

# Application of Delphi Technique in Developing New Types of Automobile Distribution Channels

Carmen Z. Lamagna\*  
AHM Fazle Rabbi\*

## Abstract

*Recent steps of the government to allow environment friendly products and transports are creating awareness among the ordinary citizens of Bangladesh. Banning the two-stroke autos and old transports will eventually encourage investment and demand for new automobiles. To catch up this growing market, auto-manufacturers have to develop distribution channels strategies to promote and capture Automobiles market shares. The Delphi technique is a management tool commonly used to ask the experts about their opinions in estimating future demands and their implications. The application of this tool is considered to develop different types of Automobile distribution channels in Bangladesh. The expert opinions on Auto industry in Bangladesh are sought and found that horizontal and vertical and even hybrid distribution channels can be suitable in Bangladeshi environment. Although direct selling trend is evident using Internet facilities in other business, it is recommended that act of middleman is necessary in developing brand image and satisfying customer service needs. The research reveals that management techniques can be successfully implemented to solve marketing problems too.*

## Introduction

The Delphi technique (Frederick, 1984) is developed by Olaf Helmer and his colleagues at the RAND Corporation to make technological forecasting more accurate and meaningful. It is widely used by the experts on that industry to generate new ideas in planning and decision-making. The technique is employed to collect creative ideas from the experts, generate probable alternatives and implications and make recommendations on the pre-determined problems. The Authors aimed to

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\* Vice Chancellor, American International University-Bangladesh (AIUB).

\* Assistant Professor of Management, School of Business, American International University-Bangladesh (AIUB).

deploy this well-known management technique in developing new automobile distribution channels in Bangladesh.

Bangladeshi automobile market is dominated by the imports of new and used cars of Japan and India. Japan-made car market share is about 95% compared to any other exporting countries. Generally all the automobiles are imported under the government license by local sellers and displayed to their distribution showrooms for sell. Instead of private buyers there exists few government and institutional buyers who contact directly to Japan sales companies for their requirements. Mitsubishi Ltd. Japan is also operating horizontally to market their 'Pajero' brand in Bangladeshi market. To sum up the current situation in Bangladeshi auto-selling market there exists the following types of distribution channels:

- 1 Horizontal channels
- 2 Vertical channels and
- 3 Hybrid of horizontal and vertical channels.

The increasing Auto-production in Asian companies highlights the increasing demand of automobiles consumptions. The following table illustrates the increase of production in major auto-producers in January 2002.

**Table 1: The Increase of Production in Major Auto-Producers in January 2002**

<b>Internal Production</b>	<b>% of Increase</b>
Toyota	5.7
Honda	12.1
Mitsubishi	7.4
Mazda	3.4

Source: *Autoline*, May 2002, pp27, Bangladesh.

From the above table it is evident that production rate of Automobiles has increased in Asian markets. The socio-economic trends and deregulations in this Auto-import industry are helping the market to fuel the growth.

The present Bangladeshi government is encouraging new auto imports and eventually decreased tax on new cars, respite of only two years given

to the old car imports which help to invite new car selling, distribution or even assembling or manufacturing in Bangladesh. With increasing demand of new cars, marketers of autos are in search of new and innovative ways of developing distribution channels in Bangladesh. The problem is to find out how best the distribution channels can serve the Bangladeshi market and what types of new channels can be developed?

Hence, the objectives of this research can be articulated as follows:

- To find the nature of existing Auto-mobile distributing channels in Bangladesh
- To explore the nature and procedure of Delphi Technique
- To apply this management technique to explore new types of Auto-mobile distribution channels in Bangladesh,
- To develop alternative and innovative thinking model which can be deployed in generating a new idea (in light of the Delphi technique).

## **Literature Review**

It is found that customers would not buy goods or services unless it is readily available when and where they want to buy it. According to Luis W Stern (1992) distribution channel is the set of interdependent organization involved in the process of making product or services available for consumption or use by consumers or industrial use. Hallmark's experience in recent years (1990-95) reveals that the marketing manager has to face two major challenges to solve distribution problems:

- **Channel design**  
Channel design decisions concern with developing a channel structure that links the firms marketing strategy with needs of its target market.
- **Channel management**  
Channel management decisions involved in development of policies and procedures to gain and maintain the co-operation of and often to

transfer mutually beneficial long term relationship with the various institutions within the channel.

Much of Hallmark's recent marketing activity has been aimed at encouraging its traditional retailers to continue to stock and promote the company products despite conflicts emanating from increased direct competition from discounters and firms own website.

## **What is Delphi Technique**

Delphi technique is based on marketing forecasts that is, in turns based on expert opinions. The technique can be used for predicting future events as well as generating innovative ideas for new types of distribution channels for automobiles. As Fredrick (1984) suggests, this technique has a degree of scientific responsibility and acceptance. The purpose of this successive opinions and feedback is aimed not to force the experts to compromise but rather by bringing additional informational inputs to bear to make opinions more informed. As Heinz W (1998) pointed out that an informed consensus among the experts will be more accurate and meaningful decision making process. This hope is verified by Fredrick (1984) while examining the factors contributing Delphi accuracy.

## **Operatious of Delphi**

The Delphi technique can be used to for predicting future events as well as generating innovative ideas (such as for new types of distribution channels for automobiles).

The analytic Delphi method involves using a combination of three teams:

- A coordinating team,
- A forecasting team and
- A strategic team

## **Steps to Employ Delphi Technique**

Each of these teams take on different roles in the decision making process. The following are the steps involved in executing the method:

**Step 1:**

Form two Delphi panels. An in-house or outside consultant team acts as coordinator to design questionnaire and conduct the Delphi inquiries. This team then selects two panels from within the organization to participate in two Delphi inquiries—one to innovate the trends effecting the existing auto-mobile distribution channels (the innovative Delphi team) and the second to identify the strategic goals and priorities of the organization (The strategic Delphi team). This latter panel should be selected from among the top management of each division/department in the organization, as well as managers from all functional areas.

**Step 2:**

Identify threats and opportunities: The coordinating team, through several rounds of questionnaire and feedback, asks for the innovative Delphi panel to identify major trends, opportunities in the Automobile distribution market, possibilities of new types of channels and any threats against which the organization must guard.

**Step 3:**

Determine directions and strategic goals of the organization: the coordinating team conveys the findings of the innovative team to the strategic Delphi panel, which then uses them in the second Delphi inquiry to determine the organization's directions and strategic goals.

**Step 4:**

Develop alternative (s): Once the strategic Delphi panel establishes the long-term goals, it should focus its attention on developing various alternatives. The alternatives should develop from the learning, expert opinions and market trends of the existing distribution channels.

**Step 5:**

Prioritize the alternative (s): The set alternatives and innovative ideas developed in stage 4 (refer to chapter 1.4) should be presented to the participants of the strategic Delphi panel to obtain their subjective value judgments.

This systematic approach identifies trends, developments, and opportunities, while considering the organizations strengths and weaknesses. The approach also brings the firm's strategic goals and objectives into this important decision making process.

## **Implications and Limitations of Delphi Technique**

There are also limitations on information, creative decision-making process, uncertainty, expert opinions and biases. Generation of new ideas and co-coordinating the idea of vending is always difficult and critical, but once the Delphi method is employed it follows on its own track. In this stage the concepts should be gathered from the experts and secondary data are available to fuel the thinking process.

## **Application of the Delphi's Model**

Every Innovative Delphi panel team member has to gather information, ideas and practical experiences, on the types and trends of Automobile distribution channels. From the existing literature review, market research and practical experiences, it is found that there are two types of auto-mobile distribution channels available.

### **Horizontal Channels:**

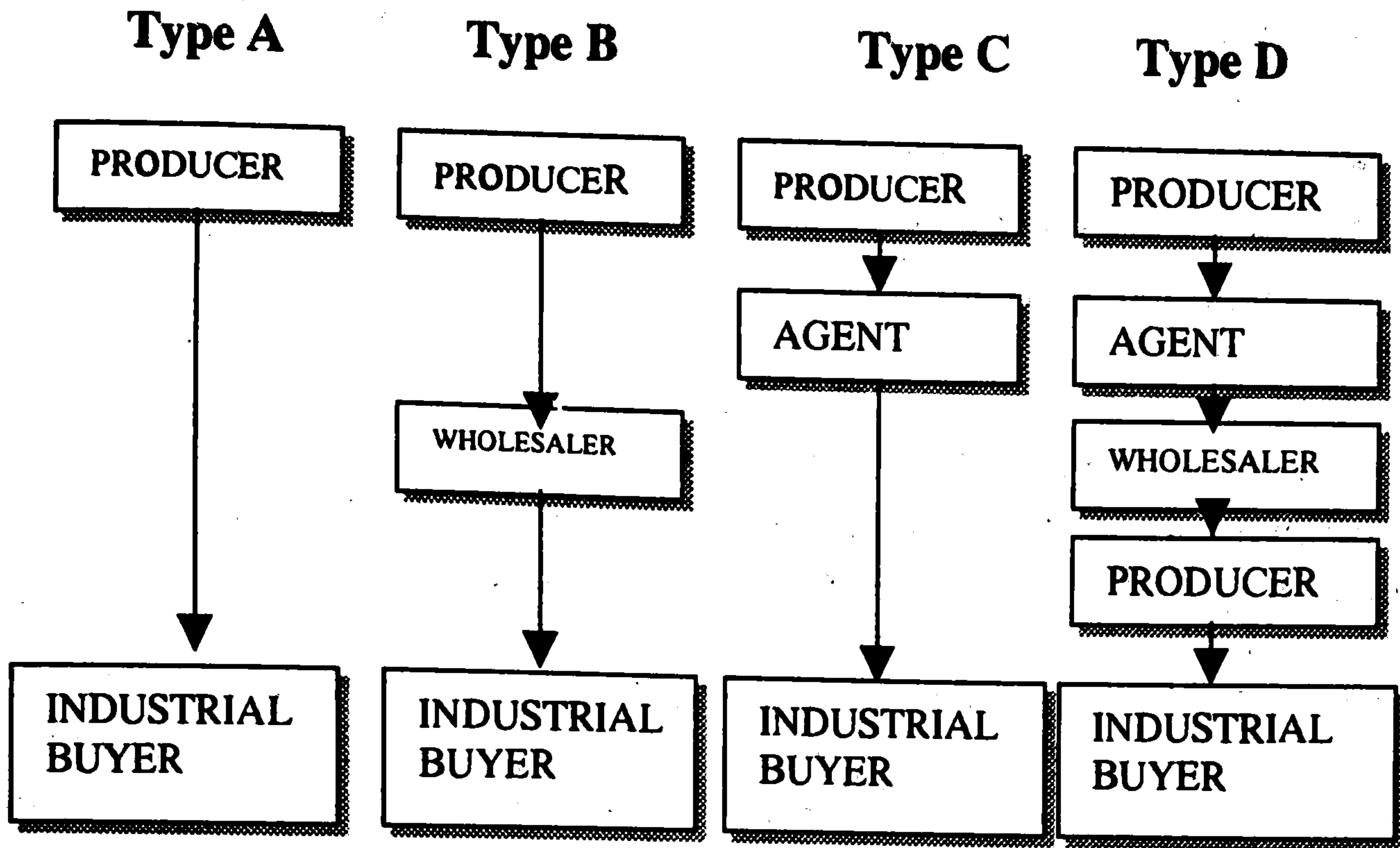
The channel, which deals with two or more companies to market the same product (Autos). For example Mitsubishi, Japan and Rangs, Bangladesh Ltd. are distributing the same Mitsubishi automobiles in Bangladeshi markets.

### **Vertical Channels:**

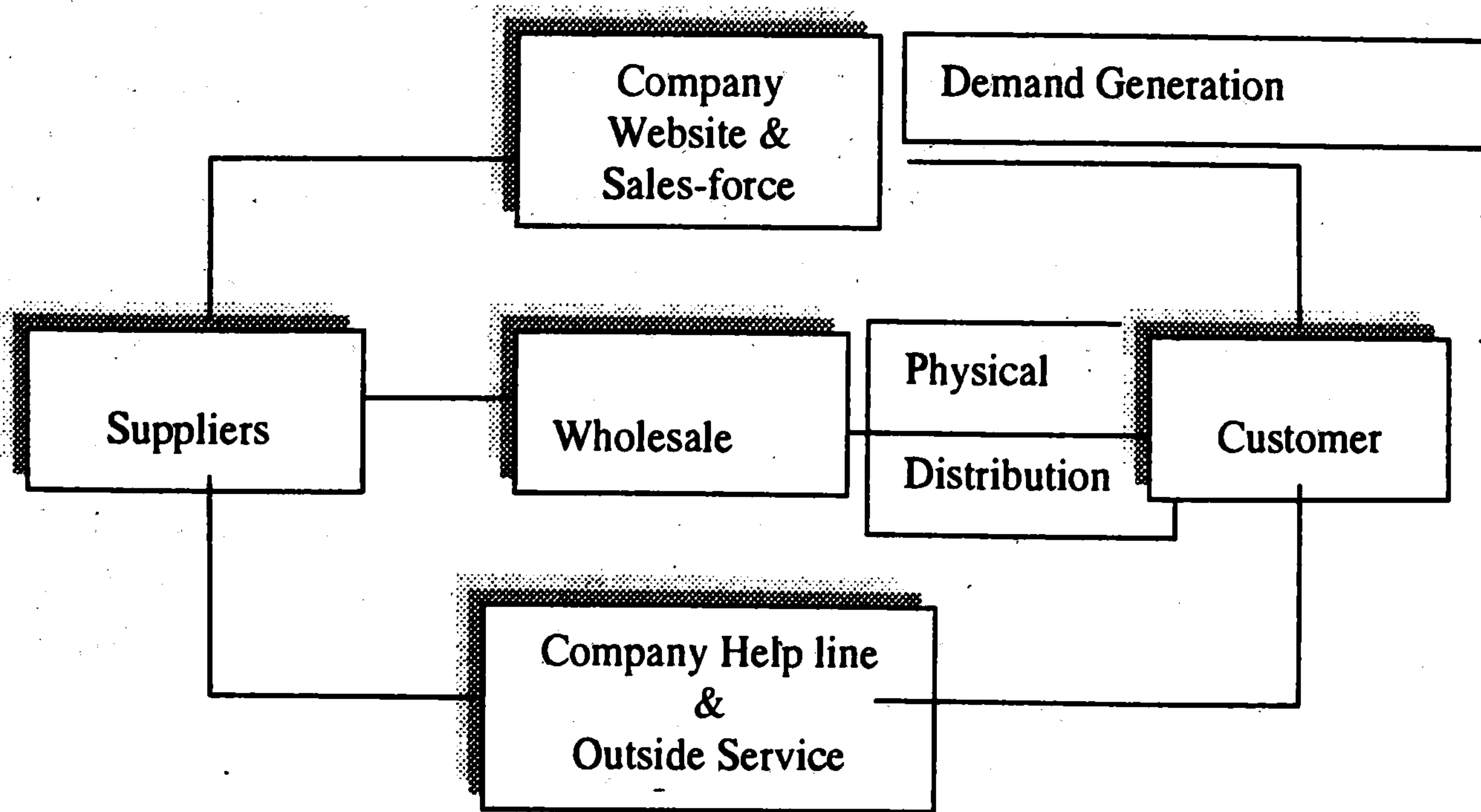
The channel, which deals with producer to buyer either directly or through agent or wholesaler. The automobile manufacturer may distribute through local and foreign distributor (s). While a manufacturer loses some control over such activities as the negotiation of sales contracts, installation and maintenance by using distributors, wholesalers can improve distribution efficiency by lowering costs for such functions as selling, storage and transportation.

From the basic models of direct distributions and distribution through middle-man, the expert opinions can develop various distribution channels and their implications in Bangladeshi Auto market.

The following vertical types can be discussed in the Delphi team.



From the above information the innovative team may come up with Hybrid Channel (a combination of Horizontal and vertical) for automobile distribution.



The Automobile Company may restructure its conventional vertical organization and lead to the creation of a 'horizontal' or market-focused

company. Thus it will achieve a number of distinguishing characteristics like:

- Organized around processes, not tasks
- Flat and de-layered
- Guided by performance metrics that are market-based.
- Brand development
- Consumer development
- Customer management
- Supplier development
- Supply chain management.

Other types of channels/services/networks: Auto manufacturers may export to open channels of distribution, transferring technology and skills needed to produce autos and market the products to an organization in foreign country through a contractual agreement and open more channels through direct investment. Using the above Delphi technique and reviewing the Appendices 1 to 9 for wider knowledge of distribution functions, the reader himself can participate in innovating new ways of Automobile distribution channels.

### **Data Collection Methodology**

Field study is made to collect the most recent information from different auto distributors. Interview is conducted with some owners and logistics managers and personnel engaged in the Automobile trade. The renowned auto distributors around Dhaka city are called on Delphi-meet. The co-coordinator was the Author himself and interview questionnaires and opinions are sought from the invitees. Secondary data are collected mainly from published materials such as annual reports, Survey reports, Journals, Books and other published materials.

This research is related with all the realistic data and facts that are both primary and secondary. This research is based on the past data of organizations and the physical interview of different personnel. So all the data, information, survey, facts, numerical and arithmetic evidence, all are absolutely real, ethical and grunted truth.

Sample of the study was limited to the existing Auto-Distribution channel managers in Dhaka Metropolitan City including Agents, dealers



and auto buyers. The data is processed in a computerized way using Microsoft excel. The processing of some data may not be able to perform or process in a graphical form. Like there may be some answer (specially from interview) that may not accurate, in that case we need to do some analytical explanation. In some case descriptive explanation used as necessary to explain the theme.

## Data Analysis

In the following parts the survey analysis is highlighted from the Auto-users to the opinions of the Auto distribution channels experts.

### 1. Primary Data Analysis

Why do the customers buy or use automobiles? This query can be answered through the following table:

**Table 2: Customer Behavior**

	Factors	Marks
1	Comfortable Journey	4
2	Reduction of Traveling Expenses	3
3	Reaching in Time	5
4	Personal Safety	5
5	Increasing Social Status	4

What are the offerings from the Auto manufacturer to the customers to make house of quality? Answer of this question can be seen from the following table:

**Table 3: Nature of Offerings from the Manufacturers' Side:**

Customers' Requirements	Offerings from the Manufacturer
To provide comfort	Air suspension system
To reduce cost	Electronic fuel injection system
To reduce time	Auto transmission system
To provide safety	ABS, auto lock, seat belt
To increase status	Full option models as per needs

Finally, 'What is the nature of prevailing auto-distribution channels in Bangladesh?' can be answered at a glance through the following table:

**Table 4: Nature of existing Auto-distributing channels in Bangladesh:**

Direct/Vertical	82%
Horizontal	5%
Hybrid	13%

### **Summary of Delphi Meeting with the Auto-Distribution Management Experts**

1. Importing Autos are the simplest way to enter in the Bangladeshi market to develop different brand presence. Import merchants and import agents in Bangladesh and co-operation organization in exporting countries can arrange to develop distribution channels in Bangladesh.
2. Foreign based distribution channels or operating units such as branches or subsidiaries can be set to promote Auto sales in Bangladesh.
3. Contract manufacturing can be developed in Bangladeshi production plants.
4. Overseas Direct Investment can be encouraged to set up new Auto-manufacturing and distribution channels.
5. Joint Venture Company can be established to manufacture and to build various types of distributing channels.
6. A sole ownership: Production plants and distribution facilities can be developed by the Auto manufacturers' sole ownership and direct supervision.

It is revealed that high risks involved in buyback, counter-trade, legal restraint and political unrest can be barriers in developing co-production agreements.

Local and foreign banks and financing institutions are offering up to 75% of term loans to buy a new or reconditioned car or to develop a rent car company. The experts still believe that social trend, government support and policies are in favor of developing new Auto distributing channels in Bangladesh.

## Technical Information on Auto-Expert

Auto transmission model is designed to drive using one leg (keeping foot on either transmission pad or on the brake pad) this idea can also be used to distribute these automobiles to the disabled who lost control of one leg. Experts can coordinate this suggestion in the Delphi meeting to get the experts' feedback and validity of new channels of distribution.

### 2. Secondary Data Analysis:

A recent survey of Boston Consultancy Group (Green, 2000) reveals that retails websites in general have not done a great job satisfying customers, particularly on the basis of customer service dimensions.

**Table 4:**

Code	Nature of Buyers	Percent
a	Visit leading to orders	1.7
b	Individual who ordered	3.2
c	Repeat buyers	2.6
d	Abandon shopping carts	65

So in Auto industry, where brand image, after-sales services are equally important as an augmented product, only online web site sales might not help in launching new distribution channels. The customers may wish to touch, feel and evaluate to buy a major product like automobiles.

### Findings of the Primary and Secondary Data Analysis

- Positive relation of increasing customer demand and increase in production of Automobiles in Asian markets. However, there remains a question if Bangladesh is a representative sample of Asian Markets, i.e. do the market structure and behavioral aspects of auto markets of Bangladesh resemble to those of most Asian markets.
- Existing distribution channels are mainly vertical and agency based and following and surviving by primitive personal efforts not by expert marketing or distribution technique.

- Government laws, social trends, increase in income and lending bankers/institutions are helping to grow auto market in Bangladesh.
- Expert opinions are available and recommended to develop multi-channel distribution channels using modern Marketing Information System.
- The experts are suggesting to develop in-store positioning, increasing geographical coverage, meeting customer service requirements such as repair reliability, order cycle time and training of service technicians.
- To increase promotional efforts, effective P-O-P (point of purchase) or stores using special displays and salesperson training on the Auto characteristics and applications can be improved.
- To develop efficient market intelligence system (MIS) to monitor sales performances among distributors, to survive competition and to use information for innovative strategy building.
- To develop flexibility in distribution the manufacturer can develop long term distribution channels and be able to switch to new channels or type of middleman as conditions change.

## **Recommendations**

- Delphi technique should be employed to develop new ways of distribution channels in the contest of Bangladeshi Automobiles market. The following objectives are to be taken into account in designing appropriate distribution channels; market penetration, maximizing product availability, meeting customer service requirements and encouraging promotional efforts.
- Horizontal or joint distribution channels can be implemented initially to develop techniques of internal distributing channels and to share the costs of establishing the channels.
- MIS to be developed and Database records of customer or potential customers to be utilized to get more market share and customer loyalty.
- Using intra-net, Internet or direct marketing technique might help to generate new ways of auto-distribution channels. (Refer to Appendix 2)

- Use government incentives and social trend of environment friendly transports as shields of competition, collecting capitals and tax relief.

## **Implications of the Recommendations in Bangladeshi Market**

All the above recommendations might not be possible to implement at a go due to existing barriers of trade environment. The implications are as follows:

- Lack of expertise on auto distribution and promoting new channels;
- Bureaucracy, red-tapes and risk avoidance of the government and financial institutions;
- Lack of capital and facilities to establish necessary auto-distribution channels;
- Political unrest, uncertainty of interest rates and high inflation rate discourage warehousing and long-term investment to build back up industry.

Therefore good channel design requires careful judgment of existing industry environment and compromise between resources and objectives.

## **Concluding remarks**

It is never expected that the experts have to compromise with the limitations but to keep those limitations in mind while generating new ideas to promote auto-distributions in Bangladesh. To capture the automobile market share, delighting customers' with services, retaining customer loyalty and constant innovation in building auto distribution channels can be achieved to the dynamics of the changing business environment.

A manufacturer or service provider can attempt to gain develop distribution channels and direct the efforts of its channel partners through vertical integration (manufacturing and supplying itself) or by legal contracts. The economic incentives can be provided to develop mutually beneficial relationships based on trust and the expectation of future benefits.

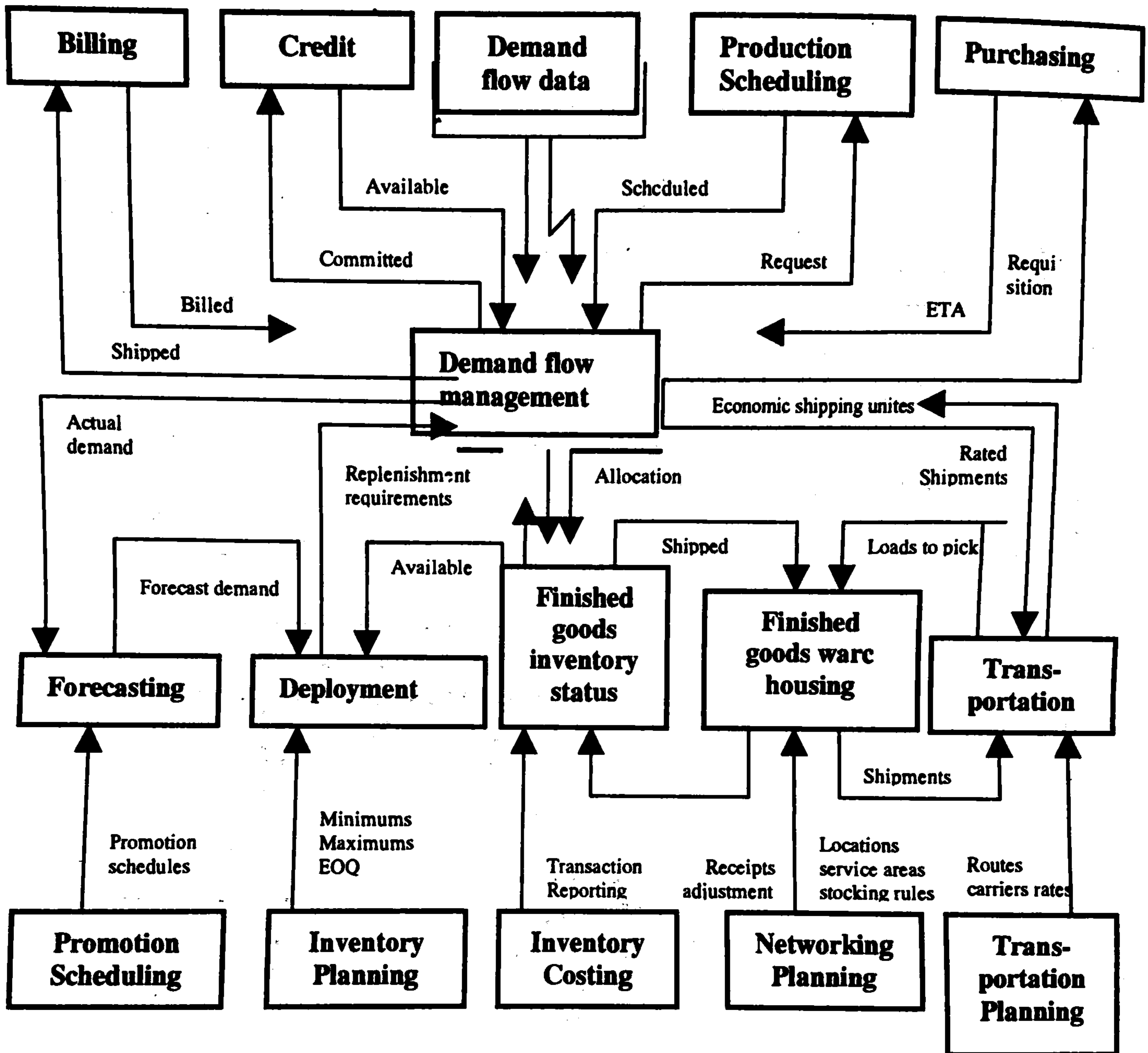
Since the critical importance of good customer service, including the local presence and after sales services, can not be ignored, it is, therefore, equally important to develop a satisfied and loyal customer base in automobile distributions. In a similar fashion to such a start-up like *Amazon.com* that invested millions of dollars in building warehouses and own distribution system, the manufacturer of Autos may develop own distribution channels, warehouses and inventory and customer order managements. For a clear visionary concept, readers may refer to Appendix 1-3 that sketches a detailed distribution model diagrams.

As major barriers to the development of a dynamic auto-distribution channel, large investments required for vertical integration (building plants and distribution channels) and difficulty of writing enforceable contracts can emerge before a manufacturer or service-provider. When market conditions keep on changing rapidly (such as a virgin Auto market like Bangladesh), the development of effective incentives and long-term relationships with distribution channel members has become vital for the market success of the automobile firms.



## APPENDIX 2

### An Integrated Logistics Information System for a Distributor<sup>f</sup>



<sup>f</sup> This model could be an integrated logistics and distribution information system for the Automobile company.



## APPENDIX 3

### Internet Applications and the Supply Chain

#### Customer Service

- Information and support products and services
- Electronic help dcsk
- Mass customization and order processing

- Public relations and advertising
- Market research and test
- Electronic mails and catalogues

#### Information retrieval

- Online news
- Statistics, reports and databases
- Data mining
- Competitive analysis

#### Supplier relationships

- Logistics
- Product search
- Electronic Data interchange
- Ordering and payment
- Supply chain Integration

#### Financial Transactions

- Selling and payment
- Managing accounts
- Credit card payments

#### Electronic distribution

- Product, data, information

#### Internal communications

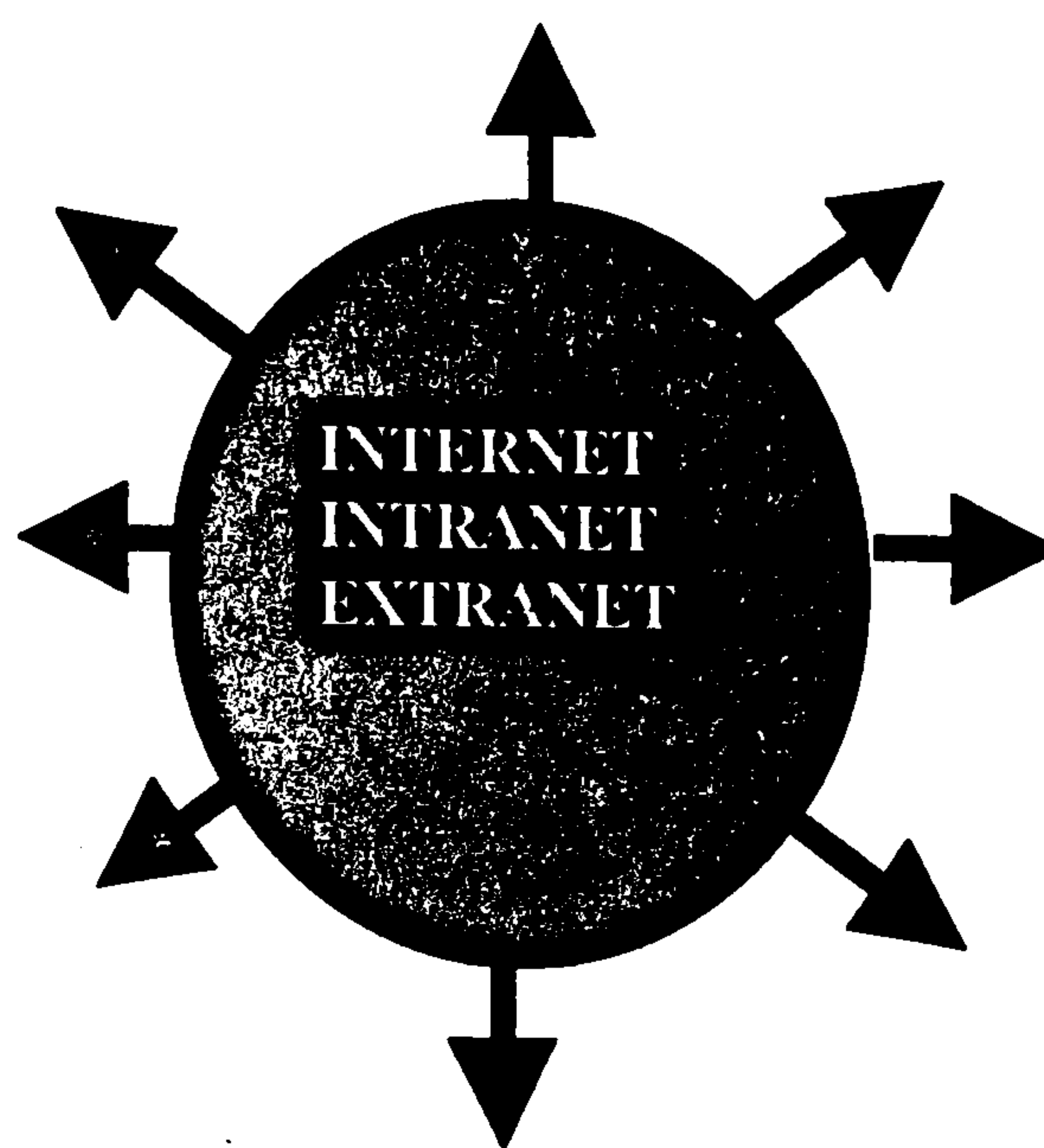
- Complete internal, external, vertical and horizontal communications
- GroupWare
- E-mail
- Collaboration
- Knowledge transfer
- Telecommuting

#### Human Resources and employee relations

- Job opening posting
- Expert research
- Employee training and support
- Distanee learning

#### Sales force automation

- On-site configuration and order processing
- Sales process transformation



#### Building strategic alliances

- Newsletters, bulletin boards, Discussion databases
- Sharing Knowledge and experience

**Figure : Internet applications and the supply chain**

By introducing internet, intranet and extranet, Automobile companies can achieve better and quicker and innovative ways of distribution channels.

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