Technopark, 2014)

1.1 Food service industry in India

Catering to more than 1.2 billion people, the food service industry in India is largely growing rapidly. It is estimated that country is having more than 2.1 million outlets serving out cuisine that is diverse and appealing to diverse taste buds.

The Food Service Sector contributes approximately 2.3 percent of the total GDP and has witnessed strong growth over the past few years. Economic liberalization and growing income of middle-class population have had a positive impact on consumer spending and consumption in both suburban and urban areas. Indian consumers now spend a significant proportion of their income on eating out. Furthermore, market growth is largely fuelled by the rising young population, working women, hectic schedules, and presence of massive investments.

According to a research report, "Indian Food Services Market Forecast to 2015", the Indian Food services Industry is anticipated to grow at a CAGR of around 12 per cent

during 2012-2015. Anticipating the future growth, many big international players are entering into the market by making deals with the domestic players. And those already present in the Indian market are expanding their presence in different provinces of the country.

The present food services market is US\$ 48 billion and is expected to grow to US\$ 78 billion by 2018. The key drivers of the food service markets are increasing working and young people, urbanization, disposable income and economic growth; diversifying into multiple cuisines in tune with changing consumer preferences and growth of tourism industry.

The current size of the Indian food service industry is INR 247,680 crore and is projected to grow to INR 408,040 crore by 2018 at 11per cent according to a survey commissioned by Techno Park for National Restaurant Association of India (NRAI). In terms of market segments, Quick Service Restaurants (QSR) and Casual Dine-in formats account for 74per cent of the total chain market, while Cafés make up for 12per cent with Fine Dining and Pub Bars Club & Lounges (PBCL) comprising the rest. The casual dining and quick service restaurants are the most popular formats of the food service industries in India. QSR and casual dine-in are popular with the working professionals while fine dining is family and occasion oriented. The food industry introduces more features to reach the customers by online order, online payment and door step delivery.

There is no doubt that the food consumption habits of Indians are changing. Indians are going to eat out more often or they are ordering the take away food as their disposable incomes increase and due to the change in the lifestyle. An increase in the working population, urbanization and consumerism are some other factors for growth in the food service industry. The revolution in the restaurant industry began in the nineties when McDonald's, Pizza Hut, Domino's Pizza, Subway etc. mushroomed.

The preferences of the consumers in India are also showing changing trends with people demanding various cuisines from across the world like Italian, Mexican, Japanese, Middle Eastern and European, African besides the popular Chinese and Thai and American fast foods. All these trends have led to the massive growth in the restaurant

industry which now has a market size of Rs 247,680 crore and the predicted growth by 2018 is expected to reach Rs 408,040 crore.

The largest segments of customers who eat out are the 21 to 30 year olds and this group makes up 40per cent of the customer profile followed by 31 to 40 year olds. These are obviously professionals and 30 per cent of their monthly consumption expenditure goes into foods and beverages. Majority(73per cent)of customers considered price to be the biggest decider when eating out. These consumers eat out when there are offers, discounts or loyalty memberships and are different from customers who's eating out is need based rather than an eating out experience. . Increase in per capita income and changes in work culture encouraged urban population to go for packaged food. In recent years consumption of processed and packaged foods has grown strongly in urban areas especially among more affluent households with working women (Sinha 2012).

The fixed menu based formats (FDR) segments are attracting the all age groups in current years. The popularity of the concept arises from several benefits that includes the greater variety of dishes, unlimited portions fixed prices and better experience. The growth of the food industry relies purely by the taken away and door delivery. The food service industry focuses to spend the more money time and energy to sustain it and higher investment rate is required to improve and stabilize the growth of food service industry.

There is no doubt that the food service industry is fulfilling a need of the consumer. Besides this they also provide multiple job opportunities and are also bringing growth to other sectors of the economy like real estate, logistics, food processing and kitchen equipment.

Another noticeable trend today is that consumers have begun to use technology in a big way to research restaurants online before making a decision about where they would like to eat. They consult sites like Zomato, TripAdvisor, Justdial, Food Panda, and Groupon to see eating out options and many base their decision on the reviews that other customers have given about restaurants on social media or in comments on these sites. As lifestyles improve customers expect not only a good location and ambience but factor in the health quotient and the calorie intake are also the deciders in food choices.

1.2 Problem Focus

The case firm operates in a highly competitive and dynamic industry. The concept of serving food from the multiple restaurants through a single outlet involves a complex process. A process is a group of related tasks with a specific inputs and outputs creating value for the customers, suppliers shareholders etc. The process analysis is a systematic examination of all the aspects of the process so as to improve its operations to make it faster, more efficient, less costly and more responsive to consumers. The main concern for serving the food through a single outlet is to ensure the timely collection of foods from various suppliers. The collaboration between suppliers and case firm is highly essential for the successful performance. The case firm want to expand their operations and wants to standardize their front end and back end operations. Mapping the entire process in the terms to time, activity, ownership, flexibility etc., will help the organization to standardize their operations for fulltime expansions.

In order to explore the critical issues in the food service industry, the present study was conceived with the overall objective of evaluating the process design of the case firm and to evolve a suitable framework for implementation.

1.3 Objectives

- To map the business process and to identify the process bottlenecks.
- To analyze the process feedbacks from the stakeholders (suppliers, consumers& Employees).
- To evolve a framework for process redesign.
- To suggest the strategies for implementation of the evolved framework.

1.4 Scope of the study

The study covered sample respondents in Chennai, Tamil Nadu. The results of the study will be helpful to enhance the process and sales in case firm. The result of the study would be help to make decisions about increasing the sales in future.

1.5 Limitations of the study

The study was based on primary data collected from the sample respondents at case firm in Chennai, Tamil Nadu. Hence, findings are largely applicable to those areas where similar conditions prevail. Utmost care was taken to minimize the possible recall bias through cross checks in the framed questionnaires.

1.6 Organizations of the Thesis

The thesis is organized in six chapters as under:

- Chapter I** : Introduction –Background of the topic, problem focus, scope of the study, objectives and limitations of the study are presented.
- Chapter II** : Concepts and review –The review of the past work are discussed.
- Chapter III** : Design of the study - It specifies the sampling design, method of the data collection and tools used for analysis of the data.
- Chapter IV** : Description of the study area-The details about the place of study and firm in which the study is conducted are elaborated.
- Chapter V** : Results and discussion - The results obtained from the study and their interpretation are presented.
- Chapter VI** : Summary and conclusion – A brief summary of work done and the salient findings are presented with concluding remarks.

Concepts and Review

CHAPTER II

CONCEPTS AND REVIEW

Comprehensive knowledge on the concepts related to the research problem would help to measure the same. Hence literature on the concepts and related past studies were reviewed in order to conceptualize them for the present study. The concepts and review pertaining to the study are discussed in the following sections.

2.1 Process

A process is any activity or group of activities that takes one or more inputs, transforms them, and provides one or more outputs for its customers.

Hammer *et al.*, (1993) stated that a business process is a collection of activities that takes one or more kinds of input and creates an output that is of value to the customer.

Armistead *et al.*, (1999) reported that processes are a generic factor in all organizations and they are way to get things done.

Eriksson *et al.*, (2000) said that a business process emphasizes how work is performed rather than describing products or services that are a result of a process.

McCormack and Johnson, (2001) viewed process as ‘strategic assets’ which require companies to ‘take a business process orientation’.

In the present study process refers to various activities undertaken by the case firm in procuring the product from suppliers, delivering the food packs to consumers through sales outlets.

2.2 Process design

Process design is defined as the activity of determining the workflow, equipment needs, and implementation of requirements for a particular process.

Hinduja *et al.*, (1985) described a procedure to calculate the optimum cutting conditions for turning operations with minimum cost or maximum production rate as the objective function.

According to **Hunt, (1996)** the goal of process design projects is to help organizations identify, understand, and improve their AS-IS processes by applying process mapping methodologies and related tools.

In the present study process refers to various activities undertaken by the case firm in procuring the product from suppliers, delivering the food packs to consumers through sales outlets.

2.3 Process mapping

Process mapping is defined as identification of different types of activities that take place during the process. It shows the flow of materials, information through the business process.

Davenport *et al.*, (1990) defined business process as a set of logically related task performance to achieve a defined business outcome. A process is a structured, measured set of activities designed to produce a specified output for a particular customer or market.

Biazzo, (2002) has established that using process mapping techniques is crucial for improving business processes.

Marrelli, (2005) described process mapping as “the step-by-step description of the action taken by workers as they use a specific set of inputs to produce a defined set of outputs”

In the present study process mapping is done to map various activities undertaken by the case firm in moving the product from suppliers to the consumers through their outlets in Chennai city.

2.4 Cause and effect analysis

Bagchi (1997) suggested that statistical tools like cause and effect diagram and Pareto diagram were used for problem solving and quality improvement. The analysis of data, information and use of these tools mainly focused on the continuous improvement practice using cause and effect analysis through process improvement and identifying most promising factors for rejection.

Mahto and Kumar (2008) stated that Ishikawa or Fishbone Diagram was used to associate multiple possible causes with a single effect. The diagram was constructed to identify and organize the possible causes for a particular single effect. Causes in Cause and Effect Diagram were arranged in four major categories. For manufacturing cases it was manpower, methods, materials and machinery. For administration and service sectors, it was equipment, policies, procedures and people. Ishikawa advocated CED as a tool for breaking down potential causes into more detailed categories so that they can be organized and related into factors, which helped in identifying the root cause.

Ahmed and Ahmad, (2011) applied cause and effect diagram for minimizing the rejection of raw materials during the lamp process in Bangladesh. The vital and trivial factors for defects in various steps were identified and analyzed using cause and effect diagram. It is very useful in detecting the appearance of abnormalities of the process in the form of excessive variations of process parameters.

The Cause and Effect analysis was used to identify the delay in supply of food packs to consumers along the business processes of the case firm.

2.5 Process charts

A flowchart is a type of diagram that represents an algorithm, workflow or process, showing the steps as boxes of various kinds, and their order by connecting them with arrows.

Meredith *et al* (2000) applied the process charts to review service delivery in hospital. The results of this study shows that process charts helped to improve the process of hospitals without affecting any process.

2.6 Process Standardization

Process standardization is the process of implementing and developing technical standards to maximize compatibility, interoperability, safety, repeatability, or quality.

Rossiter, (2006) described process standardization as “defining exactly how a process will be executed regardless of whom is performing the process or where it is completed”.

Womack and Jones, (2003) argued that instead of speeding up existing processes, the parts of those processes that do not add value for the customer should be reduced or eliminated, or better still more beneficial alternative processes should be found. Nevertheless, since a preferable way of implementing standardization's into organizations is by letting site managers choose and try different methods to solve similar problems, the short-term gain culture is inhibiting alternative processes from evolving.

2.7 Process redesign

Business process redesign is defined as the critical analysis and radical redesign of existing business processes to achieve breakthrough improvements in performance measures.

David, et al., (2008) applied that the process redesign in clinical center in Australia. Because Public health services are struggling to cope with rising demand. The Strain on health services manifests as longer waiting lists for surgery, queuing in the emergency. The result concludes that Rigorous clinical process redesign significantly improve performance, even in the face of rising demand

2.8 Service

Clark et al., (2008) found that success of a restaurant was solely dependent on its reputation therefore they should not compromise on quality and maintain standards for reputation.

Brink and Bemdt, (2009) concluded that the focus of relationship marketing is on the customer, and ensuring that the relationship with the customer was enhanced in an effort to expand trust and commitment from the side of the customer, which would lead to customer loyalty and satisfaction.

Jeevanada, (2011) found that among various customer service attributes such as product availability, display, service at billing counter, payment options etc., personal assistance to the customer was the most important attribute. Further, it was emphasized that a majority of the customers found a mismatch between the expected service levels and the actual service levels provided by the retailers. Measures should be taken to minimize this gap by implementing standard operating procedures of services in order to

generate customer loyalty by way of strategies such as easy payment options, returns and claims, delivery, easy ordering, sales person assistance, store ambience to increase the satisfaction levels.

Samraz and Bakhtiar, (2012) indicated that service quality, customer satisfaction, loyalty programs are the important factors which increase the loyalty of a customer.

Clancy *et al.*, (2013) have cited customer loyalty as the customer behavioral intention that affects the purchase of the same brands products and services repeatedly and retention of customers as the corporate asset.

2.9 Retailing

The consumer is defined as an individual who buys products or services for personal use and not for manufacture or resale.

Varshney, (2000) explained retailing as the final connection in the marketing channel that brought goods from manufacturers to consumers. In other words, retailing was the combination of activities involved in selling or renting consumer goods and services directly to ultimate consumers for their personal or household use.

Weitz, (2007) referred to retailing as a set of business activities that added value to the products and services sold to consumers for their personal or family use.

Pradhan, (2008) referred to retailing as the final step in the distribution of merchandise, for consumption by the end consumers.

NABARD, (2011) retailing is referred to any sale for final consumption in contrast to a sale for further sale or processing (i.e. wholesale).

2.10 Food service retailing

Cliff *et al.*, (2004) examined the proposition of changes in consumer access to food shopping in Cardiff over the last 20 years. The result shows that although accessibility scores have increased in Cardiff since 1980 due to faster rate in higher income areas.

Prasad &Reddy., (2007) reported that fast changing trends in food and eating habits of consumers have contributed immensely to the growth fast food and processed

foods. This has happened for various conspicuous reasons namely demand and supply, socio-cultural, demographic, psychographic, economic and technology advancements like a large segment of young population, a rapidly expanding middle class, rising income levels, growing literacy, increasing number of working women and nuclear family structures which in turn have created an enormous demand for consumer goods and paved way for modern retail formats.

2.11 Consumer

Consumer is defined as an individual who buys products or services for personal use and not for manufacture or resale

Cravens, (1996) consumers represented people in families and other kinds of households who purchased and used products in order to satisfy their personal needs and wants.

Evans, (2003) defined retailing as encompassing the business activities involved in selling goods and services to customers for their personal, family or household use. Retailing is the last stage in the distribution process.

Bukenya and Wright, (2007) described empirical evidence argues that socio demographic factors such as gender, age, educational status and income play an important role in determining the food consumption pattern across the world.

Levy et al., (2008) defined customer as an individual who consumed goods, and services of manufacturers or retailers.

In the present study, consumers referred to any person who purchased food products at case firm.

2.12 Consumer satisfaction

Customer satisfaction is the degree to which a customer perceives an individual, firm or organization has effectively provided a product or service that meets the customers.

Varshney et al., (2000) defined satisfaction as a person's feelings of pleasure or disappointment resulting from comparison of a products perceived and actual

performance to his or her expectations. So, consumer satisfaction was considered as a function of the consumers' perception about the products performance and the consumers' expectation.

Anderson et al., (2000) opined that businesses existed and competed to create satisfied customers. Investors were attracted to companies that excelled at satisfying their customers. It would not be possible to increase business prosperity without increasing customer satisfaction.

Bhave et al., (2001) found that with better understanding of customers' perceptions, companies can determine the actions required to meet the customers' needs. They can identify their own strengths and weaknesses, where they stand in comparison to their competitors, chart out path, future progress and improvement. Customer satisfaction measurement helped to promote an increased focus on customer outcomes and stimulate improvements in the work practices and processes used within the company.

Kotler and Armstrong, (2013) described customer satisfaction as the extent to which a product's perceived performance matched a buyer's expectations. If the product's performance was higher than expectation, the buyer was satisfied or delighted.

Berman et al., (2004) explained customer satisfaction as a feeling that a product had met or exceeded the customer's expectation.

Gomez et al., (2004) in their study found that there were three main antecedents to customer satisfaction in food retailing i.e., customer service, quality of different products and value for money.

Flurry et al., (2005) had conducted significant research on the influence of various members of households on travel decisions but there was very little research on the influence of family or household life cycle on customer satisfaction in restaurants.

Martinez-Tur et al., (2005) examined social and technical situational constraints surrounding customer satisfaction, and found that technical constraints had far more weight in the satisfaction levels than social constraints.

Blackwell et al., (2006) defined that decisive determinant of customer satisfaction as whether the customer perceives the performance of the product to be adequate during consumption, in other words, to be of quality.

Gupta, (2007) defined customers' satisfaction as a function of the product's perceived performance and the consumer's expectation.

Richards and Jones, (2008) defined that satisfied customers could become loyal customers; and every opportunity to interact with the customer provides the business with the prospect of creating value due to a long lasting relationship.

Liu and Yen, (2010) determined that customers satisfied when they could get more benefits than their cost.

Dubey, (2011) denoted if performance matches with the expectations, then the customer is satisfied and if performance exceeds expectations, then the customer may be highly satisfied and delighted. Hence, service providers must anticipate and deliver services in mutually rewarding manner.

Jahanshahi and Khaksar (2011) studied the importance of quality of products and emphasizes on identifying the new customers and satisfying their undiscovered needs, which will lead to superior customer value and satisfaction. It was also pointed out that paying attention to customer satisfaction was critical and was also challenging task for the company in a competitive scenario.

Phadke, (2011) stated that customer satisfaction was considered by companies as a key strategy to gain competitive advantage.

Amudha, et al., (2012) stated that customer satisfaction led to an increase in customer loyalty. At the same time, there may be many satisfied customers who may not be loyal to particular brands. When a customer does not perceive good value for the products, his level of satisfaction is not up to the mark and so the customer deters from sending a positive word of mouth to his friends and relatives. Therefore, customer satisfaction and customer loyalty are mainly based on the quality of service rendered. It was also identified that intermediaries play a major role in customer satisfaction.

Evaschitzky, et al., (2012) customer satisfaction was regarded as a prerequisite for establishing long term, profitable relations between a company and a customer and customer contact employees are key to nurturing this relationship. It was important to note that involved consumers generating product referrals, co create experience, value and contribute to the organizational innovation process and consumer loyalty.

Kumar et al., (2013) stated that the association between customer satisfaction and loyalty was highly variable depending on some factors as the industry, customer segment studied, the nature of the dependent and independent variables, and the presence of numerous factors that serve as mediators.

In this study customers' satisfaction was considered as the consumer's response to expectations and performance of the product or service.

2.13 Customer service attributes

Jeevanada, (2011) found that among various customer service attributes such as product availability, display, service at billing counter, payment options etc., personal assistance to the customer was the most important attribute. Further, it was emphasized that a majority of the customers found a mismatch between the expected service levels and the actual service levels provided by the retailers. Measures should be taken to minimize this gap by implementing standard operating procedures of services in order to generate customer loyalty by way of strategies such as easy payment options, returns and claims, delivery, easy ordering, sales person assistance, store ambience to increase the satisfaction levels.

Design of the Study

CHAPTER III

DESIGN OF THE STUDY

The research design enables to analyze the research problems systematically and to find solutions for the same. In this chapter, the selection of study area, sampling procedure, method of data collection and analytical tools used to draw meaningful inferences regarding various facets outlined in the objectives are presented.

3.1. Selection of the study area

Chennai, a city with huge population, diversified cultures, wide social and economic classes has highly sophisticated life style. The case firm wanted to study their business process, an identified the areas of improvement. The study aimed at identifying business process, bottlenecks and analyzing the process feedbacks from the stake holders so as to evolve a frame work for enhancing case firm sales and services. The case firm has its outlets at two locations namely, Central railway station & DLF IT Park, Porur. They had supplier in Chennai to deliver food packs to outlets.

3.2. Selection of the sample

The research approach selected for this study is survey method. Business process of the case firm is dependent on three stakeholders such as consumers and suppliers of the firm. Data were collected using structured interview schedule for all the stake holders. Simple random technique was used to select the consumers. Consumers visiting two retail outlets were randomly selected and 50 consumers from each outlet were interviewed while they waited in a queue for delivery of foods from dispenser. The study involved meeting and obtaining information from the various stake holders. The study area was confined to the two retail outlets of the case firm.

3.1 Distribution of samples

S.No	Surveyed areas	No. of Sample Respondents	Type of Respondents
1.	DLF IT Park	50	Consumers
2.	Central Railway Station	50	
3.	Suppliers	5	Suppliers
	Total	105	

3.3 Collection of Data

3.3.1 Primary Data

Primary data for the study was collected through personal interview method using pretested interview schedule. Data on general characteristics of various stakeholders, frequency of purchase of food packs, experience in food industry, expectations from case firm, level of customer satisfaction and their expectations from case firm etc..

3.3.2 Secondary Data

The demographic profile related to the Chennai such as population, literacy rate, working population, culture, life style, language and economic aspects were collected from government publications and websites.

3.4 Period of study

The reference year for the study was 2014-2015 and data collection was done during the months of January – April 2015.

3.5 Tools of Analysis

The raw data obtained were coded, processed and analyzed using appropriate statistical techniques and categorized into tables to draw meaningful inferences. The analytical techniques employed in this study are explained below.

3.5.1 Percentage analysis

Percentage analysis was used to study the general characteristics of the customers which included age, education, gender, income, occupation etc,

$$\text{Percentage analysis} = \frac{\text{Number of respondents}}{\text{Total sample size}} \times 100$$

3.5.2 Scaling Technique

The customers' satisfaction towards the food and services provided was measured by using Likert's five point scale. The sample respondents were asked to indicate the level of satisfaction experienced by them as highly satisfied, satisfied, neutral,

dissatisfied, and highly unsatisfied. The views of the sample respondents were recorded and score was given to each factor. The mean score was calculated. The scores assigned to the responses are given in Table 3.2.

Table 3.2 Satisfaction level of customers

Response	Highly satisfied	Satisfied	Neutral	Dissatisfied	Highly Dissatisfied
Score	5	4	3	2	1

3.5.3. Garrett Ranking Technique

Garrett ranking technique was adopted to analyze the reasons for purchasing from the case firm. The sample respondents were asked to rank the reasons based on their preference. The ranks assigned to the above reasons by the sample consumers were converted to scores using the formula:

$$\text{Percent position} = 100(R_{ij} - 0.5) / N_j$$

Where, R_{ij} = Rank given for i^{th} factor by j^{th} individual

N_j = Number of factors ranked by j^{th} individual

The percent position of each rank obtained was converted into scores by referring to the table given by Garrett. Mean score was estimated for each factors. These mean scores for all the factors were arranged in descending order and factors with the highest mean score was given first rank. The most important factors were thus identified.


3.5.4. Process charts


Process chart is the graphical representation of the sequence of steps or tasks representing a process starting from raw materials to the finished product. It serves as a tool for examining each of the process in detail to identify areas for possible improvements. It is also referred as process map. This type of charting helps to analyze the workflows or systems resulting in subsequent analysis. The process charts could be designed for a specific workstation or work place or for a wider system, process or at procedure level.


To build a conceptual process flow model, found process flow modeling useful in predicting the effect of productivity improvement measures such as combining similar operations, eliminating non-value added activities such as material storage, transportation, inspection, rework and implementing a new method. The starting point for this model was process flow chart, which consisted of blocks representing activities and flow of entities through the blocks. Each process block is defined by its inputs, outputs, resources, process time and output routing. The idea is to focus on the overall process flow and not dwell on any particular process activities.


The process flow chart provides a visual representation of the steps in a process. Flow charts are also referred as process mapping or flow diagrams. Constructing a flow chart is often one of the first activities of a process improvement. Flowcharts are used in designing and documenting simple processes or programs. Like other types of diagrams, they help visualize what is going on and thereby help to understand a process, and perhaps also find flaws, bottlenecks, and other less-obvious features within it.


There are many symbols used to construct a flow chart; the more common symbols are shown below:

 **The process symbol** represents a process, action, or function. It's the most widely-used symbol in flowcharting.

 **The document symbol** represents the input or output of a document.

 **The decision symbol** indicates a question to be answered—usually yes/no or true/false.

 **The connector symbol** connects separate elements across one page. It's usually used within complex charts.

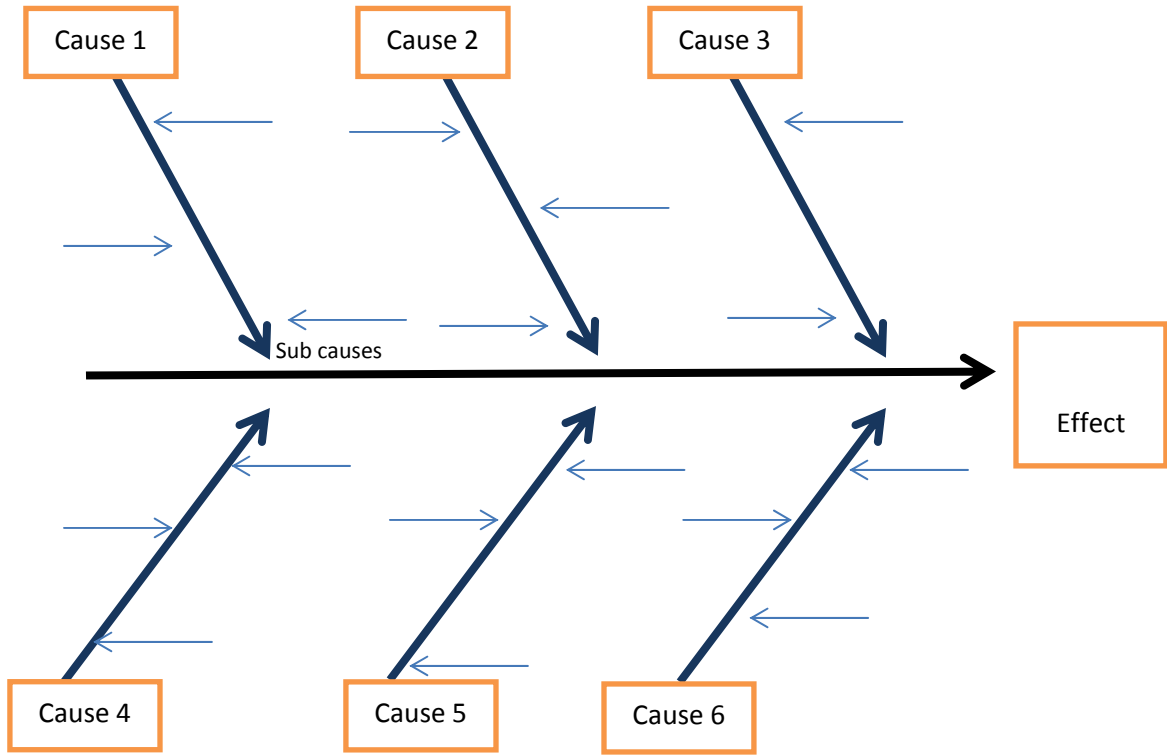
 Flow line connectors show the direction that the process flows

3.5.5 Cause & Effect diagram

The cause and effect diagram, also known as the fishbone or Ishikawa diagram. It is an effective tool to be used as guideline to improve the process design. It is a tool for analyzing the business process and its effectiveness. It evaluates the cause and sub-causes

of one particular problem. The main problem which is required to be resolved has been put on the head of the diagram, and causes are put as Bones. The smaller bones are created as the resembles of the sub cases after completion of the diagram. It is a comprehensive evaluation of the causes of the main problems, and rivals of all possible root causes.

Figure 3.1 Cause and Analysis



Description of the Study Area

CHAPTER IV

DESCRIPTION OF THE STUDY AREA

A proper perspective of the study region covering a brief description of physical, social and economic conditions will facilitate better understanding of the retailing business in the study area and helps in drawing meaningful inferences based on the results of the study. Hence information regarding geographical location, demography, education, working group, culture, lifestyles and languages, etc., is discussed in this chapter.

4.1 Physical Aspects

Chennai, one of the metropolitans in India and capital of Tamil Nadu state is the fourth largest city in the Indian sub-continent and 30th largest city in the world. It plays a significant role in historical, cultural and intellectual development of the state. Chennai city lies between 12.9° and 13.9° of the Northern Latitude and between 80.9° and 80.19° of the Eastern Longitude. It is one of the most important commercial cities in India, which is situated to the north east of Tamil Nadu on the coast of Bay of Bengal. It stretches nearly 25.60 kilometers along the Bay of Bengal coast from Thiruvanmiyur in the South to Thiruvottiyur in the North. It extends to an area of 175 sq.km as per 2011 census, which accounts for only 0.13 percent of the state.

4.2 Social Aspects

4.2.1 Demographic details

The total population of Chennai city is around 46.6 Lakhs. The population density of Chennai city was about 26553 per square kilometer as per the census of 2011. The ratio of male and female residents in Chennai city is approximately 989 female for every 1000 male. Demographically the growth rate of population was 9.76 per cent as against the State average of 11.19 per cent during the period 2001-2011. The rapid progress rate of urbanization in the Chennai metropolitan area is posing formidable challenges to urban infrastructure and civic services. The demographic details of Chennai city are given in the table 4.1.

Table 4.1 Demographic Profile of Chennai City as per 2011 Census

S. No	Details	Numbers
1.	Population (in Lakhs)	46.6
2.	Male (in Lakhs)	23.3
3.	Female (in Lakhs)	23.1
4.	Density of Population (per Sq.Km).	26553

(Source: Census India, 2011)

4.2.2 Literacy

Chennai ranked fourth in the State in literacy with 90.18 per cent, which was higher than the State average (73.4 per cent). The literacy details of Chennai City are given in the table 4.2.

Table 4. 2 Literacy details of Chennai City as per 2011 Census

S.No	Details	Numbers
1	Literate (in Lakhs)	37.76
2	Literacy rate (in percent)	90.18
3	Male Literate (in lakhs)	19.68
4	Male Literacy Rate (in percent)	93.70
5	Female Literate (in lakhs)	18.08
6	Female Literate Rate (in percent)	86.64

(Source: Census India, 2011)

4.2.3 Workers population

As per Census 2001, the total labours in the city (11.70 lakhs) accounted for 30.64 percent of the total population. The share of different categories under main workers is given in Table 4.3.

As of 2001, out of the 937,000 migrants (21.57 percent of its population) in the city, 74.5 percent were from other parts of the state, 23.8 percent were from rest of India and 1.7 percent was from other countries. Among the total population 34.27 percent comes under the group of working population. Non workers constitute 65.73 percent of the total population. Availability of skilled labor is an important pre-requisite for industrial development of a region. The district is endowed with talented entrepreneurs who are known for their business acumen. The manpower of the district is marked for its diverse skills, professional expertise and its ability to communicate in several local languages as well as English.

Table 4.3 Workers population

Sl.No	Particulars	No. of Workers (Lakhs)	Percentage to Workers
1	Agriculture and allied activities	0.11	0.94
2	Mining and quarrying	0.01	0.11
3	Manufacturing industries	2.76	23.55
4	House hold industries	0.07	0.66
5	Construction Workers	0.75	6.38
6	Other services	8.11	68.36
	Total	11.71	100

Source: Census India (2011)

4.2.4 Infrastructure facilities

Chennai is ever growing, changing and pulsating with new activities. The well-being of people is attributed to the blooming economic situation of the region. Over the years Chennai had witnessed a tremendous growth in the economic condition which could be explained in its infrastructure development. Infrastructure availability viz., the transport and communication system development determines the pace of economic development of a region. Chennai enjoys third rank in the infrastructure availability among Indian metropolitans. Chennai Port that endeared itself to the progress of Indian

industries and economy is one of the best in the country. Chennai Port is ahead of trade in creating facilities for India's International Trade and Commerce. It is a versatile port with facilities to handle liquid bulk, dry bulk, neo bulk, break-bulk and containers in a quick, efficient and modern way.

Chennai has an international airport with more than 60 direct flights every week to more than 15 countries in Europe and Far Eastern countries and it has also a domestic airport with a number of flights daily to different parts of the country. The well-developed railway in the district has played a substantial role in the economic development of the district. Chennai is well connected to rest of the country with good rail network. Chennai hosts the headquarters of the Southern Railway. The city has two main railway terminals. Chennai Central station, the city's largest, provides access to other major cities as well as many other smaller towns across India, whereas Chennai Egmore provides access to destinations primarily within Tamil Nadu. The Chennai suburban railway network, one of the oldest in the country, facilitates transportation within the city. Construction is underway for an underground and elevated Rapid Transit System locally known as Chennai Metro Rail. The metro line first phase from Alandur to Koyambedu was inaugurated on 29 June 2015.

Healthy development of any economy depends on modern telecommunication facilities. The city has a good postal, telegraph and telephone communication network. Intra-city transport and commuting facilities between the suburban areas to the center of Chennai is the most efficient amongst all the metros in India. Chennai has a combination of three modes of transport within the city. Metropolitan Rapid transport system (MRTS), suburban EMUS and transport Corporation buses. The city also has a fleet of three wheelers for hire, called auto rickshaws. They are the most economical mode of hired transport. This different transport mode gives unique advantage for the easy access to most of the resources, domestic as well as international markets, required for industrial development.

4.3 Economic Aspects

Chennai's economy is currently rated the fourth-largest economy in India. Chennai has a broad industrial base in the automobile, computer, technology, hardware manufacturing and healthcare sectors. As of 2012, the city is India's second largest exporter of information technology (IT) and business process outsourcing (BPO)

services. Chennai has a diversified economic base anchored by the automobile, software services, hardware manufacturing, health care and financial services industries. According to the Confederation of Indian Industry, Chennai is estimated to grow to a US\$100-billion economy, 2.5 times its present size, by the year 2025. As of 2012, with 1 lakh crore investments in the pipeline over 5 years, the city is poised for major industrial investment.

It is ranked 4th in hosting the maximum number of *Fortune* 500 companies of India, next only to Mumbai, Delhi and Kolkata. It also is home to 24 Indian companies having a net worth of more than US\$1 billion. As of 2012, the city has about 34,260 identified companies in its 15 zones, of which 5,196 companies have a paid-up capital of over 50 lakh.

The financial institutions can make a significant contribution towards the development of business and industrial activities in the economy. Chennai is the financial capital of south India. The Metro city has its strong financial system, served by All India Financial Institutions like ICICI, IDBI, IFCI, Commercial Banks such as the State Bank of India, Indian Overseas Bank, Co-operative Banks and non-banking financial companies such as Chit Funds and indigenous financiers. Foreign Banks such as City Bank, Hongkong Bank, ABN Amro Bank, Bank of Tokyo, Mitsubishi Bank of America etc., have also established offices in Chennai.

Chennai is home to several malls, due to its status as an IT hub. Major ones include Express Avenue (EA), Citi Centre, Spencer Plaza, Ampa Skywalk, Phoenix Market City and Forum Vijaya Mall. Chennai is an important gold market in India contributing to 45 percent of the 800-tonne annual national gold uptake.

4.4 Culture, Lifestyles and Languages

Chennai district, the capital of Tamil Nadu has a legacy of ancient tradition and rich cultural heritage. Popularly known as the "Gateway to the South", Chennai presents a culture rich in music, dance and other art forms, make it traditional and conventional in many ways despite of its six million populations. Dance forms like Bharatanatyam and various other forms of dance and music including Carnatic music have flourished here for centuries. The urban social recreation includes clubs, golf, beach resorts, theme parks, racecourses, art and theatre. Visits to game reserves, long sandy beaches, zoological and entertainment parks are the other way of social pastimes available in the Chennai district.

CHENNAI



● Study area

Figure 4.1 City map of Chennai

4.5 Profile of the case firm

Atchayam Business Solutions Private Ltd, a startup firm based out of Chennai, was launched in 2012. The company had received funding from the US-based private equity firm during the first round. It expects its business turnover to rise to Rs. 100 crore in the next five years.

The company launched Food Box, an automated restaurant chain for delivering multi-brand cuisines. The focus is on providing a quick, hassle-free meal to people who are on the move – travelers, students/office-goers, anyone else with a time crunch. Thus a new category of service: *Ultra-QSR*, to serve people food less than 90 seconds. Food Box deals with automated machine delivery of packaged food drawn from established restaurants. In earlier stage of the case firm they start with local suppliers such as ashisf biryani and sutha idily shops. After the growth of the case firm they established the tie up the branded suppliers is Charminar, Adiyar anandha Bhavan B, Moti Mahal, MR.C and Anjappar. Case firm is planning to open around 40 stores in the next two years in various cities.

Each restaurant associated with case firm will first be consulted in providing meals that are completely satisfactory in terms of quantity and pricing. The meals are packed in 100 per cent virgin polypropylene, food-grade packaging materials at the partnering restaurants, transported to case firm and stored in a climate controlled, automated system which heats the food just before serving. The automated system allows constant replenishment of food, based on stock and demand thereby minimizing wastage and simultaneously ensuring that the food served to customers is always fresh. The special features of automated system are as follows

- Product analysis is done through ERP systems to determine products per location per mealtime.
- Packaging equipment stationed at the restaurants aid in integral sealing of products
- Monitored, cyclic route for transportation of products to the stores
- Rapid random stacking of products in the ARS – product barcodes help in easy retrieval

According to the service, buyers could surf through the menu on the touch screen in the outlet and can pay the bill through payment card or handing over cash to the store keeper. It also plans to set up outlets at highways, high streets, large universities, hospitals and large scale retailers. It has also tied up with online bus ticket provider TicketGoose.com India Private Ltd and is in talks with some of the airlines and airports authority to offer food packages inside the airports.

1. Product analysis through ERP systems to determine products per location per mealtime.
2. Packaging equipment stationed at the restaurants aid in integral sealing of products
3. Monitored, cyclic route for transportation of products to the stores
4. Rapid random stacking of products in the ARS – product barcodes help in easy retrieval
5. Sale monitoring to determine replenishment; Expiry management to disable expired product retrieval (shelf life of product = 6 hrs from packing)

4.6 Food Combos provided by the case firm

The items provided by the Food Box menu are given in table 4.4. The combos provided are combination of Western, Chinese, North Indian and South Indian foods. The customers are from various locations of the country, so to attract the customers' attention the case firm provided the menus.

chart 4.1 Overview of case firm

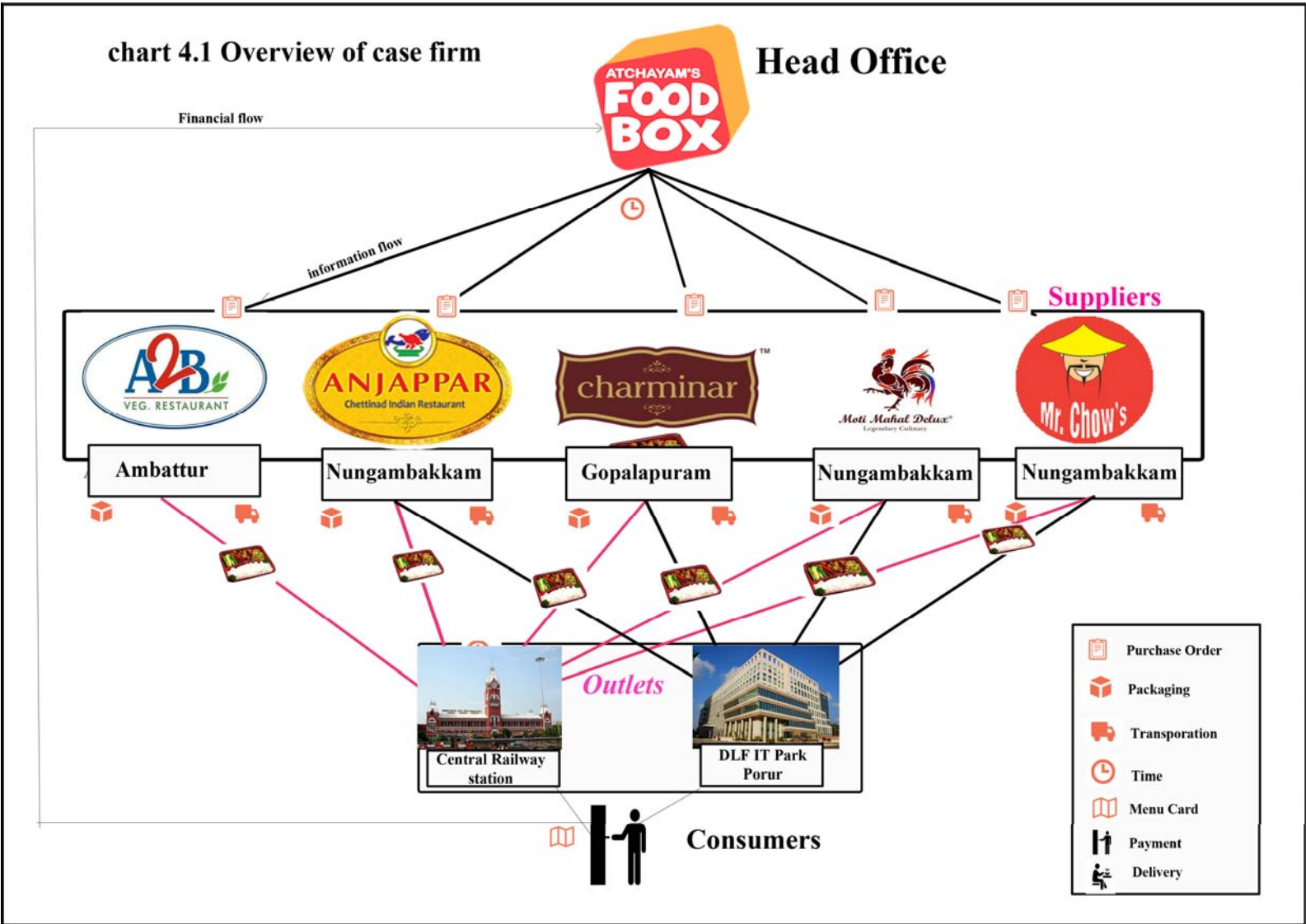


Table 4.4 Food Combos provided by the case firm

S.No	Menu	Price (in Rs.)
1	Simple veg meal	85
2	Veg Biryani, Veg gravy, Poriyal	100
3	Chicken Biryani, Tandoori chicken, Brinjal curry	130
4	Chicken Biryani, Chilly chicken, Biryani curry	130
5	Mutton Biryani, Mutton chukka, Brinjal gravy	150
6	Vanjiram fish curry meal	140
7	Chappathi, Channa masala, Veg Biryani	100
8	Kulcha, Aloo Jeera, Saag Makhani	110
9	Lacha paratha, tawa chicken, dal makhani	120
10	Schezwan noodles, Schezwan Chicken gravy	120
11	Singapore Noodles, Schezwan Veg gravy	110
12	Tandoori Paratha, Pinidi masala, Dal jaipuri	110

Results and Discussion

CHAPTER V

RESULTS AND DISCUSSION

In the earlier chapters, a brief review of the past studies, relevant methodology adopted and the general description of the study area were presented. With that background, the data collected during the survey were tabulated and analyzed in relation to each of the specific objective of the study. The results of the study are presented and discussed under following broad areas.

5.1 General characteristics of respondents

General characters like age, gender, educational status, income, etc. will have profound influence on the purchase of packed foods, frequency of purchase and preference for those food items. Therefore the details on the same were collected, analyzed and the results are presented and discussed in Table 5.1

5.1.1 Age of Sample Consumers

The consumer's taste and food preference differs with age. The decision making on food choice would be influenced by the age of sample consumers. The respondents were classified into five groups based on their age and the details are furnished in the Table 5.1.

Table 5.1 Age of Consumers

(n=100)

S. No	Age (in years)	Sales Outlets		Total
		Central Railway Station (n=50)	DLF IT Park (n=50)	
1	<18	3 (6.00)	0	3 (3.00)
2	18-30	25 (50.00)	37 (74.00)	62 (62.00)
3	31-40	14 (28.00)	11 (22.00)	25 (25.00)
4	41-50	6 (12.00)	2 (4.00)	8 (8.00)
5	>50	2 (4.00)	0	2 (2.00)
	Total	50 (100.00)	50 (100.00)	100 (100.00)

(Figures in parentheses indicate percentage to total)

It could be concluded from Table 5.1 that majority of sample respondents (62.00 per cent) belonged to age group of 18-30 years. 62 per cent of sample consumers belonged to the age group of 18-30 followed by 25 per cent in the age group of 31 – 40 years. Majority of consumers at both retail outlets Central railway station (50 per cent) and DLF IT Park (74 per cent) were young adults.

5.1.2 Gender classification of the Sample Consumers

Men and women may vary in their behavioral orientation based on socialization. The gender of consumer influences foot falls at the retail outlets, choice of food, satisfaction etc. Hence the gender was analyzed and the results are presented in Table 5.2.

Table 5.2 Gender of Sample Consumers

(n=100)

S. No	Gender	Sales outlets		Total
		Central Railway station(n=50)	DLF IT Park(n=50)	
1.	Male	22 (44.00)	34 (68.00)	56 (56.00)
2.	Female	28 (56.00)	16 (32.00)	44 (44.00)
	Total	50 (100.00)	50 (100.00)	100 (100.00)

(Figures in parentheses indicate percentage to total)

From Table 5.2, it could be inferred that 56.00 percent of the respondents were males and the rest are females (40.00 per cent). The share of males who purchased food was considerably higher at DLF IT Park (68 per cent) and share of females was higher (56 per cent) at Central Railway Station. Thus, it could be informed that in employment area, the share of male customers were considerably higher than in transport centre.

5.1.3 Educational Qualification of the Sample Consumers

The educational status of consumers help in using the food vending machine namely selecting the food, making payment, checking the quality of food packs etc. Thus

selected consumers were categorized into higher secondary, graduate and post graduate and results are presented in Table 5.3.

Table 5.3 Educational Qualification of the Sample Consumers

(n = 100)

S. No	Educational status	Sales outlet		Total
		Central Railway Station(n=50)	DLF IT park (n=50)	
1.	Higher secondary	12 (24.00)	-	12 (12.00)
2.	Graduate	25 (50.00)	27 (54.00)	52 (52.00)
3.	Post graduate	13 (26.00)	23 (46.00)	36 (36.00)
	Total	50 (100.00)	50 (100.00)	100 (100.00)

(Figures in parentheses indicate percentage to total)

It could be inferred from Table 5.3 that 52 per cent of consumers were graduate followed by 36 per cent of Postgraduates. All the consumers at DLF IT Park were graduates (54 per cent) and Post graduates (46 per cent).

5.1.4 Occupational status of the sample Consumers

The occupational status of the respondents determined their purchasing power of the consumers. Hence, the occupations of respondents were classified into four categories and results were explained in Table. 5.4

Table 5.4 Occupational status of the sample Consumers**(n=100)**

S.No	Occupation	No of Respondents		Total (n=100)
		Central Railway Station(n=50)	DLF IT Park, Porur(n=50)	
1	Student	4 (8.00)	-	4 (4.00)
2	Employed	21 (42.00)	50 (100.00)	71 (71.00)
3	Business	13 (26.00)	-	13 (13.00)
4	Homemaker	12 (24.00)	-	12 (12.00)
	Total	50 (100.00)	50 (100.00)	100 (100.00)

(Figures in parentheses indicate percentage to total)

From Table 5.4, it could be inferred that 71 per cent of total respondents were employed followed by 13 per cent of them were business people, 12 per cent of consumers were home maker in the study area. All the consumers at DLF IT Park were employed since the outlet was located inside IT Park. Railway station being a common place comprised of different category of consumers.

5.1.4 Average Monthly income of the sample consumers

The average monthly income of the respondent is an important variable that helps in analyzing the customer behavior and the expenditure depends upon the income. The respondents were classified into four categories based on the average gross monthly income of the respondent. In the case of student respondents, the average monthly income of the family was collected and used for analysis. The results are given in the table 5.4.

Table 5.5 Average monthly income of the sample consumers**(n=100)**

S.No	Income (Rs/Month)	No of Respondents		Total (n=100)
		Central Railway Station(n=50)	DLF IT Park, Porur(n=50)	
1.	<25000	3 (6.00)	-	3 (3.00)
2.	25001-35000	14 (28.00)	-	14 (14.00)
3.	35001-45000	17 (34.00)	19 (38.00)	36 (36.00)
4.	45001-55000	9 (18.00)	13 (26.00)	22 (22.00)
5.	>55000	7 (14.00)	18 (36.00)	25 (25.00)
	Total	50 (100.00)	50 (100.00)	100 (100.00)

(Figures in the parentheses indicate percentage to total)

It could be observed from the table 5.5 that majority of the respondents (36 per cent) earned Rs. 35001-45000 per month, while 25 per cent of the respondents earned more than Rs. 55000 per month. It could be concluded that major share of respondents belonged to upper middle income group.

5.1.6 Previous Purchase experience of the Sample Consumers

The respondents are classified into two categories based on their purchase experience in the sales outlet of case firm. The results are given in the following table.

Table 5.6 Previous Purchase experiences of the sample consumers**n=100**

S. No	Previous Purchase Experience	No of respondents		Total
		Central Railway station(n=50)	DLF IT Park(n=50)	
1	Yes	22 (44.00)	41 (82.00)	63 (63.00)
2	No	28 (56.00)	9 (18.00)	37 (37.00)
	Total	50 (100.00)	50 (100.00)	100 (100.00)

(Figures in parentheses indicate percentage to total)

It could be observed from Table 5.6 that 44 per cent of the respondents in Central railway station and 82 per cent of respondents in DLF IT Park have previously purchased from the case firm. Majority of the DLF IT Park consumers have purchased earlier when compared to central railway station.

5.2 Suppliers

Companies are trying to build long-term and profitable relationships with suppliers. In order for firms to compete effectively and survive in the market, they must maintain and build relationships with a capable and competent network of suppliers and extract maximum value from these relationships. The various information from the suppliers such as experience, production type, peak demand period duration etc. were obtained and discussed in the following section.

The Case firm has partnered with five restaurants suppliers namely, Adayar Ananda Bhavan, Anjappar Chettinadu, Moti Mahal Deluxe, Charminar Hyderabad Biryani, and Mr. Chows. The sales outlet of the case firm is located at two places in Chennai Viz., central railway station and DLF IT. The case firm sold about 900-1300 food packs per day at the Chennai central railway Station. DLF IT park outlet sells about 200-300 food packs per day depending on the day of the week. The overview of the suppliers and the details of supply of food in terms of time period and transportation methods are provided in Table 5.7.

Table 5.7 Suppliers of the case firm

S.no	Outlet	Particulars	A2B	Anjappar	Moti Mahal	Charminar	Mr.Chow
1	Chennai Central Railway Station	Location of supplier Production facility	Ambathur	Porur	Nungambakkam	Royapettah	Nungambakkam
		Packing machine version	V1	V1	V2	V2	V2
		Breakfast	Yes	Yes	No	NO	No
		Lunch 1	Yes	Yes	Yes	Yes	Yes
		Lunch 2	No	yes	Yes	No	Yes
		Dinner 1	Yes	Yes	Yes	Yes	Yes
		Dinner 2	No	yes	No	No	No
		Transportation	Own	Own	Third party	Own	Third party
	Packing Material supply	Two weeks once	Weekly	Weekly	Weekly	Weekly	
2	DLF IT Park	Location of supplier production facility	Ambathur	porur	Nungambakkam	Royapettah	Nungambakkam
		Packing machine version	V1	V1	V2	V2	V2
		Lunch 1	Yes	Yes	Yes	Yes	Yes
		Lunch 2	No	No	No	No	No
		Dinner 1	Yes	Yes	Yes	yes	Yes
		Dinner 2	No	Yes	Yes	No	Yes
		Transportation	Own	Own	Third party	Own	Third party
			Packing Material supply	Two weeks once	Weekly	Weekly	Weekly

5.2.1 Length of Association with suppliers

The experience of suppliers in food business will help them to critically understand the taste, preference of consumers and also has significant influence over their decision making process. Therefore, the experience of the suppliers in food business and their association with the case firm was analyzed and the results are presented in Table 5.8.

Table 5.8 Experience of suppliers and their length of association with Case Firm

S. No	Food Supplier	Experience (years)	Relationship with Case firm
1	Anjappar	40	One Year
2	AdayarAnandha Bhavan	48	One Year
3	Charminar	10	6 months
4	Moti Mahal	10	6 months
5	Mr. Chow	10	6 months

(Figures in the parentheses indicate percentage to total)

It could be observed from the Table 5.8 that all the suppliers have vast experience in food business. The Anjappar and Adayar Anadha Bhavan have more than one year relationship with the case firm. This is a win-win situation for both the case firm and suppliers as the suppliers have an additional channel for moving their products. For the case firm, the experienced suppliers will know their customers well and have a good rapport with them over years and brand names were well established. The suppliers are very interested to associate with the case firm mainly due to the opportunity to reach new markets at zero capital spends.

5.2.3 Type of Production Process of the suppliers

The organization of manufacturing systems, also planning and control of production greatly depends on the product type and product line. The different types of production system are job production, batch production and continuous production. The table 5.9 shows the production type of the each supplier.

Table 5.9 Type of Production Process of suppliers

S. No	Restaurant Name	Production type	Facility
1	Anjappar	Batch	Outlets
2	Adayar Anandha Bhavan	Batch	Centralized Kitchen
3	Charminar	Batch	Outlets
4	Moti Mahal	Batch	Outlets
5	MR. Chow	Batch	Outlets

From the above Table 5.9, it could be seen that all the suppliers adopted batch system of production. The presence of production facility is varying only in case of A2B as the supplier has chain of restaurants; the food production is made from a centralized kitchen. Here, Food that was centrally produced was distributed to the point of service in pre-portion and transported in a ready-to-serve state. The presence of centralized kitchen helped them to produce food in large scale and also during late hours. But in the case of other three suppliers Anjappar, Charminar, Moti Mahal & MRC also pre portion and transport the ready to serve food packs from the individual kitchens facility which is available in their restaurants. These suppliers faced difficulty in sending excess order requirements as they may have to satisfy their demand at the restaurants.

5.2.4 Peak Sales Pattern of different Brands at the sales outlet

In the restaurant industry, there is a real need for operators to connect with their food suppliers. The success of service depends heavily on the ability to satisfy demand during peak periods without deteriorating service. Food is procured for five sessions (Breakfast -6.00 am to 8.30 am, Lunch (11.30-1.30 pm), Late Lunch (3.30 pm to 5.30 pm), Dinner (7.00 pm to 10.00pm), Late dinner (11.30 pm to 12.30 pm) from the supplier to the sales outlet during different time period. The identified peak demand duration varied for different suppliers and the information is provided in Table 5.10.

Table 5.10 Peak Sales Pattern of different Brands at the sales outlet

S. No	Restaurant Name	Type of Food	Breakfast	Lunch	Late Lunch	Dinner	Late Dinner
1	Adayar Anandha Bhavan	Vegetarian	6.00-7.30 AM	11.30 – 12.00 AM	-	7.00 – 10.00 PM	-
2	Anjappar	Non Vegetarian	-	11.30 – 12.00 AM	12.30 - 1:30 PM	7.00 – 10.00 PM	11.30 PM- 12.30 AM
3	Moti Mahal	Vegetarian & Non Vegetarian	-	12.00 – 01.00 PM	04 - 5:30 PM	7.00 – 10.00 PM	11.30 PM- 12.30 AM
4	Mr. Chow	Non Vegetarian	-	12.00-1.00 PM	04-05 PM	7.00 – 10.00 PM	11.30 PM- 12.30 AM
5	Charminar	Non Vegetarian	-	11.00 – 12.00 PM	-	7.00 – 10.00 PM	-

(Figures in the parentheses indicate percentage to total)

It could be observed from the table 5.10 that only one supplier i.e. Motimahal supplied both vegetarian and non-vegetarian food varieties . Adayar Anadha Bhavan supplied only vegetarian food and remaining three suppliers provided only Non vegetarian food. For breakfast the Adayar Anandha Bhavan had peak demand as mostly vegetarian food was preferred in the Morning. During lunch session higher demand was for Moti Mahal followed by Adayar Anandha Bhavan, Anjappar, and Charminar.

5.3 Food preference of the Sample Consumers

The respondents were classified into two categories based on food preference as Vegetarian and Non vegetarian. The results are given in the following table.

Table 5.11 Food preference of the Sample Consumers**(n =100)**

S.No	Food preference	No of respondents		Total
		Central Railway station (n=50)	DLF IT Park (n=50)	
1	Vegetarian	23 (46.00)	15 (30.00)	38 (38.00)
2	Non- vegetarian	27 (54.00)	35 (70.00)	62 (62.00)
	Total	50 (100.00)	100 (100.00)	100 (100.00)

(Figures in parentheses indicate percentage to total)

It could be inferred from table 5.11 that there was a clear difference in food preference among the two locations. The preference for Vegetarian and Non vegetarian food was almost even at the central railway station where as the preference for non vegetarian food was very high in the DLF IT Park.

5.3.1 Factors Influencing Purchase of food

The Factors Influencing the purchase of food from the sales outlets of the case firm were ranked and presented in the following table 5.12.

Table 5.12 Factors Influencing Purchase of food

S.No	Factors	Central Railway station		DLF IT Park	
		Mean Score	Rank	Mean Score	Rank
1	Quality and freshness of food	50.09	IV	66.50	I
2	Wide assortment of Food Items	33.57	VI	51.20	II
3	Good value for the price	56.37	III	37.65	VI
4	Quick Service	60.46	I	46.30	III
5	Convenient Packing	60.00	II	40.11	V
6	Known brands	40.47	IV	44.45	IV

From the table 5.12, it could be inferred that Quick service was ranked first by the consumer in Central railway station as they were on the move. They preferred less waiting time and faster check outs. The sample consumers in DLF IT Park ranked the quality of food as first followed by availability of wider assortment of food items. Bartlett and Han (2007) stated that food quality had the strongest impact on customer experience. The customers in DLF IT Park have purchased from the case firm before. The quantity of the food was ranked third Chennai railway station respondents as they felt it was sufficient but the respondents in DLF IT Park opined that the quantity of the food supplied was less. The case firm should take sufficient measures to enhance the repeat consumers by increasing the quantity and also can different SKUs.

5.3.2 Brand Preference of the Sample Consumers

The case firm is procuring and selling food packs from five branded suppliers. Generally the respondents opted to buy from particular supplier for various reasons such as time taste, quantity and availability. The same information was collected and presented in table 5.13.

Table 5.13 Brand Preference of sample Consumers

S.No	Brands	No of customers		Total
		Central Railway Station(n=50)	DLF(n=50)	
1	Charminar	8 (16.00)	11 (22.00)	19 (19.00)
2	MRC	8 (16.00)	4 (8.00)	12 (12.00)
3	Moti Mahal	3 (6.00)	3 (6.00)	6 (6.00)
4	Anjappar	20 (40.00)	22 (44.00)	42 (42.00)
5	Adayar AnandhaBhavan	11 (22.00)	10 (20.00)	21 (21.00)
	Total	50 (100.00)	50 (100.00)	100 (100.00)

(Figures in parentheses indicate percentage to total)

From above table 5.13 it could be inferred that majority of the respondents preferred Anjappar (42.00 percent) followed by Adayar Anandha Bhavan (21.00).The sample respondents opined that they preferred food from these suppliers as they are well known brands. The MRC brand was less preferred at DLF and the Charminar brand was more preferred at DLF IT Park.

5.4 Food Satisfaction level of the Consumers

5.4.1 Characteristics of Food

The purchase of the consumers would vary based on the food quality, quantity, taste price, variety, packaging etc. It is important to know the consumers 'response to characteristics of food provided by the case firm. Five point scale was used to analyze the satisfaction level of the consumers regarding the food

Table 5.14 Consumer Evaluation of Characteristics of Food

S.No	Characteristics	Mean Score	
		Central Railway Station	DLF IT Park
1	Food Quality	4.26	4.01
2	Food Quantity	4.00	3.56
3	Taste	4.03	3.71
4	Price	3.08	2.85
5	Variety	3.5	4.03
6	Packaging	3.7	3.66

The respondents' at CRS gave maximum score for food quality (4.26) followed by taste. Price had lowest mean score of 3.08 followed by food quantity. At DLF IT Park, the mean score was maximum for variety (4.03) followed by food quality and taste. The mean score was lowest for price (2.85). At CRS, all the mean scores were less than 4.0.

Across outlets the mean score for price was lowest and close to 3.0 indicating that consumers were not satisfied with the price. The food quantity was also considered inadequate at CRS.

5.4.2 Service Satisfaction level of the sample consumers

Chase *et al.* (1992) generalized two major elements (formulating a service strategy and designing the service delivery) to consider in the design of a service system. They advocated service flow (operation process) analysis in design of service system. Satisfaction in services offered by the firm will always lead to repeat customers.

The satisfaction of consumer towards different aspects of service rendered by the case firm was analyzed and presented in the Table 5.15.

Table 5.15 Service Satisfaction level of consumers

S.No	Particulars	Mean Score	
		Central railway station	DLF IT park
1	Store Cleanliness	3.01	2.76
2	Store décor and ambience	4.06	4.00
3	Friendly and Knowledgeable Staff	3.31	3.90
4	Quick Service	4.20	4.13
5	Convenience in payment	3.72	3.91
6	Ease of ordering	3.98	4.23

Quick service at the store obtained high satisfaction from respondents in CRS and DLF IT Park (4.20 and 4.13 mean score). DLF IT park respondents were satisfied with ease of ordering (menu, order placement etc.) during purchase (4.23 mean score) whereas the consumers at the CRS opined that it took some time to understand the menu and method of placing the order. Automated food vending mechanism at IT Park was functioning very well whereas the CRS respondents faced some difficulty in understanding the concept. The mean score for cleanliness at both places showed high level of dissatisfaction among the consumers. The firm can make arrangements to promote cleanliness and ordering can be made earlier in CRS.

5.5 Process Mapping of Food Supply System

Marrelli (2005) described process mapping as “the step-by-step description of the actions taken by workers as they use a specific set of inputs to produce a defined set of outputs”. However, process mapping has been used on a wide range of scales and different levels of detail, and has been established as a tool that creates greater

understanding and potential for improvement. Biazzo (2002) has established that using process mapping techniques is crucial to improving business processes.

Process Charting is a method by which the nature and sequence of the activities involved in process are recorded. A process chart is a pictorial representation of the activities that occur in the work method or procedure, in which suitable symbols are used to represent the various activities. The construction and interpretation of process charts are simplified by the use of these symbols.

The various processes involved in moving the products namely, information to the suppliers about the requirement of various products , production of food , transportation to the sales outlet and sales were depicted in the Process Chart (Fig 5.1 & 5.2).

Fig 5.1 Process chart of Case firm -1

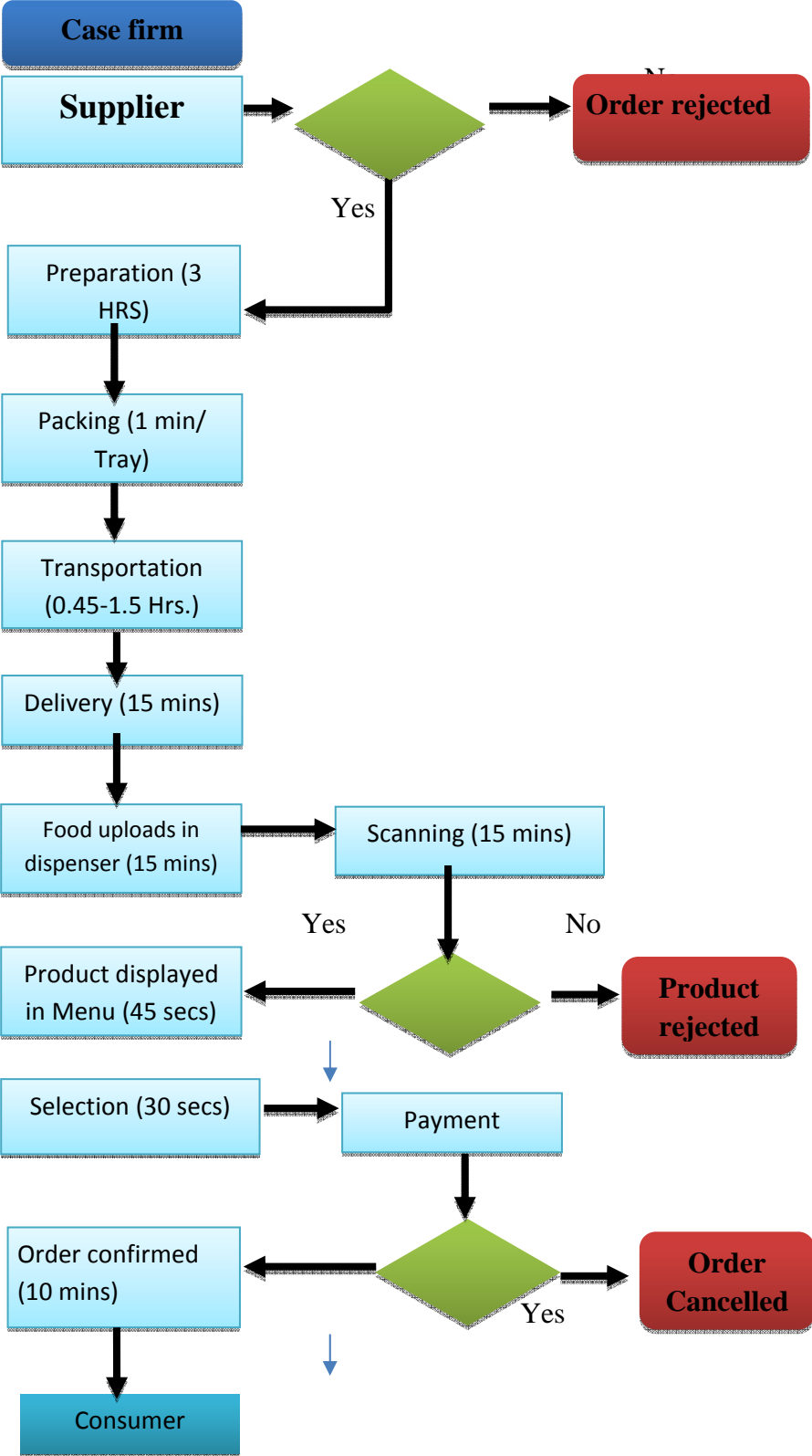
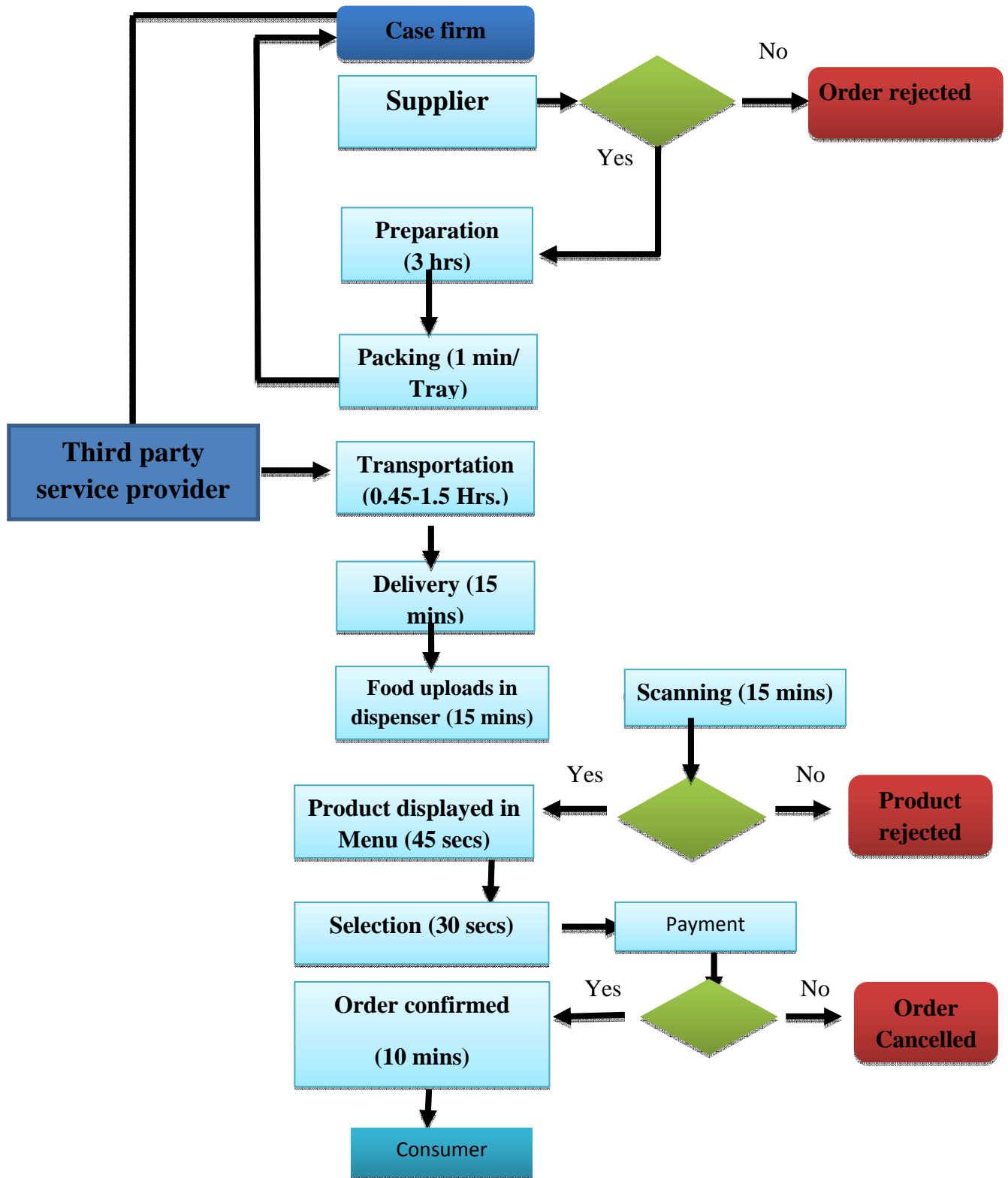


Fig 5.2 Process chart of Case firm -2



The case firm analysed the requirements for each day and the information such as quantity, variety required was sent to the suppliers individually through the production order. The case firm has categorized the sessions into five namely, Breakfast, Lunch, Late Lunch, Dinner and Late Dinner. The purchase order was sent to the supplier before three hours for example, if the food was required for Breakfast session (6.15 am) the production order with requirements was sent before 1.30 am. Before starting the production, suppliers confirmed the order for each session with the case firm marketing managers.

Once after confirmation, production of food was started and supplier took about 3 hours for food production. The material for packing will be supplied to the supplier before two weeks by the case firm. After the products are produced they are packed in food trays. The food trays had barcodes which was generated during the production time. The barcode contained the details of date, time of the production, product type, and items in the food tray. The machine delivered the food packs by taking into account the production time. Food trays were sealed individually with guidance of the supervisor with semi-automated sealing machine. The time taken for sealing the food trays was about 60-140 seconds/tray.

The prepared and packed foods was then transported to the sales outlet. The products were transported by the suppliers using their own vehicles except Mothi Mahal and Mr. Chow, which used a third party service provider for transportation. Normally, it took about 15 minutes for loading the food trays. To reduce the damage during transportation, the individual food trays were packed into another container. Around 20 trays were packed into each container. The transportation of food trays from suppliers to sales outlet nearly took about 45 minutes to 1:30 hours. The suppliers delivered the food products in outlet and collected receipts and packaging containers.

The case firm employees at the sales outlet immediately uploaded the food trays into the dispenser in the machine within in 15 minutes and scanning mode was activated. During scanning the dispenser collected the information from the barcode and same was stored in the machine. It took about 15 to 20 minutes to scan the new entries in dispenser. The vending machine is automated which stored the food in controlled environment and dispensed the food hot and fresh when required. The machine had the capacity to hold food trays in honey comb structure and each food box accommodated 227 packs.

The consumers order involved two steps such as selection of food, payment using any credit or debit card or cash to get a printed bill with an order code. Then consumers picked the bill and watched the screen for the order number and then collected the food coming out on the conveyer belt. Once the order was placed by the consumer, it took about 90 seconds.

Upon receiving an order, the combo number was sent to a computer that directed a robotic arm to pick the right food tray from cold storage. A conveyor belt inside the machine took it to the microwave oven, where it was heated and sent to the dispenser from where the consumer picked the food trays. The innovation in the dispenser machines was that it does not require any manual intervention (in its ideal state). The machine is built in a way that it sensed the expiry of food and not fit for consumption; it also heated or cooled the eatables as it was sold. The food was not disposed by the machine after three hours as it deemed as expired. The employees then had to clear the food trays from the machine and were considered as waste.

5.7 Bottlenecks in the Food Supply System Process

Bottleneck is one process in a chain of processes, such that its limitation reduced the capacity of the whole chain. Bottlenecks caused stalls in production, supply overstock, pressure from customers and low employee morale. Bottlenecks determined the throughput of a supply chain. Recognizing this fact and making improvements will increase cash flow. Normally, the bottle neck occurred due to delays in process time, transportation, service etc. To identify the bottle neck, the information about the ordering time, production time and supply time for three months were collected, analyzed and presented in Table.5.16 and the various reasons for the process delay is presented in Table 5.17.

It could be inferred from the Table 5.16 that majority of delay was with the supplier Anjappar followed by Adayar Anadha Bhavan. The majority of delays were mainly during the Lunch Session and Dinner sessions.

Table 5.16 Bottlenecks in supplier process**(Number of Sessions)**

S.No	Suppliers	December				January				February				March				Total
		BF	L1	D1	D2	BF	L1	D1	D2	BF	L1	D1	D2	BF	L1	D1	D2	
1	A2B	2	5	7	0	3	4	4	0	3	1	5	0	3	1	21	0	59
2	Anjappar	0	7	4	5	0	7	4	5	0	7	4	5	0	5	0	8	61
3	Charminar	0	4	4	0	0	7	7	0	0	7	7	0	0	3	4	0	43
4	Moti Mahal	0	2	2	2	0	1	2	1	0	3	1	0	0	2	4	2	28
5	Mr.chow	0	2	2	3	0	1	2	1	0	3	0	0	0	1	0	3	18
	Total	2	20	19	10	3	20	19	7	3	21	17	5	3	12	29	13	203

5.8 Reason for delay sessions

The process delay happened mainly due to lack of communication, issues in packing, transportation and technical related issues. It could be observed from the Table 5.17 that majority of the problems arose due to packing .The various issues in packing were due to lack of packing materials ,delay in packing and sealing. If the packing was not done properly the wastage rate increased. Lack of communication was another reason for delays in the process. Lack of communication between the suppliers and case firms affected the entire chain of activities. The technical problems identified were mostly with regard to barcodes. The dispenser runs relies completely on the barcode information. If the suppliers failed to generate the right barcodes, the food cannot be uploaded in dispenser machine. The case firm has to take adequate measures to reduce these issues so the process could be smoothened.

Table 5.17 Reasons for delayed sessions

Problem Code	A2B			Anjappar			Charminar		Moti Mahal			Mr. Chow			Total
	BF	L1	D1	L1	D1	D2	L1	D1	L1	L2	D2	L1	L2	D2	
Technical Error	4	6	0	6	2	2	1	0	6	2	1	6	0	1	37
Communication	8	7	1	5	3	6	4	4	3	2	2	3	1	2	52
Preparation & Packing problem	1	1	9	10	7	12	15	10	2	2	1	1	0	1	72
Transportation Problem	2	5	1	6	3	4	9	7	2	0	1	1	0	1	42
Total	15	19	11	27	15	24	29	21	26	8	8	11	1	5	203

5.8 Causes for Reduction in Sales of the Case firm

Cause analysis brought out the reasons for the gap between desired and current performance of the firm. Cause and effect diagram (fish bone diagram) was used to present the causes for the current performance of the organization. The cause that had greater influence which created various bottle necks in the process was discussed first followed by the causes of lower influence and presented in Fig 5.3. The major causes were discussed under equipment, administration, technology related and consumer related.

The case firm supplied equipments for packing, sealing, barcode generation and also used automated machines at the outlets. The layout i.e. arrangement of machines at the supplier production facility was not planned for the operations of case firm and hence the process movement was hindered leading to delay in packing of foods.. The barcode generation started after the confirmation of production order was made by the supplier with the case firm. The barcode started generating with start in the production of food at the supplier production facility. Sometimes the barcode generation got struck and created time delay. There was also a mismatch between the barcodes and the packed food item that resulted in process delay. As a result wasteful activities are generated that resulted in delayed food production and delivery from the supplier's, Improper maintenance schedule of the dispensing machines faced frequent break downs.

The sealing machine also created issues while packing the food trays as only one food tray can be sealed at a given time leading to more time consumption and additional labour hours while sealing the food trays. The sealing of wrappers on food trays was not uniform as there were differences in the wrappers supplied each time by the suppliers.

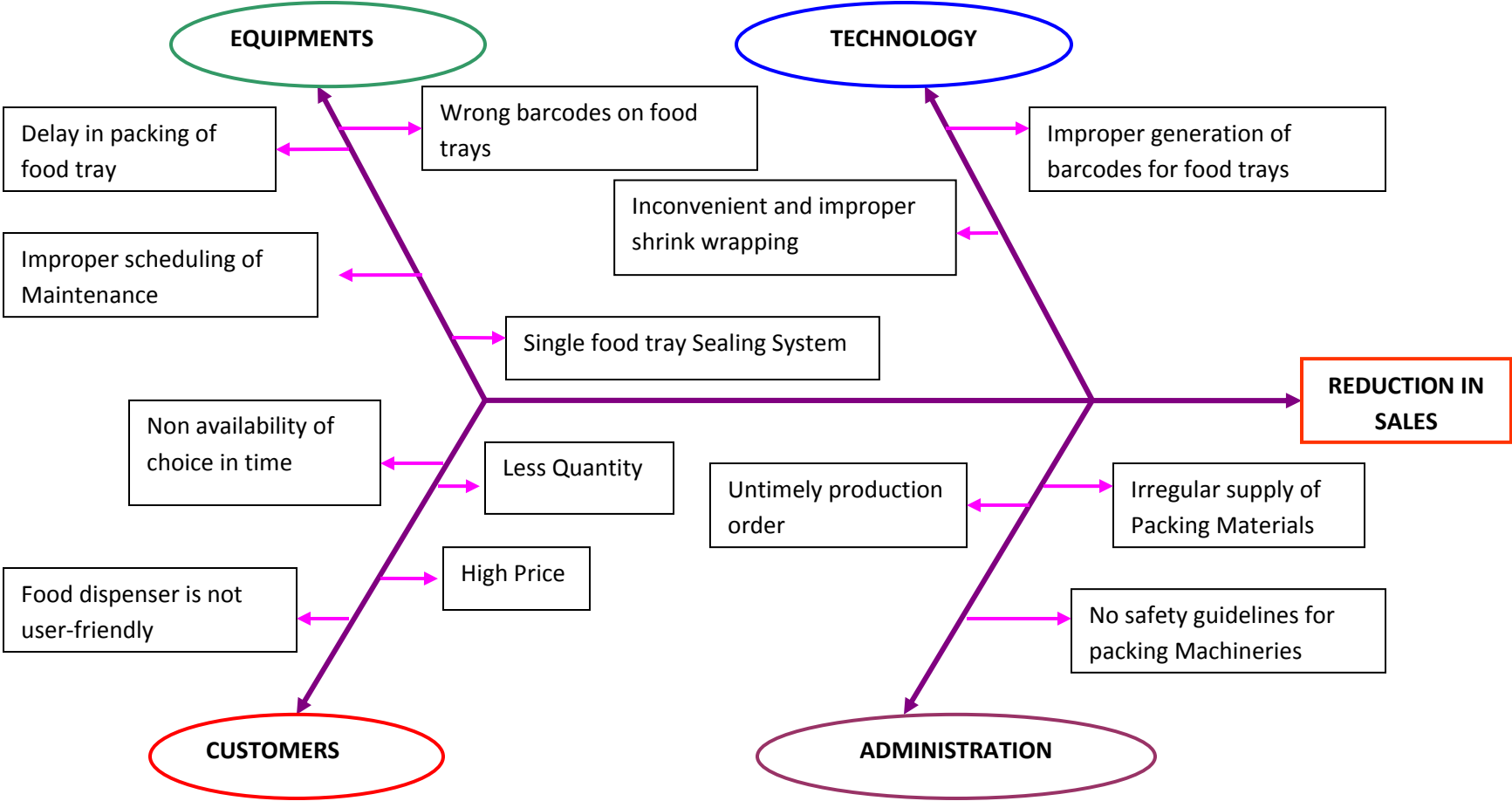
The administration related causes involved irregular supply of packing material, cups, sealing sheets by the case firm to the supplier. This resulted in problems during the process. The case firm did not issue proper guidelines about the usage of materials supplied and has not developed any safety guidelines for the usage of machineries. Without the safety guidelines, new employees are struggling to know about the operations of the machineries and it results in severe injuries to the employees like electric shock, physical injury etc. The production order was generated three hours before each session and sent to the supplier during the untimely hours which led to confusion and delay in confirmation of the order. No proper training was provided to the employees at the point of sales which resulted in delay in loading the food trays. The loading of food trays was complicated and not user friendly at both the point of production and point of sales. The employees also did not explain about the menu, availability of foods to the consumers.

The consumers of the case firm faced problems while opening the food tray as the wrapper was tightly covered and was not easy to peel. The food trays at times break when consumers try to open resulting in spillage of food. The consumer felt that menu could be made more informative. The customers' value was negatively influenced by less quantity of food at higher price.

The entire production and distribution process was highly dependent on the technology. Absence of cross verification methods such as production order placed with the supplier and actual production schedule cannot be done. The machine scanned entire quantity of food loaded and stores the information. If there was any problem in the automated machine, number of food trays loaded was wrongly entered which created problems while payment. The information about the number of food trays to be received was not known to the employees at the sales outlet.

The case firm has advanced information technology but they were not able to capture certain process systematically. So implementation of the third party services such as BITRIX and Sales force.com will enhance the existing business process. The delay in network connection at time resulted in late generation of barcodes, wrong code numbers to the combos which led to decline in sales and resulted in accumulation of wastes over time. The time delay in any process will have an effect on the sales of the food trays as the machine can dispense the food trays only up to three hours from the time of production.

Fig.5.3 Causes for Reduction in Sales of the Case firm



5.9 Redesigning Food Supply System Processes

Processes and systems have parts that perform the work of the system, and relations among the parts that define how the work should be performed. For example, a business process has employees as its parts, and procedures and directives as its relations. Both parts and relations must be effective for the system to succeed in meeting its objectives. Based on systems theory, changes in a system's relations often represented the largest potential for improvement because the relation provides the structure in which the system functioned. Business Process Redesign is "the analysis and design of workflows and processes within and between organizations" (Davenport and Short 1990).

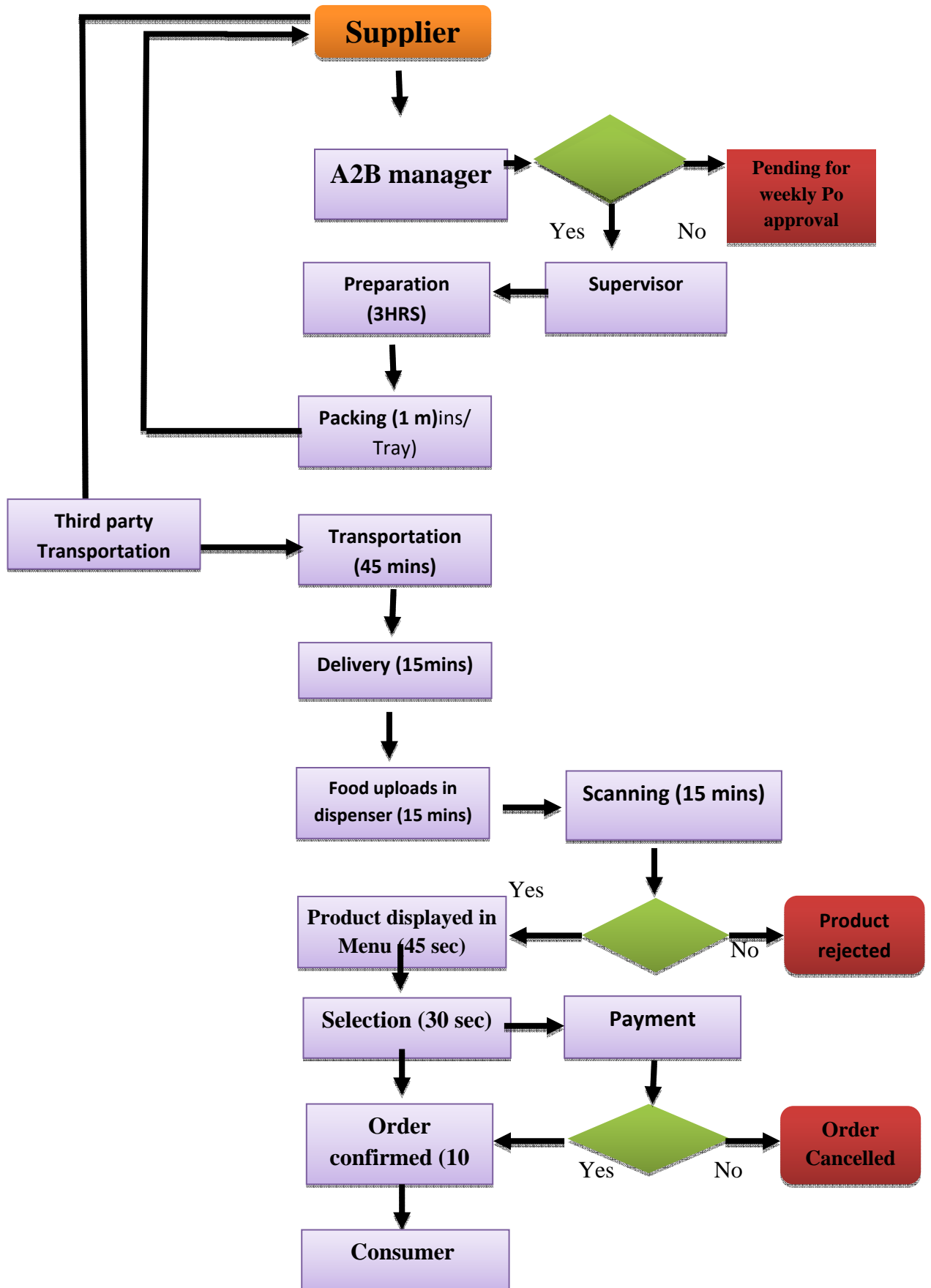
The process mapping of the case firm revealed that production order was raised by the case firm for every session. So the confirmation of purchase order created problems to the suppliers as they got orders before 3 hours as they will be also involved in their regular food preparation. This can be redesigned in such a way that weekly purchase orders can be made to avoid the problems. The confirmation on purchase order can be done on daily basis.

Presently the production orders are sent to the managers in supplier's facility. In the redesigned process, the weekly production order can be sent to managers and kitchen supervisors.

Case firm may introduce the automated packing machine or can offer training to the employees of the supplier firms on the functioning of existing semi-automated machine to improve the speed of packing and sealing of the food trays. The scheduled supply of the packing material, bar code sheets, trays and selling cover can be made consistent by supplying the materials a week earlier based on demand forecasting. These activities would reduce the various problems faced while packing the food.

The case firm can use third party service providers to help ensure the timely delivery, as the third party delivery charges are based on timely delivery of the foods.

Figure 5.3 Redesigning Food Supply system Process



5.10 Strategies for Implementation of Redesigned Processes

Some of the strategies that can be tried by the case firm to redesign the process are as follows.

Introduction of the new purchase ordering system will reduce the existing communication gaps. This system would enhance and speed up all the process. As an alternative of purchase order on day to day basis, introduction of weekly production order avoids the problems in production order. The case firm can send the weekly production order to managers and they have to check and confirm it on daily basis. After confirmation Food Box can mark a copy to suppliers. It will enhance the e ordering system and delivery channel. The suppliers can be insisted to allocate a separate person to handle the orders of the case firm.

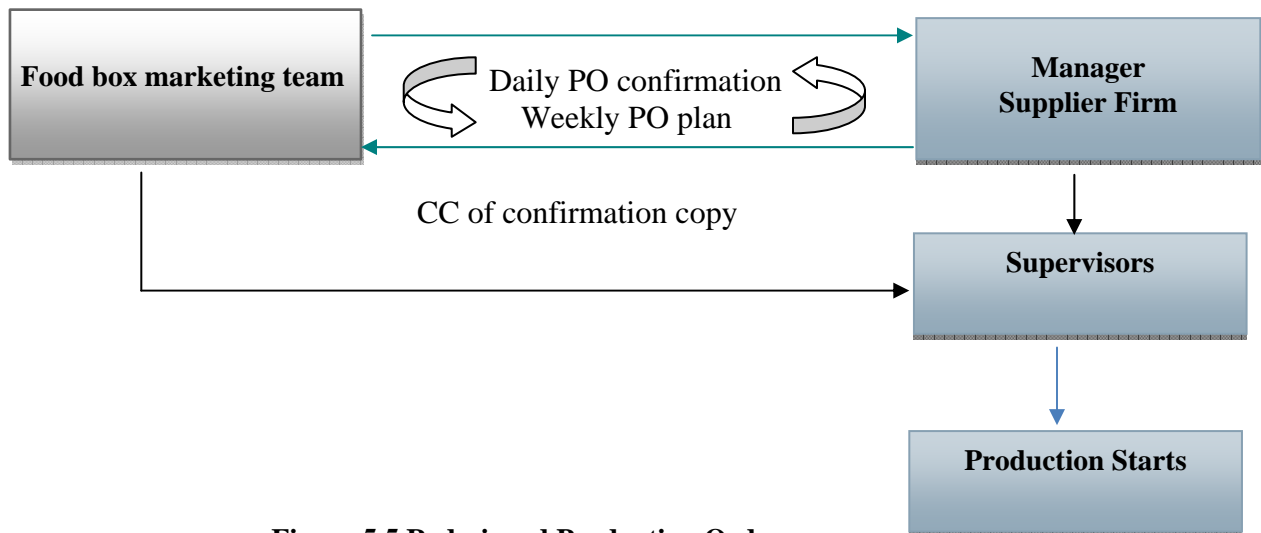


Figure 5.5 Redesigned Production Order process

Third party Logistics

Presently, among the five food suppliers to the case firm, only three of them have their own delivery system. The other two availed the services of third party logistics for transportation and delivery of food products. To avoid the transportation problem, uniform implementation of the third party logistics service with all the suppliers will ensure timely delivery. This will enable the case firm to concentrate on existing quantity food production and retailing food.

In this case, the case firm can send production order and delivery order to both supplier and third party logistics provider. Once the production order is complete, the supplier has to inform both case firm and third party logistics provider. The TPL provider will pick up the food from the suppliers and deliver at the required store and collect post-delivery confirmation. By this way the timely delivery can be ensured which will improve the sales and reduce waste.

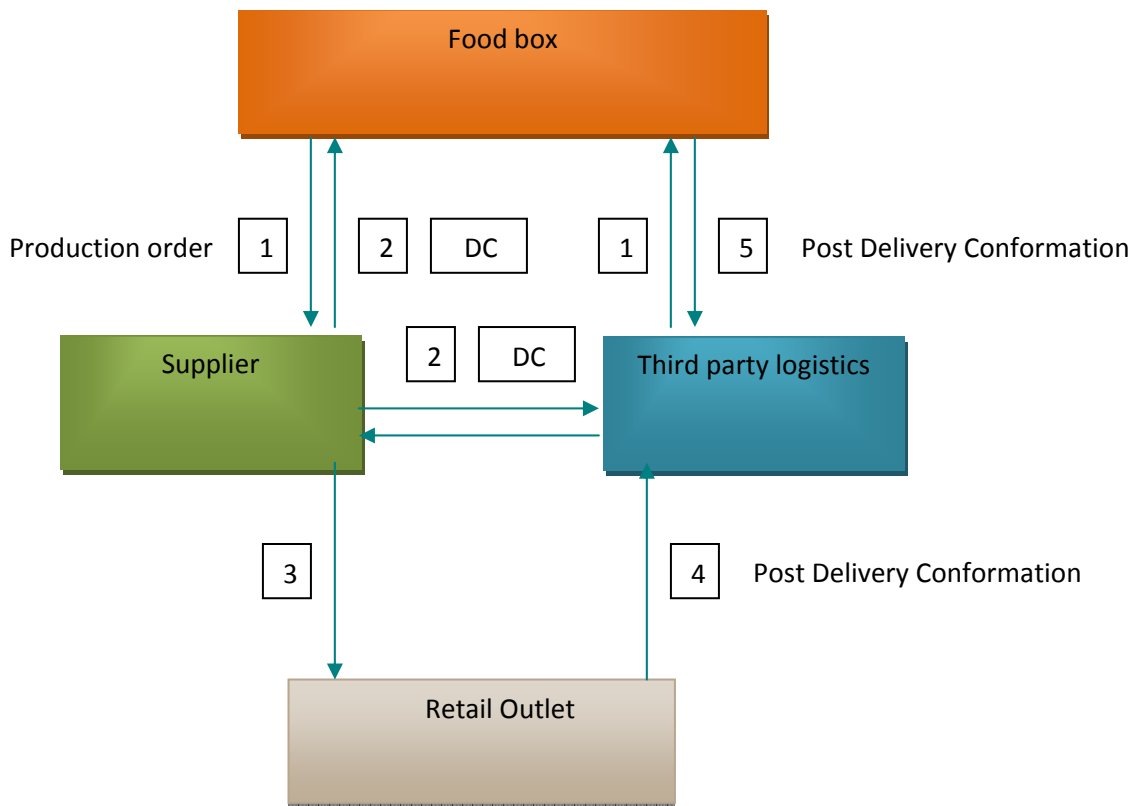


Figure 5.6 : Third party Logistics Process

Packing Issues

The current packing machine consumes more time to seal the food packs and all the suppliers are unsatisfied about the packing machine and raised concern about safety aspects. Employees were injured during the time of sealing. So the case firm needs to redesign the machine with safety standards. The case firm can also provide training to employees to improve the packing speed and safe packing measures.

Information Technology

The case firm has advanced information technology but they are they not able to capture certain process systematically. So implementation of the third party software services such as BITRIX and Sales force.com will enhance the existing business process. Food Box has a plan to open 30 more stores in India, capturing of customer data and business data will help them to improve the business in upcoming stores.

Summary and Conclusion

CHAPTER VI

SUMMARY AND CONCLUSION

In this chapter, the summary of the research work undertaken and the conclusions drawn based on the results obtained are furnished. The present study was conceived with the overall objective of evaluating the process design of the case firm and to evolve a suitable framework for implementation.

- To map the business process and to identify the process bottlenecks
- To analyze the process feedbacks from the stakeholders(Suppliers, Employees and Consumers)
- To evolve a framework for process redesigning
- To suggest strategies for implementation of the evolved framework.

The study was undertaken in Chennai city .The two sales outlets of the case firm located at DLF, IT Park and Central Railway Station, Chennai was selected for the study. The consumers visiting the retail outlet were randomly selected and thus a total of 100 consumers and 5 suppliers formed the sample of the study. The primary data was collected through well-structured interview schedule .The tools employed for this study was percentage analysis, process charts and cause and effect diagram.

The data collected from the consumers covered details like age, gender, educational status, income, etc., which will have profound influence on the purchase of foods, frequency of purchase and preference. Majority of sample consumers (62.00 per cent) belonged to age group of 18-30 years. Majority of consumers at both retail outlets in Central railway station (50 per cent) and DLF IT Park (74 per cent) were young adults.

6.1 General Characteristics of the Consumers

About 56.00 percent of the respondents were males and the rest are females (40.00 per cent). The share of males who purchased food was considerably higher at DLF IT Park (68 per cent) and share of females was higher (56 per cent) at Central Railway Station. All the sample consumers were literates and majority (52 per cent) of them were

graduates. All the consumers at DLF IT Park were graduates (54 per cent) and Post graduates (46 per cent).

Majority (71 per cent) of total respondents were employed followed by 13 per cent of them were business people, 12 per cent of consumers were home maker in the study area. All the consumers at DLF IT Park were employed since the outlet was located inside IT Park. Majority of the respondents (36 percent) earned Rs. 35001-45000 per month while 25 per cent of the respondents earned more than Rs. 55000 per month.

Around 44 per cent of the respondents in Central railway station and 82 per cent of respondent in DLF IT Park have previously purchased from the Case firm sales outlet. Majority of the DLF IT Park consumers have purchased earlier when compared to central railway station.

6.2 Food Suppliers of the case firm

The Case firm has partnered with five restaurants suppliers namely, Adayar Ananda Bhavan, Anjappar Chettinadu, Moti Mahal Deluxe, Charminar Hyderabad Biryani, and Mr. Chows. The sales outlet of the case firm is located at two places in Chennai Viz., central railway station and DLF IT. The case firm sold about 900-1300 food packs per day at the Chennai central railway Station. DLF IT park outlet sells about 200-300 food packs per day depending on the day of the week.

All the suppliers of the case firm were found to have vast experience in food business. The Anjappar and Adayar Anadha Bhavan have more than one year relationship with the case firm. This is a win-win situation for both the case firm and suppliers as the suppliers have an additional channel for moving their products.

6.3 Production system of the Suppliers

Batch system of production was followed by the suppliers. The presence of production facility is varying only in case of A2B as the supplier has chain of restaurants; the food production is made from a centralized kitchen. Here, Food that was centrally produced was distributed to the point of service in pre-portion and transported in a ready-to-serve state. The presence of production facility is varying only in case of A2B as the supplier has chain of restaurants; the food production is made from a centralized kitchen.

The Peak Sales Pattern of different Brands at the sales outlet was analyzed and also type of food served by the supplier. It was found that only one supplier i.e. Motimahal supplied both vegetarian and non-vegetarian food varieties. Adayar Anadha Bhavan supplied only vegetarian food and remaining three suppliers provide only Non vegetarian food.

6.4 Food preference of Consumers

The food preference of the consumers indicated that majority of the respondent (54 per cent) preferred Non-vegetarian food. Quick service was ranked first by the consumer in Central railway station as they were on the move. They preferred less waiting time and faster check outs. The sample consumers in DLF IT Park ranked the quality of food as first followed by availability of wider assortment of food items. The quantity of the food was ranked third Chennai railway station respondents as they felt it was sufficient but the respondents in DLF IT Park opined that the quantity of the food supplied was less. The case firm should take sufficient measures to enhance the repeat consumers by increasing the quantity and also can offer different SKUs. The previous purchase experience of the customers in DLF IT Park showed that they have already purchased from the case firm.

Majority of the respondent preferred Anjappar (42.00 percent) followed by Adayar Anandha Bhavan (21.00). The respondents' at central railway station gave maximum score for Food Quality (4.26) followed by Taste. Price had lowest mean score of 3.08 followed by food quantity. DLF IT park respondents were satisfied with ease of ordering (menu, order placement etc.) during purchase (4.23 mean score) whereas the consumers at the Central Railway Station opined that it took some time to understand the menu and method of placing the order.

6.5 Process Mapping and Identification of bottlenecks in Food Supply System

A process chart is a pictorial representation of the activities that occur in the work method or procedure, in which suitable symbols are used to represent the various activities. The various processes involved in moving the products namely, information to the suppliers about the requirement of various products required, Production of food, transportation to the sales outlet and sales were depicted using the process chart. The case

firm analysed the requirements for each day and the information such as quantity, variety required was sent to the suppliers individually through the production order. The case firm has categorized the sessions into five namely, Breakfast, Lunch, Late Lunch, Dinner and Late Dinner. The purchase order was sent to the supplier before three hours.. Before starting the production, suppliers confirmed the order for each session with the case firm marketing managers.

Once after confirmation, production of food was started and Supplier took about 3 hours for food production. The material for packing will be supplied to the supplier before two weeks by the case firm. After the products are produced they are packed in food trays. The food trays will have barcodes which will be generated during the production time. Food trays will be sealed individually with guidance of the supervisor with semi-automated sealing machine .The time taken for sealing the food trays is about 60-140 seconds/tray.

The prepared and packed food was transported to the Sales outlet. The products are transported by the suppliers using their own vehicles except Mothi Mahal &MR. Chow, which used a third party service provider for transportation. Normally , it takes about 15 minutes for loading the food trays .To reduce damage during the transportation the individual food trays are packed into another container . Around 20 trays can be packed into each container. The transportation of food trays from suppliers to sales outlet nearly takes about 45 minutes to 1:30 hours. The suppliers delivered the food products in outlet and collects receipt and packaging containers.

The case firm employees at the sales outlet immediately uploaded the food trays into the dispenser in the machine within in 15 minutes and scanning mode was activated. During scanning the dispenser collected the information from the barcode and same is stored in machine.

The consumers order involved two steps such as selection of food, payment using any credit or debit card or cash to get a printed bill with an order code. Then consumers picked the bill and watched the screen for the order number and then collected the food coming out on the conveyer belt. Once the order was placed by the consumer, it took about 90 seconds to deliver the order.

To identify the bottle neck, the information about the ordering time, production time and supply time for three months were collected and analyzed. Majority of delay was with the supplier Anjappar followed by Adayar Anadha Bhavan. The various issues in packing were due to lack of packing materials, delay in packing and sealing. Lack of communication was another reason for delays in the process. Lack of communication between the suppliers and case firms affected the entire chain of activities. The case firm has to take adequate measures to reduce these issues so the process could be smoothened. The cause and effect analysis was used to analyze the causes which reduced the sales.

6.6 Causes for Reduction in Sales

Cause analysis brought out the reasons for the gap between desired and current performance of the firm. The major causes were discussed under equipment, administration, technology related and consumer related.

The case firm supplied equipments for packing, sealing, barcode generation and also used automated machines at the outlets. The barcode generation started after the confirmation of production order was made by the supplier with the case firm. There was also a mismatch between the barcodes and the packed food item that resulted in process delay. As a result wasteful activities are generated that resulted in delayed food production and delivery from the suppliers. Improper maintenance schedule of the dispensing machines faced frequent break downs.

The sealing machine also created issues while packing the food trays as only one food tray can be sealed at a given time leading to more time consumption and additional labour hours while sealing the food trays. The sealing of wrappers on food trays was not uniform as there were differences in the wrappers supplied each time by the suppliers.

The administration related causes involved irregular supply of packing material, cups, sealing sheets by the case firm to the supplier. No proper training was provided to the employees at the point of sales which resulted in delay in loading the food trays. The loading of food trays was complicated and not user friendly at both the point of production and point of sales. The employees also did not explain about the menu, availability of foods to the consumers.

The consumers of the case firm faced problems while opening the food tray as the wrapper was tightly covered and was not easy to peel. The food trays at times break when consumers try to open resulting in spillage of food. The customers value was negatively influenced by less quantity of food at higher price.

The entire production and distribution process was highly dependent on the technology. Absence of cross verification methods such as production order placed with the supplier and actual production schedule cannot be done. The information about the number of food trays to be received was not known to the employees at the sales outlet.

The case firm has advanced information technology but they were not able to capture certain process systematically. So implementation of the third party services such as BITRIX and Sales force.com will enhance the existing business process. The delay in network connection at time resulted in late generation of barcodes, wrong code numbers to the combos which led to decline in sales and resulted in accumulation of wastes over time.

6.7 Redesigning Food Supply System Processes

The process mapping of the case firm revealed that production order was raised by the case firm for every session. So the confirmation of purchase order created problems to the suppliers as they got orders before 3 hours as they will be also involved in their regular food preparation. This can be redesigned in such a way that weekly purchase orders can be made to avoid the problems. The confirmation on purchase order can be done on daily basis.

Presently the production orders are sent to the managers in supplier's facility. In the redesigned process, the weekly production order can be sent to managers and kitchen supervisors.

Case firm may introduce the automated packing machine or can offer training to the employees of the supplier firms on the functioning of existing semi-automated machine to improve the speed of packing and sealing of the food trays. The scheduled supply of the packing material, bar code sheets, trays and selling cover can be made consistent by supplying the materials a week earlier based on demand forecasting. These activities would reduce the various problems faced while packing the food.

The case firm can use third party service providers to help ensure the timely delivery, as the third party delivery charges are based on timely delivery of the foods.

6.8 Strategies for Implementation of Redesigned Processes

Some of the strategies that can be tried by the case firm to redesign the process are as follows.

- Introduction of the new purchase ordering system will reduce the existing communication gaps. This system would enhance and speed up all the process. As an alternative of purchase order on day to day basis, introduction of weekly production order avoids the problems in production order. The case firm can send the weekly production order to managers and they have to check and confirm it on daily basis. After confirmation Food Box can mark a copy to suppliers. It will enhance the ordering system and delivery channel.
- The suppliers can be insisted to allocate a separate person to handle the orders of the case firm.

Third Party Logistics

- Presently, among the five food suppliers to the case firm, only three of them have their own delivery system. The other two availed the services of third party logistics for transportation and delivery of food products. To avoid the transportation problem, uniform implementation of the third party logistics service with all the suppliers will ensure timely delivery. This will enable the case firm to concentrate on existing quantity food production and retailing food.
- The case firm can send purchase order and delivery order to both supplier and third party logistics provider. Once the production order is complete, the supplier has to inform both case firm and third party logistics provider. The TPL provider will pick up the food from the suppliers and deliver at the required store and collect post-delivery confirmation . By this way the timely delivery can be ensured which will improve the sales and reduce waste.

Packing Issues

- The current packing machine consumes more time to seal the food packs and all the suppliers are unsatisfied about the packing machine and raised concern about safety aspects. Employees were injured during the time of sealing. So the case firm needs to redesign the machine with safety standards.
- The case firm can also provide training to employees to improve the packing speed and safe packing measures.

Information Technology

- The case firm has advanced information technology but they are they not able to capture certain process systematically. So implementation of the third party software services such as BITRIX and Sales force.com will enhance the existing business process.

Bibliography

BIBLIOGRAPHY

- Ahmed ,M.,& Ahmad, N.(2011). An application of pareto Analysis and cause and effect diagram(CED)for minimizing rejection of raw materials in Lamp production process. *Management science and engineering*, 5(3),87-95.
- Aksoy, L., B. Coolil., C. Groening., T. L. Keiningham and A. Yalçin, (2008), "The Long-Term, Stock Market Valuation of Customer Satisfaction", *Journal of Marketing*, 72, pp: 105-122.
- Amarnath, B., &Vijayadu, G., (2011). "Rural consumers attitude towards branded packaged food products", *Asia- pacific journal of social sciences*, 3(1), Jan-June, pp: 147-159.
- Amutha, R., Surulivel, S.T., &Vijayabanu, C., (2012). "A study on consumer satisfaction towards quality of service of an Indian private sector Bank using Financial Analysis", *European Journal of Social Sciences*, 29(1), pp:12-25.
- Anderson, E.W., &Fornell, C., (2000). "Foundations of the American customer satisfaction index", *Total Quality Management*, 1(7), pp: 869-83.
- Armistead, C., &Machin, S. (1997). Implications of business process management for operations management. *International Journal of Operations & Production Management*, 17(9), 886 - 898.
- Basotia, V., (2001). "Marketing Management", Jaipur: Mangaldeep Publications, India: pp: 24.
- Berman, Berry, & Joel R. Evan, (2004). "Retail Management – A Strategic Approach", New Delhi: Prentice Hall of India Ltd, pp: 29, 171.
- Bhave &Ashish, (2001). "What do customer value?" ,*Handbook of Customer Satisfaction Measurement*, New Delhi: Prentice Hall of India Ltd, pp: 35-41.
- Biazzo, S., (2002).Process Mapping Techniques and Organizational Analysis.*Business Process Management Journal*, 8(1).

- Binu Mathew, (2006). "A Study on Consumer Preference for RTE and RTC Products in Ernakulam district", Unpublished MBA thesis, submitted to Department of Agricultural and Rural Management, Tamil Nadu Agricultural University, Coimbatore.
- Blackwell, R. D., Miniard, P.W., & Engel, J.F., (2006). "Consumer Behaviour", 10th ed. Mason: Thomson South-Western.
- Brandweek, (1995). "Introduction to Modern Marketing – An Applied Approach". New York: The McMillan Co.
- Brink, A., & Berndt, A., (2009). "Relationship marketing and customer relationship management and customer service", *Landsdowne*: Juta, pp: 58.
- Bukenya, J.O., & Wright, N.R., (2007). "Determinants of consumer attitudes and purchase intentions with regard to genetically modified tomatoes", *Agribusiness*, 23(1), pp: 117-30.
- Clancy, K.J., Berger, P.D., & Krieg, P., (2013). "Problems with derived importance measures in brand strategy and customer satisfaction studies", *Indian Journal of Marketing*, 43(1), pp: 5-13.
- Clark, R. A., Hartline, M.D., & Jones, K.C., (2008). "The effects of leadership style on hotel employees' commitment to service quality", *Cornell Hospitality Quarterly*, 65(4), pp: 23-25.
- Cliff, G. Graham, C. & Eyre, H. (2004). "Food retail change and the growth of food deserts: a case study of Cardiff", *International Journal of Retail & Distribution Management*, Vol. 32(2), pp.72 – 88.
- Cravens Hills, & Wood Ruff, (1996). "Marketing Management", New Delhi: A.I.T.B.S. Publishers and Distributors, pp: 97.
- Crisil, (2013). "Small cities to drive fast-food market ", *Economic times*, 4(5), pp: 22.
- Davenport, T., and Short, J. (1990). "The new industrial engineering: information technology and business process redesign", *Sloan Management Review*, 31(4), pp:11-27.

- David, I., Bassham, M., Dougherty, L.,(2008).''Redesigning care at the flinders Medical Centre clinical process redesign-lean thinking'', *The Medical Journal of Australia*,188(6).
- Dubey, S., (2011). "Service quality perceptions: A case study of banking services", *International transactions in Appliedsciences*, 3(2), pp: 221-236.
- Ellen. A. Benowitz, (2004). "Principles of Management", New York: Persus Books Pvt. Ltd, pp: 112.
- Eriksson, H.E., Penker M. (2000), Business Modeling with UML, Business Patterns at Work, John Wiley & Sons, New York.
- Evans Joel, R., (2003). "Retailing", New Jersey: Prentice-Hall, Inc, pp: 111.
- Evanschitzky, H., Sharma, A., &Prykop, C., (2012). "The role of the sales employee in securing customer satisfaction", *European Journal of Marketing*, 46(314), pp: 489-508.
- Flurry, L. A., & Burns, A.C., (2005). "Children's influence in purchase decisions: A social power theory approach", *Journal of Business Research*, 58, pp: 593-601.
- Gilbert, G. R., &Veloutsou, C., (2006). "A cross-industry comparison of customer satisfaction", *The Journal of Services Marketing*, 20(5), pp: 298-308.
- Gomez, McLaughlin, W., &Wittink, R., (2004). "Customer satisfaction and retail sales performance: an empirical investigation", *Journal of Retailing*, 80(4), pp: 265-278.
- Gupta, C.P., &MitaliChaturvedi, (2007). "Retailing: An Emerging Trend in India", *Indian journal of Marketing*, 4(2), pp: 45-55.
- Hammer, M., Champy, J., 1993. Reengineering the Corporation: A Manifesto for Business Revolution.NewYork, USA, pp:223
- Hawkins, (2004). "Consumer Behavior: Building Marketing Strategy", 7th Edition, USA: McGraw-Hill.
- Hinduja S., Petty D J., Tester M., & Barrow G, "Calculation of optimum cutting conditions for turning operations'', *Proc. Inst. Mech. Eng* , 81-92.

- Homburg, Koschate, N., & Hoyer, W.D., (2005). “Do satisfied customers really pay more? A Study of the Relationship between Customer Satisfaction and Willingness to Pay”, *Journal of Marketing*, 69(2), pp: 84-96.
- Jahanshahi, A.A., &Khaksar, S.M.S., (2011). “Study the effects of customer service and product quality on customer satisfaction and loyalty”, *International Journal of Humanities and social science*, 1(7), pp: 253-260.
- Jeevanada, (2011). “Study on customer satisfaction level at hypermarkets in Indian Retail Industry”, *Research Journal of Social Science and management*, 1(3), pp: 1-14.
- Keiningham, T. L., Cooil, B., Aksoy, L., Andreassen, T.W., & Weiner, J., (2007). “The value of different customer satisfaction and loyalty metrics in predicting customer retention, recommendation, and share-of-wallet”, *Management of Service Quality*, 17(4), pp: 361-384.
- Kerr, M. J., Dinesh Marothia, K., Katar Singh, Ramaswamy, C., & William Bentley, (2000) “Natural Resources Economics – Theory and Application in India”, New Delhi: Oxford and Indian Book House Publishing Co. Pvt Ltd, pp: 631-632.
- Kothari, C. R., (2004). “Research Methodology: Methods and Techniques”, New Delhi: New Age International Publishers, 2(3), pp: 40-43.
- Kotler Philip, & Armstrong, (2013). “Marketing Management”, New Delhi: Prentice Hall of India Private Ltd., pp: 19, 593, 529.
- Kumar, V., Pozza, I.D., & Ganesh, J., (2013). “Revisiting the satisfaction–loyalty relationship: Empirical generalizations and directions for future research” *Journal of Retailing*, 89, pp: 246–262.
- Kuster, I., & Villa, N., (2006). “Relational strategies in the textile sector: Internet use”, *Journal of Relationship Marketing*, 5(4), pp: 3-20.
- Levy & Weitz, (2008). “Retailing Management”, New Delhi: Tata McGraw Publishing Pvt. Ltd.

- Liu, C. H., & Yen, L.C., (2010). “The effects of service quality, tourism impact, and tourist satisfaction on tourist choice of leisure farming types”, *African Journal of Business Management*, 4(8), pp: 1529-1545.
- Mahto, D., & Kumar, A.(2008). Application of root cause analysis in improvement of product quality and productivity. *Journal of industrial Engineering and management*,1(2),16-53
- Manmohan Singh, (2003). “Marketing and marketing management in an organization”, *Indian Journal of Marketing*, 17(1), pp: 21-22.
- Marrelli, A. F., (2005). The Performance Technologist’s Toolbox: Process Mapping. *Performance Improvement*, 44(5).
- Martinez-Tur, Vicente, Peiro, Jose, M., & Jose Ramos, (2005). “Linking Situational Constraints to Customer Satisfaction in a Service Environment,” *Applied Psychology*, 54 (1), pp: 25-36.
- McCormack, K., Johnson, W. (2001), *Business Process Orientation: Gaining the E-Business Competitive Advantage*, St Lucie Press, Delray Beach
- Meredith, (2000)“Just the Ticket”, *The Health Service Journal*, 12(2) p23.
- NABARD, (2011).“Organized Agri Food Retailing in India”, NABARD – Report, Mumbai-51.
- Phadke, S. K., (2011). “Consequences of service quality linkage – An insight from an empirical investigation in higher education”, *Indian journal of marketing*, 41 (8), pp: 11-19.
- Pilon, M., (2009).“College Graduates Facing Mounting Debt, Rising Unemployment”, *The Wall Street Journal*.
- Pradhan, S. (2008), “Retailing Management”, New Delhi: Tata McGraw Hill Publishing Company Limited, pp: 4, 168, 308, 314.
- Prasad, L., & Reddy, D. (2007).*The Journal of Business Perspective*, October; vol. 11, 4: pp. 21-30. reference to FMCG products”, *Indian Journal of marketing*, 44(8), pp: 43-55.

- Praveen, S., &Kumaresh, K., (2014). "A study on usage and customer satisfaction towards solar water heaters in Coimbatore district in TamilNadu", *International Journal Management Research and Review*, 1 (5), pp: 216-228.
- Radha Krishna, G., &Shylajan, C.S., (2007). "Determinants of Habitual Buying Behavior: A Study on Branded Apparel", *The ICFAI Journal of Marketing Management*, 4(3), pp: 6-21.
- Rajagopal, (2009). "Growing Shopping Malls and Behaviour of Urban Shoppers", *Journal of Retail & Leisure Property*, 8(2), pp: 99–118.
- Ramaswamy, V. S., &Namakumari, S., (2002). "Marketing Management - Planning Implementation and Control", New Delhi: Macmillan India Ltd, pp: 3-400.
- ReetiAgarwal, (2007). "A study of spousal influences in family purchase decisions", *The Icfai Journal of Consumer Behaviour*, 11(3), pp: 58-68.
- Richards, K. A., & Jones, E., (2008). "Customer Relationship Management: Finding Value Drivers," *Industrial Marketing Management*, 37, pp: 120-130.
- Rossiter, M. (2006), "State-based management: A process for reducing customer waiting in over-the-counter service operations," *International Journal of Service Industry Management*, 14(4), 458-470.
- Samraz, H., & Bakhtiar, M., (2012). "The Impact of service quality, customer satisfaction, loyalty programs on customer loyalty: Evidence from banking sector of Pakistan", *International Journal of Business and Social science*, 3(16), pp: 200-209.
- Sharkey, J., Horel, S., Han, D., & Huber, J., (2007). "Association between neighborhood need and spatial access to Fast Food", *International Journal of Health Geography*, Vol-20(1), pp: 47-60.
- Sinha, T., (2012), "Study on Principles for Implementing CRM Strategies for Organized Retail in India", *International Journal of Business Economics & Management Research*, 2(12), pp: 8-10.

- Sinha, T., (2012). "Study on Principles for Implementing CRM Strategies for Organized Retail in India", *International Journal of Business Economics & Management Research*, 2(12), pp: 8-10.
- Snyder, T. D., & Dillow, S.A., (2011). "Digest of Education Statistics, 2010 – Introduction", National Center for Education Statistics (NCES) Home Page, a Part of the U.S. Department of Education.
- Soriano, D. R., (2002). "Customers' expectations factors in restaurants: The situation in Spain", *International Journal Quality Reliability Management*, 19(8), pp: 1055-1067.
- Srinivasan, N., Elangovan, & Chinnaiyan, S., (2000). "Consumers Perception towards processed fruits and vegetables products", *Indian Journal of Marketing*, 30(12), pp: 22-25.
- Sudin bag, & Somasankar sen, (2012). "Kolkatta metro railway and customer satisfaction: An empirical study", *International Journal of Multidisciplinary Research*, 2(3), pp: 165-176.
- Tandoon, S., Landes, M.R., & Woolverton, A., (2011). "The expression of modern grocery retailing and trade in developing countries", *Economic Research report No 122*, USA, United States Department of Agriculture.
- Townsent, A., (2004). "Changing Food Systems In India: Response-Sharing and Marketing Arrangements for Vegetable Production in Andhra Pradesh". *Development Policy Review*, 21 (5-6), pp. 627-639.
- Varshney, R. L., & Gupta, S.L., (2000). "Marketing Management", New Delhi: Sultan Chand & Sons, pp: 4-423
- Vinod Kumar Srivastav, (2005). "Study on Consumer Behaviour in relation to Nestle Maggi noodles in Warangal, Nalgonda and Khammam districts of Andhra Pradesh", Unpublished MBA thesis, submitted to Department of Agricultural and Rural Management, Tamil Nadu Agricultural University, Coimbatore.
- Weitz, and Levy, (2007), "Retailing Management" New Delhi: Tata McGraw Hill Book Company, pp: 72.

Womack, J. & Jones, D., (1996), *Lean Thinking*. Simon & Schuster, New York, NY.

Zhu, H., Wang, Q., Yan, L., & Wu, G., (2009). “Are Consumers What They Consume? Linking Lifestyle Segmentation to Product Attributes: An Exploratory Study of the Chinese Mobile Phone Market”, *Journal of Marketing Management*, 25 (3), pp: 295–314.

Appendix

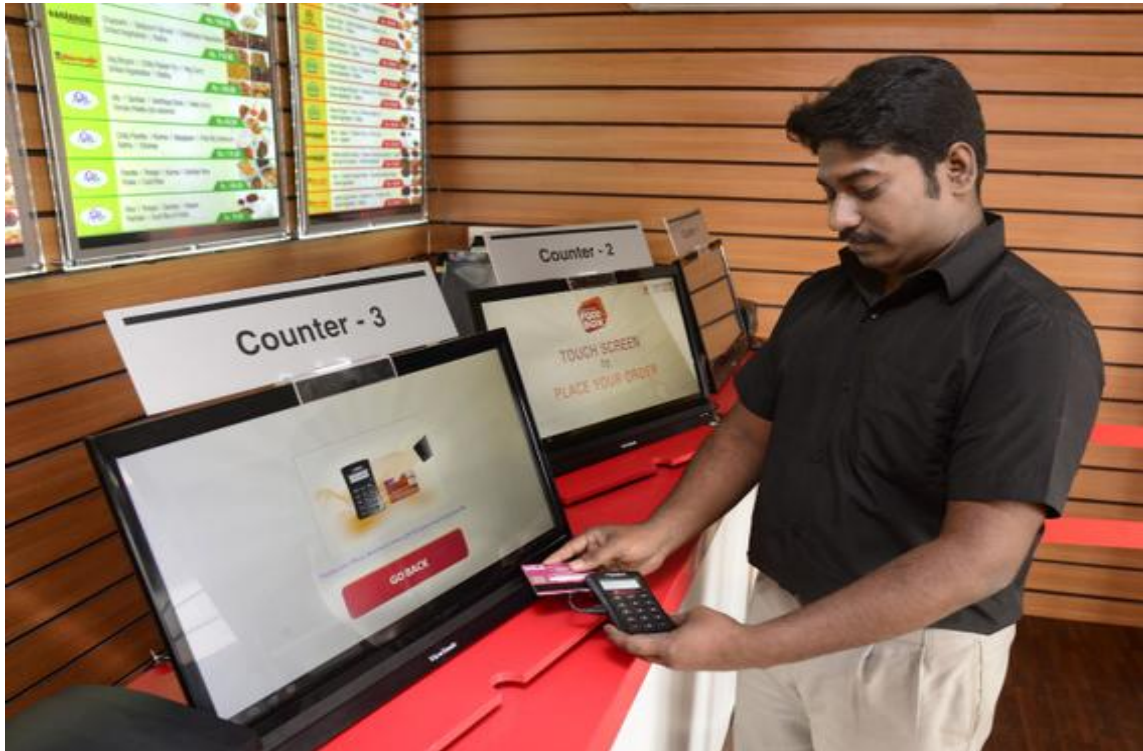
CASE FIRM OUTLET



ORDERING



PAYMENT



FOOD DISPENSER



MOVEMENT OF FOOD THROUGH CONVEYORS



DELIVERY TO CONSUMER

