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Chapter 1
INTRODUCTION

1.1 The Context

One of the most important elements of marketing mix is place, i.e. product availability. Making a product/service available to customers is what distribution is all about.

Managing the supplies to ensure adequate and timely availability of products to the end users is one of the most challenging aspects of distribution. This requires proper management of all the activities that form the basis of product availability, right from the supplier to the end users.

The management of a network of interconnected businesses involved in the ultimate provision of product and service packages required by end customers is known as Supply Chain Management (Harland, 1996). Mentzer et. al. (2001) have defined supply chain management as, “Supply chain management is the systemic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole.”

Proper supply chain management guarantees efficient handling of goods from the point of origin to the point of consumption. Supply Chain Management encompasses the planning and management of all activities involved in sourcing, procurement, conversion, and logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers, and customers. In essence, supply chain management combines supply and demand management within and across companies.

A typical supply chain may involve a variety of stages. These supply chain stages include:
Each stage in a supply chain is connected through the flow of products, information and funds. These flows often occur in both directions and may be managed by one of the stages or an intermediary. The suitable design of the supply chain depends on both the customer's needs and the roles played by the stages involved.

*Fig.1.1 A Typical Supply Chain*

*Source: www.sapientsage.com*

1.2 The Objective of a Supply Chain

The objective of every supply chain should be to maximise the overall value generated (Chopra and Meindl, 2004). The value a supply chain generates is the difference between what the final product is worth to the customer and the costs the supply chain incurs in filling the customer's request. For most commercial supply chains, value will be strongly correlated with supply chain profitability, the difference between the revenue generated from the customer and the overall cost across the
supply chain.

Each phase in a supply chain must add some value to the product or the service, i.e. there must be some value addition at every stage starting from idea generation to point of delivery.

In general, a supply chain must focus on these objectives:

- Enhancing *Customer Service*
- Expanding *Sales Revenue*
- Reducing *Inventory Cost*
- Improving *On-Time Delivery*
- Reducing *Order to Delivery Cycle Time*
- Reducing *Lead Time*
- Reducing *Transportation Cost*
- Reducing *Warehouse Cost*
- Reducing / Rationalise *Supplier Base*
- Expanding *Width / Depth of Distribution*

Each of these objectives benefits each and every member of the supply chain, right from the suppliers to the end users.

**1.3 The Role of Distribution in a Supply Chain**

Distribution refers to the steps taken in order to move and store a product from the supplier stage to a customer stage in the supply chain. To put in the words of Ducker (1962), “Distribution is the last ‘Dark Continent’ for business to conquer.” This function has become a growing concern for many industries and is today regarded as the single most critical point which can leverage business towards success.

Distribution is a key driver of the overall profitability of a firm as it directly impacts both the supply chain cost and the customer experience. Good distribution can be used to achieve a variety of supply chain objectives ranging from low cost to high
responsiveness. As a result, companies in the same industry often select significantly different distribution networks.

Distribution is one of the basic elements for the success of any business. Though it sounds simple enough to make products available in sufficient quantities wherever the demand exists, the ground reality is rather complex. Customers are spread out in wide geographical regions; many customers prefer different channels at different points of time even within a single location. Different channels have different cost implications and customers seek consistency in service levels across all the channels.

Efficient management of distribution channels calls for decision regarding the right combination of channel options, better handling of finances, proper risk management, designing proper distribution network, selecting effective marketing strategies, fruitful relationship among channel partners, employment of advanced technology, proper inventory management, and efficient environmental management.

1.4 Factors influencing Distribution Network Design

At the highest level, performance of a distribution network should be evaluated along two dimensions:

1. Customer needs that are met

2. Cost of meeting customer needs

The customer needs that are met influence the company's revenues, which along with cost decide the profitability of the delivery network.

While customer service consists of many components, focus will be on those measures that are influenced by the structure of the distribution network. These include:

- Response time
- Product variety
- Product availability
- Customer experience
- Order visibility
- Returnability

Response time is the time between when a customer places an order and receives delivery. Product variety is the number of different products/configurations that a customer wishes from the distribution network. Availability is the likelihood of having a product in stock when a customer order arrives. Customer experience includes the ease with which the customer can place and receive their order. Order visibility is the ability of the customer to track their order right from placement up to the point of delivery. Returnability is the ease with which a customer can return substandard merchandise and the knack of the network to handle such returns.

It may seem at first that a customer always needs the highest level of performance along all these dimensions. In practice, however, this is not always the case. Customers ordering a book at Amazon.com are willing to wait longer than those that drive to a nearby book store to get the same book. On the other hand, customers can find a far larger variety of books at Amazon compared to the book store.

Firms that target customers who can tolerate a large response time require few locations that may be far from the customer and can focus on increasing the capacity of each location. On the other hand, firms that target customers who value short response times need to locate close to them. These firms must have many facilities, with each location having a low capacity.

**1.5 Dimensions of Distribution Strategies adopted by Business Organisations**

Developing effective distribution strategies requires amalgamation of various dimensions that may affect the sales and profitability of the organisation.

In the context of the present study, nine dimensions have been identified that affect the distribution process of an organisation in one way or the other. The identified dimensions are viz. Supply Chain Management (SCM), Relationship Management (RM), Environmental Management (EM), Technology (T), Inventory Management (IM), Marketing Strategies (MS), Distribution Network (DN), Financial Strategies (FS) and Risk Management (RSM).
All these dimensions need to be closely monitored and managed in order to design comprehensive and efficient distribution strategies.

**1.6 Mobile Telephony in India**

Mobile communication is one of the most important developments in the recent times. Mobile telephony is one of the fastest grown and fastest adopted technologies all over the world. The last decade saw a phenomenal increase in the number of mobile phone users. The mobile communications technology is evolving rapidly in the world as more and more people demand mobile services with larger bandwidth and new innovative services like connectivity anywhere, anytime for features like TV, multimedia, interoperability and seamless connectivity with all types of protocols and standards. The mobile communication has contributed more than any other technology to bridge the digital divide.

The handset has become an entertainer, an informer, a secretary and an undeniable part of customers’ lives. The world over, voice revenues are reducing and this is forcing operators to focus on non-voice revenues. The initial change is towards SMS and then rolling to other data services like ring-tones, sports updates, film gossip and astrology.

India has come to be regarded as the world's most competitive and one of the fastest growing telecom markets. The market for mobile phone handsets in India in the year 2005 was estimated at 780 million units all over the world. The number of mobile phone users in India was estimated at 75.94 million* as on December 5, 2005. By March 2010 the country had 584.32 million* mobile phone subscribers, up from 346.89 million* just 15 months earlier. The mobile market was continuing to expand at an annual rate in excess of 40% coming into 2010. At present, with a subscriber base of more than 884.37 million* (as on November 30, 2011), the mobile telecommunications system in India is the second largest in the world and it was thrown open to private players in the 1990s. GSM is comfortably maintaining its position as the dominant mobile technology with 80% of the mobile subscriber market, but CDMA seems to have stabilised its market share at 20% for the time being (*Source: TRAI Report).
1.7 Motivation for Research

One of the fastest growing technological areas in the world is that of mobile telephony. In India too the growth has been rapid, particularly in the last decade. The subscriber base is adding more and more customers every year. Within almost ten years of introduction of mobile phones in India, i.e. by the end of 2005, the number of mobile phones was about 76 millions (Keskar, 2007). Also, mobile segment has welcomed more and more players every year. Liberalised policies have ensured lower tariffs and reduced roaming rentals. This has lead to increased usage of mobile phones.

Not only service providers but also handset manufacturers have contributed a lot towards the growth of the sector. Mobile telephony started up with bulky handsets and has now reached to smart phones with cameras, radio facility and lots of other multimedia applications. Also, PDA's have entered Indian markets with operating systems that have made mobile phone, a pocket PC.

There is a growing demand for latest cell phones that can virtually perform the task of a laptop. Business and corporate professionals want to keep track of their e-mails and other official proceedings which a mobile can easily provide today.

Today’s customer has become more responsive and demanding and there is a tremendous potential for future research in the field of mobile communication.

Following developments indicate growing awareness towards the developments in the mobile phone sector and need for in-depth and thorough study in the current industrial scenario.

Conferences, workshops and seminars are being globally organised to address the issues and strategies related to the mobile communication sector. All over the world, mobile firms are streamlining their business operations, specifically distribution networks and supply chains and improving their logistic operations. Companies are focusing on various aspects of distribution strategies that govern their overall operations and distribution management.

This research aims to find out the impact of various factors that administer the efficiency and extent of distribution strategies adopted by mobile handset manufacturers in order to assure adequate and timely delivery of products for the ultimate use of the customers. Efficient designing and proper management of the distribution strategies ensure improved quality of services, lower logistics costs, shorter lead times, increased profits and higher levels of customer satisfaction. The present research work tries to explore the differences in the strategies adopted by major mobile handset manufacturers and thus present an overview of different dimensions that play crucial roles concerned with proper distribution of mobile phones across different channels.

1.8 Scope of the Study

The present study aims to identify the current distribution strategies of mobile handset manufacturers in India with regard to the major players in the market based on their respective market shares.

For the present study, top four mobile handset manufacturers were chosen based on their respective market shares for FY 2009-2010*. They are:

1. **Nokia**, with a market share of 52.2%
2. **Samsung**, with a market share of 17.4%
3. **L.G.**, with a market share of 5.9%
4. **Micromax**, with a market share of 4.1%

(*Source: Voice & Data Journal)
The distribution process involves the efficient use of logistics and the supply chain. There are various components in the supply chain that need to be managed:

1. **Procurement**: The mobile companies either procure different components such as chipsets, consoles, batteries, etc. from the different outside sources or manufacture the same themselves. Proper management of purchase processes should be followed so that the right materials are available at the right place and at right time.

2. **Inventory Management**: Inventory must be properly managed so that there is adequate stock available for production always. Inventory must be managed in a way so as to ensure that the stock is neither too much nor too less, as both these conditions are adverse for the company.

3. **Warehousing & Storage**: After the production is done, the firm may store the handsets at proper locations so that the distribution to the retailers may be made convenient as it would be too cumbersome to transport the handsets directly to each retailer.

4. **Transportation**: The firm must take great care during the transportation of the handsets and must ensure timely delivery to the desired locations.

5. **Packaging**: The handsets must be properly packed so as to ensure proper safety during transportation. The firm may hire Third Party Logistics who specialize in the delivery operations so that the products reach the desired locations properly and in time.

6. **Information Management**: The company must have proper knowledge regarding the needs and wants of the customers. Proper communication between the channel members must be there so that useful information may be shared between them in order to cater to the customers’ needs. Further, the information regarding the various competitors, their strategies, market share, customer demographics, etc. must be possessed by the company.
7. **Returned Goods Handling:** This is one of the most important aspects in the entire logistic operations as the image in the minds of the customers regarding the product may be affected by not giving due respect to this aspect.

Few years back, Nokia Corporation recalled its defective BL-5C battery so that the customer may not suffer due to the danger it posed.

8. **Parts and Service Support:** The mobile companies make available the latest accessories as well as the spare parts to the customers in case they encounter any sort of problem with their handsets.

These firms also provide service for the handsets they sell to their customers so that the customer may remain loyal to the firms’ offerings.

9. **Customer Service Levels:** Nowadays, the mobile companies are trying to provide the best of products and services to their customers in order to stay ahead in market.

Various offers such as free service, gift vouchers, use of genuine parts, etc. are now being provided to the customers.

10. **Channel Management:** Proper management of the various channel members is the key to success. Proper and timely information sharing, proper communication and cooperation between the channel members ensure that the customers’ needs and wants are satisfied and may provide the firm a good market share.

1.9 **Research Objectives**

As discussed above, the mobile sector growth depends primarily on the distribution process as well as the management of the supply chain. This study attempts to analyse these processes as to how their betterment can enhance the sales and provide satisfactory service to the customers. Also, the study tries to find out approaches which can prove beneficial for the mobile firms in the context of market share and profitability. Specifically, the study aims:

- To identify the various factors that affect/influence distribution strategies of mobile handset manufacturers.
• To gain an insight into the current distribution dimensions adopted by the mobile handset manufacturers.

• To explore differences, if any, with regard to distribution strategies across different mobile handset manufacturers.

• To suggest distribution strategies to mobile handset manufacturers that may help them in reaching out to the customers in a better way.

1.10 Research Design

The research design used in this study is conclusive in nature which is divided into two parts. The initial phase of the study follows a descriptive research design in which a conceptual model is developed, covering the broad dimensions of the study.

However, the later part of the study is based on causal research design which is used to validate the cause-effect relationship among the different dimensions (variables) of the study.

The research techniques employed in this study were:

• Questionnaire-based survey: Questionnaire-based survey is an established approach to obtain respondents' opinion on a range of issues related to a research problem. In the present research, it was used to gain an insight, in terms of breadth as well as depth, regarding the strategies adopted by Indian mobile manufacturers for the distribution of handsets.

• Case Development and Comparative Study: Case studies were developed for the target companies representing their structure, growth and distribution strategies adopted.

Further, a comparative analysis was done based on different dimensions as regards the selected companies.
1.11 Organisation of Research

The organisation of this thesis has been depicted in Figure 1.2. The study is divided into eight chapters.

Chapter 1 outlines an introduction to the research. It addresses various issues that are crucial for effective and timely distribution of products and services like distribution strategies, supply chain management, marketing strategies, inventory management, distribution network design, and so on. It highlights the research objectives and its scope in the current business scenario. It further provides information regarding various steps taken for the conduct of the research including the research methodology followed and different statistical techniques applied for data collection and analysis. This chapter also summarises the chapter schema of the research.

Chapter 2 reviews literature on relevant aspects of this research. Contributions of various researchers on broad distribution issues as also on specific issues such as supply chain management, inventory management, use of technology, marketing strategies, relationship management, risk management, financial strategies, etc. have been reviewed and presented. After literature review, the gaps in contemporary research have been identified. These gaps, then, have helped in the crystallisation of the problem statement for this research work.

Chapter 3 details out the problem statement, scope of the study, research objectives, development of conceptual model, formulation of research hypotheses, research design, questionnaire development and its administration. In addition, this chapter provides brief description on the research strategy, pattern of analysis employed and the limitations of the study.

Chapter 4 presents the results of the questionnaire based survey conducted with regard to four major mobile handset manufacturers in the Indian market. The questionnaire was administered across manufacturers, distributors and retailers of top four mobile handset brands in the country. The results of the formulated hypotheses have been presented in this chapter.

Chapter 5 describes the application of Confirmatory Factor Analysis which is a
A statistical technique used to verify the factor structure of a set of observed variables. This method is used in order to test the validity of the conceptual model.

Chapter 6 presents the test results of the conceptual model crystallised for assessing the impact of different dimensions on the distribution strategies. The model was tested using Structural Equation Modelling technique. This research study has helped ascertain the impact of various dimensions on distribution strategies and the role of the supply chain members in the optimisation of various processes and techniques so as to ensure development of properly managed distribution network which guarantees shorter lead times, higher levels of customer satisfaction and low distribution costs.

Chapter 7 covers the case studies developed for the top four mobile handset manufacturers with regard to their inception, entry and growth in the Indian mobile sector. The distribution strategies and the market shares for each one of them have also been presented in the chapter. The chapter also compares the different strategies that each manufacturer adopts in order to make the products available to the customers in the shortest possible time and with lowest possible cost of distribution.

Chapter 8 covers key findings based on the results of the present research work. Some recommendations have been suggested to the supply chain members. Further, managerial implications have also been listed out. The chapter concludes with the directions for future research endeavour.
Figure 1.2: Chapter-wise Plan of the Thesis
1.12 Chapter Summary

The growth of mobile telephony in India has been tremendous in the last decade. The mobile sector has contributed significantly to the GDP of the country. The increase in the mobile subscriber base has been substantial which has grown from 5 million subscribers in 2001 to over 884 million* subscribers as of November 2011. This has been possible due to sharp decrease in calling rates and also due to availability of cheaper and advanced mobile handsets that offer customers various services such as online shopping, mobile ticketing, information services, mobile banking, browsing, and so on.

One of the most important aspects that the mobile handset manufacturers focus upon for the availability of better mobile handsets for customers’ use has been the development of optimal distribution strategies that ensure timely and proper delivery of handsets. Further, devising such strategies guarantees lower levels of logistics costs which in turn allows manufacturers to offer handsets at considerably low prices.

The handset manufacturers need to appropriately manage their supply chains and work out plans to make sure that the distribution network is so designed that it benefits all the members of the supply chain, right from the suppliers to the end users.

The manufacturers also have to find out various factors that play a crucial role in the development of effective and proper distribution strategies for the distribution of mobile handsets.

The present research work focuses on the different dimensions that act as key factors aiding in planning and control of distribution strategies adopted by handset manufacturers.

The research also compares the different strategies adopted by top four mobile handset manufacturers in India selected on the basis of their respective market shares.