

MARKETING STRATEGIES IN INNOVATIVE INDUSTRIES:  
THE CASE OF PACKAGE/DOCUMENT DELIVERY SERVICES

by

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FRANCOIS JACQUES

Submitted to the Technology and Policy Program and  
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ABSTRACT:

This thesis proposes a proactive marketing strategy for firms growing in innovative industries. The argument is built on the review of various theories and on the case study of a particular innovative industry, the document/package delivery services. The strategy that results assigns specific marketing actions along the stages of the industry lifecycle. These are user focus in the introduction phase, product focus in the growth stage, and differentiation or cost leadership as the industry matures. The strategy is tested on the package/document delivery industry and proposed for generalization to other innovative industries. Finally, necessary conditions for successful implementation are reviewed.

Thesis Supervisor: Professor Richard de Neufville

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INTRODUCTION

The objective in this thesis is to formulate a marketing strategy to manage the growth of a company in an innovative industry. Such a company, which I shall call an innovator, is faced with the management of its customer base and its diverse products throughout its development stages. Two different classes of strategy can be identified, one deals with the competitive aspect of mature industries while the other concentrates on the dynamics of the industry lifecycle.

My proposal is to integrate both in a proactive strategy. The case material to build such a thesis relies on a careful study of one of the most impressive innovative industries, the delivery of packages and documents. This service has within a decade emerged as an industry of its own, with estimates of market potential in the area of five billion dollars. The industry is still in a growth stage and continues to show new areas of development, among them the electronic transmission of documents and express door-to-door international delivery services. The issues for a company in such a growing industry are therefore threefold: be cost effective, avoid locking itself in declining or endangered segments, and establish a strong competitive position as the overall industry matures. This is typically the challenge of an innovator all along its growth. The proposed strategy seems to answer this challenge and could be generalized to other innovative industries.

The argument is built in three parts. After a brief introductory background on the packages/documents delivery industry, Part I provides an analysis of the current market situation in terms of products, users, competition, trends and marketing variables. It is meant to provide the necessary background to apply the diverse marketing strategies developed in Part II. There, the marketing strategies are grouped into two classes, cross section and dynamics, the first focusing on the market characteristics while the second deals with the lifecycle concept. Part III tries to synthesize both view-points in a proactive strategy for an innovator. A qualitative validation is performed before a generalization to other innovative industries is proposed.

## 1. INDUSTRY BACKGROUND

That the industry of package/document delivery has been growing at an unheard pace during the past decade is the result of a growing demand for the shipping of goods in a reliable and fast fashion and the recently improved ability of the air freight forwarders and carriers to meet this demand. This chapter provides a background on what are the determinants of the demand, what has triggered the industry response and how the industry has organized.

### 1.1 A New Demand

The explosion of the package/document delivery business can be seen as the need of a changing society, a society whose principal feature is information and the growing need for exchange and communication.

It is possible for us to know what is happening miles away within a few seconds through the use of radios, TV, telephones and telecommunications networks. Financial markets all over the world react within a second to each other's movements through a telecommunication linkage. Modern supermarkets are equipped with laser scanners which allow manufacturers, retailers and marketing researchers to follow the demand for each product on a daily basis. Consumers worldwide have never been more aware of the products available to them thanks to TV, radio, magazines and the globalization of the



markets. With the advent of direct distribution a single phone call is necessary to order shoes, stereos, furniture, etc. Information in general brings people, organizations and countries closer, breaching day after day provincialisms of all kinds.

The consequence is that markets cannot wait for announced new products and any lag in meeting demands results in loss of market share or foregone opportunity as product life cycles shorten. Time has become a critical issue in shipping goods, especially in the high-technology fields. This phenomenon filters back to the upstream manufacturing process, as demonstrates the current attention for on-time inventory systems and support systems. In brief, the need for fast and reliable delivery of various goods has emerged.

A second consequence of the growing importance of information is the proliferation of written communications. Even at the age of the computer and of the satellite, society still relies on Gutenberg technology to crystallize information. Paper documents are still the prime vehicle of information over the world, in part for legal reasons and in part because of society's attachment to tangible documents. Modern technologies already allow the electronic mailing of these documents and their reproduction in a physical form instantaneously miles away. It is reasonable to think that these will be the prime modes of document exchange in the future. In the meantime, lack of standardization, quality problems and equipment

costs still require most of those documents to be shipped physically, to the benefit of specialized carriers.

What does this sum up to? The answer is that there is an emerging market for a reliable and fast delivery of all kinds of goods and of documents, and that it seems to be written in the course of the society. The question now is how to answer this need and in more plebian words, how to develop this market. This calls for appropriate operational structures as well as relevant marketing strategies. In terms of operational structure, it seems that a dominant pattern has emerged. Typically the configuration involves trucks, planes, and telecommunications. It is therefore an intermodal transportation industry even though it has been classically addressed in terms of "air freight" industry. The reason for this denomination originates from the early response of the industry, which developed the overnight delivery with air transportation.

## 1.2 Industry Response

The merit of perceiving the demand for a reliable shipping service is owed to Federal Express, which in the mid-70s started an integrated door-to-door overnight delivery service for items below 70 pounds. Federal's founder, Frederick Smith, was quoted as arguing:

This company is nothing short of being the logistics arm of a whole new society that isn't built around automobile and steel production, but that is built up instead around service industries and high-tech-

nology endeavors in electronics and optics and medical science. It is the movement of these support items that Federal Express is all about. [after Sigafos (1984)]

Federal's beginning was difficult due to the general lack of awareness of its innovative service. But starting in 1975, Federal's operation increased drastically and generated positive profits. Soon after Federal suffered from capacity constraints due to regulatory limitations. In effect, Federal had a status of air taxi operator, i.e. non certified by the Civil Aeronautic Board (CAB) and as such was prevented from operating aircraft of more than a 7500 pounds payload. On the other hand, certified all cargo lines had little incentive in going after Federal's market due to CAB's regulation that prohibited them from freely choosing their rates and fares.

In 1974, Congress undertook a comprehensive review of CAB's regulations and concluded that all cargo lines were achieving only a marginal profitability, that they were gross inefficiencies, that the service was poor and unreliable and that the territory was not served in a balanced fashion. Typically, some location suffered from a lack of service while others enjoyed an unjustifiable level of service.

At the same time, there were significant pressures to change the regulations. Federal Express wanted to be able to operate larger aircraft; Flying Tigers, the major all cargo line wanted the freedom of choice for its routes and fares and the shippers demanded better and more reliable

service, competitive rates and the availability of priority services.

This environment pushed Congress to pass in November 1977, Public Law 95-163 known as the Air Cargo Deregulation Act. Henceforth, the domestic air freight market was opened to competition: controls over entry in the all cargo business were eliminated, rate controls were significantly reduced and air taxi operators such as Federal were allowed to use bigger aircraft. A 1978 amendment achieved to deregulate entirely the industry: CAB's jurisdiction over rates was eliminated, companies had the right to refuse to carry certain shipments if they wished, mergers and acquisitions were allowed.

The deregulation marked the dawning of a new era characterized by the rush of many companies on the package delivery business after the model of Federal Express. But this was not all. One year later, Congress passed legislation amending the Private Express Statutes. These statutes had given the United States Postal Service for over a century the monopoly to carry letters. The break-up of this monopoly added a tremendous impulse to the delivery business. Private firms like Federal Express were now allowed to compete in the mail business. I cannot resist to quoting the visionary words of Milton Friedman:

The historical reason why we have a post office monopoly is because the Pony Express did such a good job of carrying the mail across the continent that, when the government introduced transcontinental service, it couldn't compete effectively and lost money. The result was a law making it illegal

for anybody else to carry mail. [. . .]. I conjecture that if entry into the mail-carrying business were open to all, there would be a large number of firms entering in and this archaic industry would become revolutionized in short order. [Friedman, 1962]

History proves this vision was right. In the early 80s, overnight mail services were introduced by half a dozen companies and enjoyed a considerable success. Even the Postal service had to move into the business with its Express Mail service.

The lesson of this review is that government regulations can overlook society's changing needs and that the release of those regulations can suddenly open huge markets. The issue is therefore for the industry and the competition to be ready to adapt and to organize. The next section shows the different operational structures that coexist in today's market.

### 1.3 Operational Structure

Strong operational differences emerged in the industry and one can distinguish among three basic operational structures: traditional, integrated and electronic mail.

#### Traditional:

In the traditional scheme, the operations are from airport to airport and involve multiple physical agents. At one airport, the shipper gives his shipment to a freight forwarder which groups the shipment with other shipments going to the same destination. These shipments are put in a container which waits to be boarded on the next scheduled all-cargo

aircraft or belly capacity passenger airplane flying to the arrival airport. There, the container is broken down by a freight forwarder and the original shipment is delivered to the consignee. The traditional scheme involves therefore one or two freight forwarders, one airline and also a separate insurance company and a customs broker for international shipments. Because there are many agents, operations are generally slow and not very convenient. This structure is thus mostly limited to low priority deliveries. The major freight forwarders are Burlington Northern Air Freight, Emery and the United States Postal Service (inasmuch as it collects and gathers mail shipments).

Major participating airlines are United Airlines, American Airlines, Continental Airlines, TWA, Pan Am for the passenger airlines, Flying Tigers for the all cargo airlines.

Emery also operates its own fleet of planes and as such figures among the integrated carriers whose organization I will now describe.

#### Integrated:

In the second operational scheme the service is door-to-door and integrated: the same company picks up the shipment at the shipper's premises, carries, and delivers it to the consignee. Hence, the terminology integrated carrier. On short distances, some companies like UPS or Purolator use trucks only, but generally carriers use a combination of

truck and airplanes that they themselves own or lease. Typically trucks pick up the shipments and carry them to an airport where planes are waiting for all the shipments to come. At the end of the day, when the planes are filled, they fly to a common hub where all the shipments will be sorted by destination. Once the sorting is done, and the planes are filled again, these fly to their destination airports where trucks will deliver shipments to the consignees. This operational structure with a single integrated agent is much more convenient to the shipper and allows for reliable and fast deliveries, particularly for small packages, documents and letters. There are six integrated carriers: Airborne Freight, Emery Worldwide, DHL Worldwide, Federal Express, Purolator Courier and United Parcel Service (UPS). One all cargo airline, Flying Tigers, has tried to integrate the forwarding and pick-up/delivery operations in purchasing and operating its own fleet of trucks. However, poor performance and financial difficulties rules it out of the competition at the top for the high priority deliveries. United Airlines undertook a similar venture in the early 80s but pulled out of the business after a record of poor results. In both cases, failure seems to be attributable to insufficient presence in the market and an inefficient route and schedule design imposed by the requirements of passenger and bulk cargo traffics which differ from those of express packages and documents.

### Electronic Mail:

The third and newest operational scheme operates telecommunication networks, sometimes combined with a fleet of trucks. It is aimed at the very high priority delivery of letters. Three major systems are available, telex, electronic mail (E-mail) and facsimile. The telex and E-mail services work on the same basis: a message is sent electronically to a correspondent. The difference is that E-mail allows to send full documents as displayed or stored in a computer terminal connected on an E-mail network while the telex allows only to send messages as typed on a telex machine. The facsimile system is different. It is basically a copier linked on a telecommunication network that allows the reproduction of not only text but also graphics on the copier of a connected correspondent located miles away. The only problem besides cost for an individual interested in using these high speed services is that correspondents must be connected on the same network, and have the appropriate machine for the telex, terminal for E-mail, copier for the facsimile. If this is the case, then no intermediary is required. The systems work on their own. If this is not the case, then a least one intermediatry is necessary. Two cases are possible. First, the shipper is connected on a network and the correspondent has no connection on this network. Second, the shipper himself has not connection onto any transmission system. In the first case, the transmission companies have passed some agreements



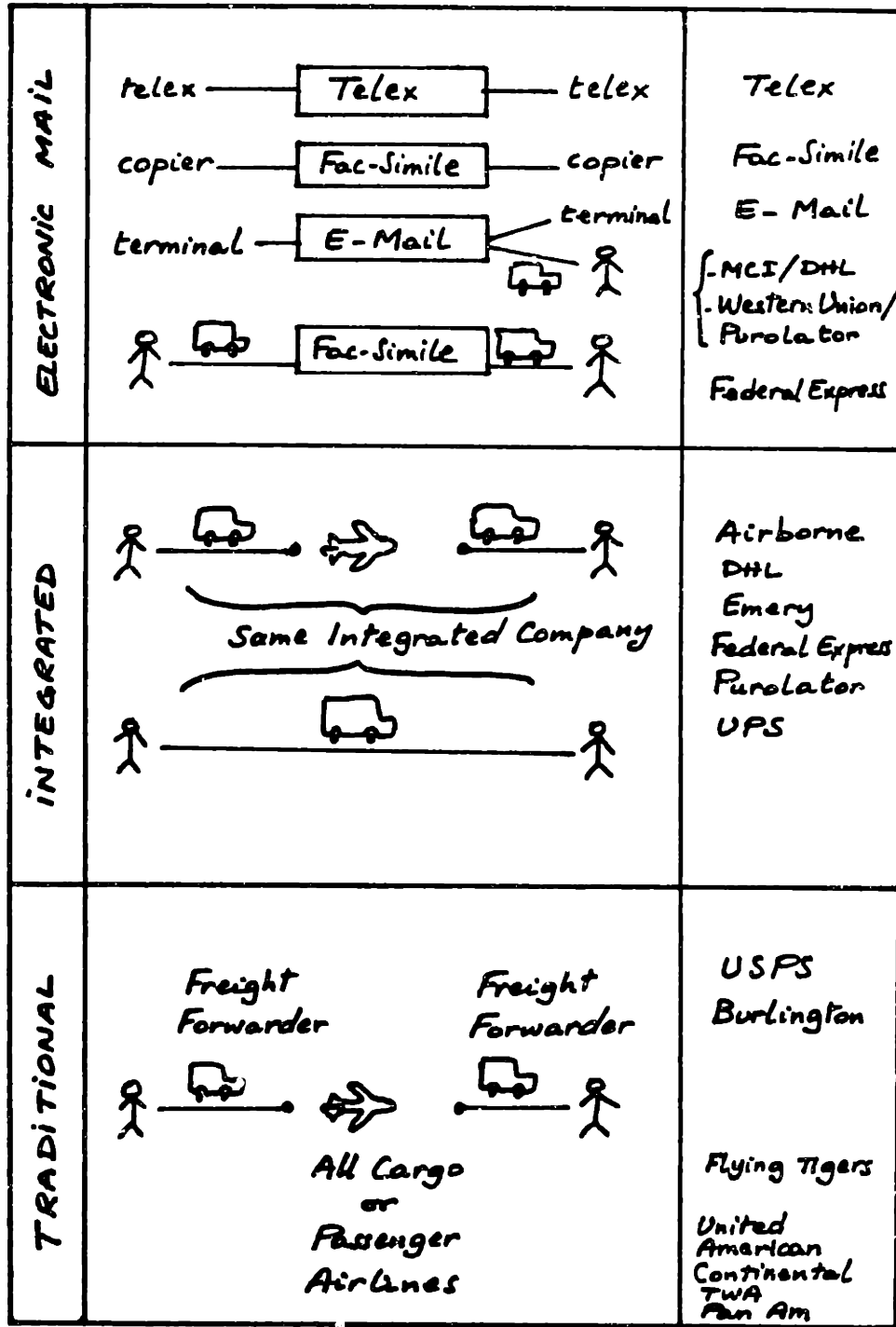
with express carriers to deliver the message to the correspondent after it has been electronically sent to the closest telex, E-mail or facsimile station nearby the correspondent location. The two examples of such agreements are the recent ventures of Purolator/MCI and of DHL/Western Union. Purolator delivers in express the electronic mail of MCI, a major telephone company. DHL delivers within a few hours Western Union's electronic mail called Easylink and also Western Union's telegrams.

In the case when the shipper is not connected to any network, it can go to Western Union and send a telegram which can be sent to the correspondent and delivered by Purolator. But this does not help the shipper if he needs to send within a few hours a full document. He needs an intermediary to pick up the document and bring it to the nearest facsimile station, which will reproduce it at the station closest to the correspondent. Then another intermediary must bring the document so reproduced to the correspondent. This kind of service has been introduced in July 1984 by Federal Express. This service is totally integrated: Federal ensures both the pick up/delivery and the transmission phases. In effect, Federal Express in addition to owning a plane and truck fleet has acquired facsimile capabilities whose it sells the services. Federal Express goes now even further as it sells directly facsimile copiers connected to its network to potentially interested shippers. Federal Express appears

therefore not only integrated in terms of planes and trucks but also as regards telecommunications. However it has to face the competition of other transmission companies and equipment producers.

Figure 1.5 shows the three operational schemes.

Figure 1.5: Different operational schemes coexist in the industry: traditional, integrated, and electronic mail.



## PART I. CURRENT SITUATION

This first part attempts to provide a clear analysis of the market in terms of products, users, competition and trends, and to explore the tools available to the companies to attack the market.

### 2. MARKET ANALYSIS

The document/package delivery market covers a wide variety of services and shows a strong segmentation that I try to analyze in this chapter. The segmentation appears at two levels, first in terms of product and second, in terms of user. I will explain both and I will later position the different firms according to them. Finally, I will give some records on the different products as well as the trends.

#### 2.1 Product Segmentation

Let us first define the product. The correct way to do this is to understand its use by the customer. Typically the latter formulates the product as such: "I have to ship a letter, a package, to some place by a certain deadline." The three questions that underlie this formulation are what, where and when. Reversing somehow the order, there are therefore three basic physical dimensions that define the product and

serve as a basis of segmentation, priority, weight and distance.

#### Priority:

Priority refers to the guaranteed time of delivery. One can distinguish four basic degrees of priority, same day delivery, next business day delivery, two day delivery, and non-priority delivery for any delivery over two days. These four degrees segment the priority dimension. Federal Express has been the promoter of the next business day delivery and is now one of the major competitors in the same day business with Zapmail, an electronic mail system. The all cargo airlines and the passenger airlines associated with traditional freight forwarders are the major players in the non priority segment.

#### Weight:

The second physical dimension of segmentation is weight. Three distinct classes of weight have emerged, letters or documents of less than half a pound, small packages, and big packages or bulk. The distinction between small packages and bigger shipments is based on the lift capacity of an individual, i.e., 70 pounds as commonly accepted. The market for big packages has been the fief of the traditional freight forwarders but is progressively penetrated by the integrated carriers. The small packages business has developed only ten years ago under the lead of Federal Express, and with the air cargo deregulation of 1977. It is the domain of

the integrated carriers. The letter segment has recently been opened to competition after the break-up of the United States Postal Service (USPS) monopoly in 1979. It is often referred to as the information segment in contrast with the package and bulk segment which deals with physical goods. This segment has also become the domain of the integrated carriers which even go into electronic mail to ensure same day service.

#### Distance:

The last physical dimension of segmentation is distance. A first breakdown of this dimension is between domestic and international services. Traditionally, the international arena has been the field of traditional freight forwarders and of scheduled airlines. However, a strong push towards integration arises as more integrated domestic carriers go international. A company like the Hong Kong based DHL has been operating mostly internationally as a traditional freight consolidator while the integrated carrier has Purolator Courier operates only domestically. A recent agreement between the two companies has allowed them to join their forces to form an integrated international service. Similarly, Federal Express which operated only in the US and recently in Canada has decided to expand its integrated operations worldwide by acquiring the Gelco international courier company. Federal plans to enter soon the transatlantic market with its own

planes. Federal policy is to cover as much of the foreign territories served, i.e. delivery everywhere, whereas a forwarder such as Burlington specialize only in specific foreign cities.

Within the domestic market, some companies specialize in short-haul deliveries whereas others cover long-haul destinations as well. A perimeter ranging from 350 to 500 miles is often accepted as the frontier between short and long haul. It is roughly the break-even point between air and surface transportation. Companies specializing in the short-haul include Purolator and UPS for the integrated carriers and Burlington for the traditional forwarder. Other companies like Federal Express, Airborne or Emery provide long haul priority services. Federal Express, in particular tries to provide the same high priority services to "virtually everywhere in the U.S.," and advertises a 90 percent coverage of the population. Table 2.1 shows the evolution of Federal's coverage over time. On the other hand, Airborne and Emery concentrate more specifically on the largest long haul markets and thus do not cover all the areas: some destinations will not benefit from the next day delivery because they are too remote. Figure 2.1 summarizes the levels of distance segmentation.

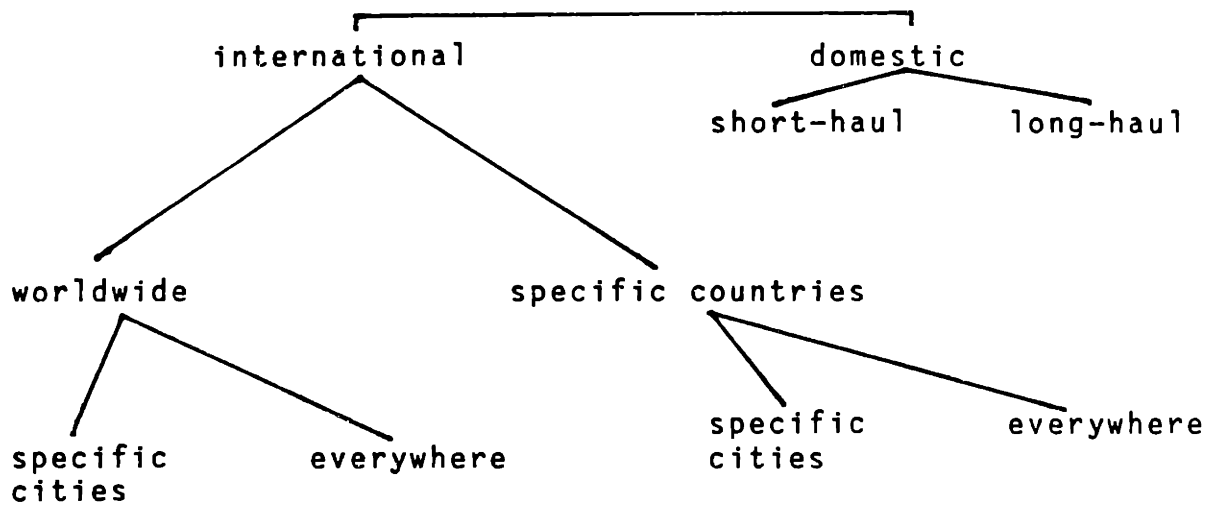
Once we pool together the three dimensions of physical segmentation, we obtain a full mapping of the market in its diverse products. Figure 2.2 shows the product map and Figure 2.3 makes the distinction between the informative and physical

Table 2.1: Federal Express now covers most of the U.S.  
(source: Federal Express Corporation).

Year	Coverage of U.S. population (percent)
1980	60
81	65
82	72
83	79
84	90



Figure 2.1: Levels of segmentation along the distance dimension.



natures of the letters and packages.

The second class of segmentation deals with the user of the services.

## 2.2 User Segmentation

The users of the documents/packages delivery services are diverse and can differ considerably both in their nature and usage habits. These two elements constitute the basis for a user segmentation.

### Nature:

The users can be broken down along the taxonomy proposed presented in Figure 2.4. A first distinction is between residences and businesses. The policy of Federal Express and Purolator has been to serve residences as well as businesses while Emery and UPS have focused primarily on businesses. In the business segment, one can distinguish the specialized segment of mail order business from the rest. It is particular as this mail order business is a whole industry dedicated to shipping goods and constitutes as such a stable, fairly predictable source of revenues for the carriers.

Figure 2.2: The three physical dimensions, priority, weight and distance segment the market together.

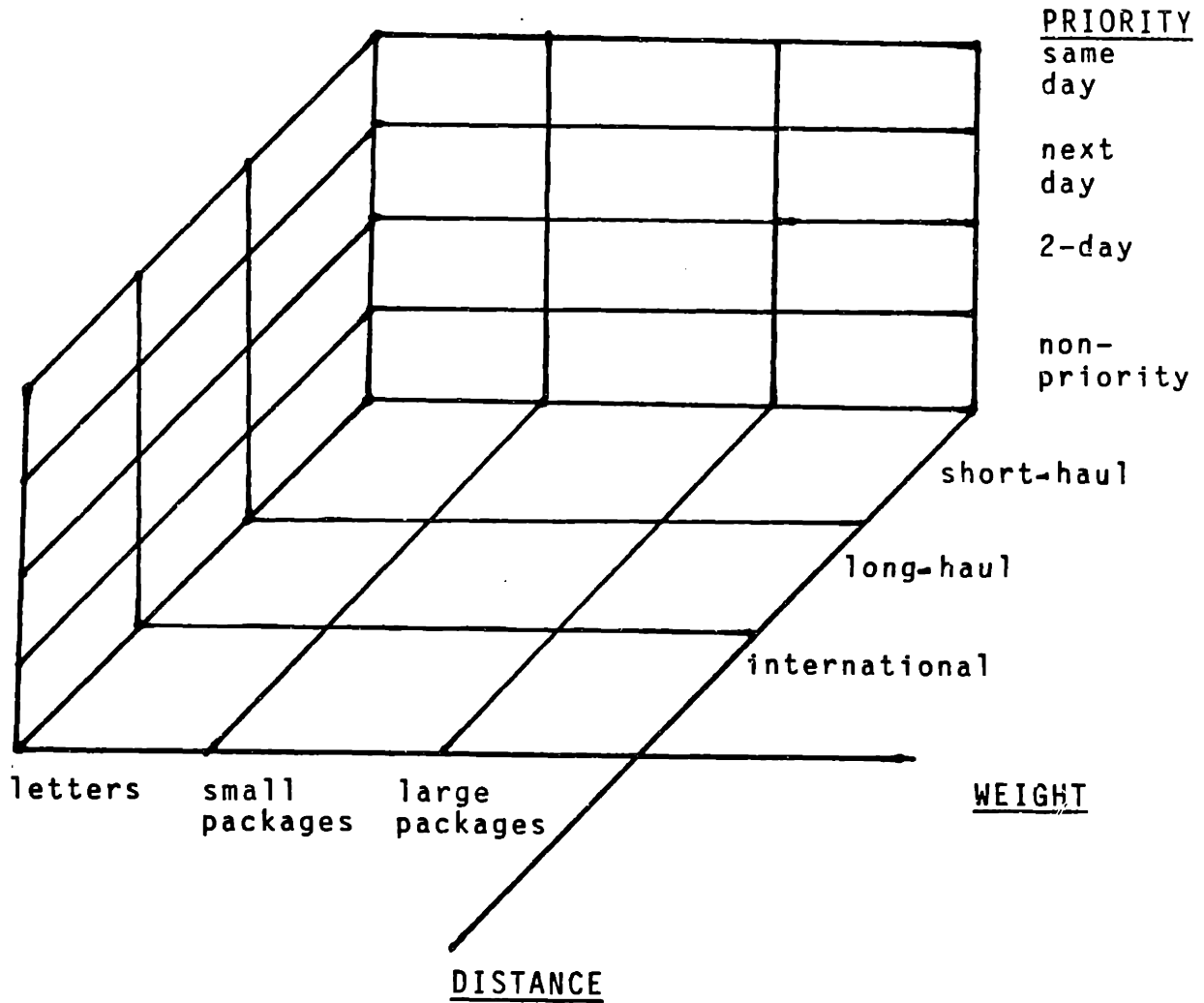
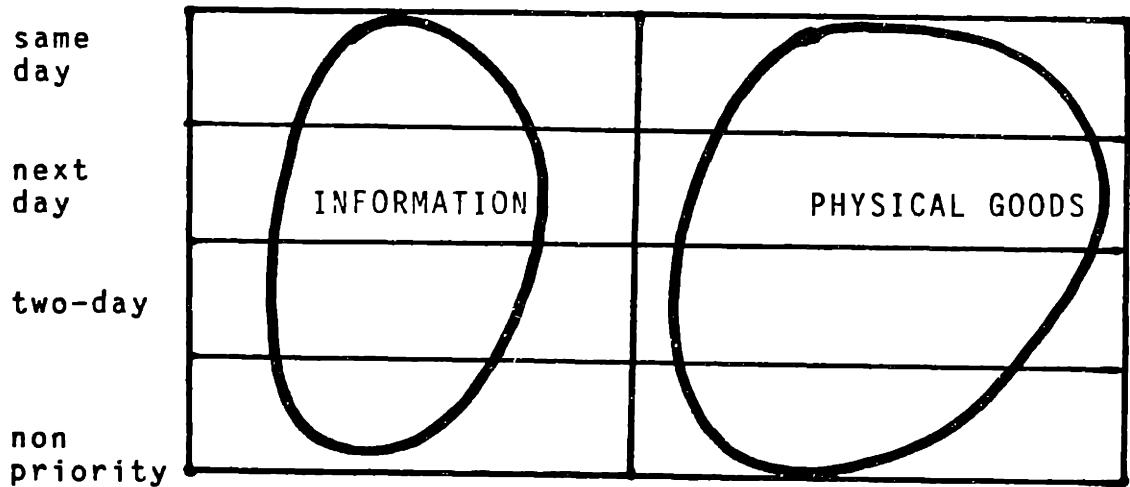


Figure 2.3: A conceptual distinction can be made between information and physical goods shipments.

PRIORITY



letters

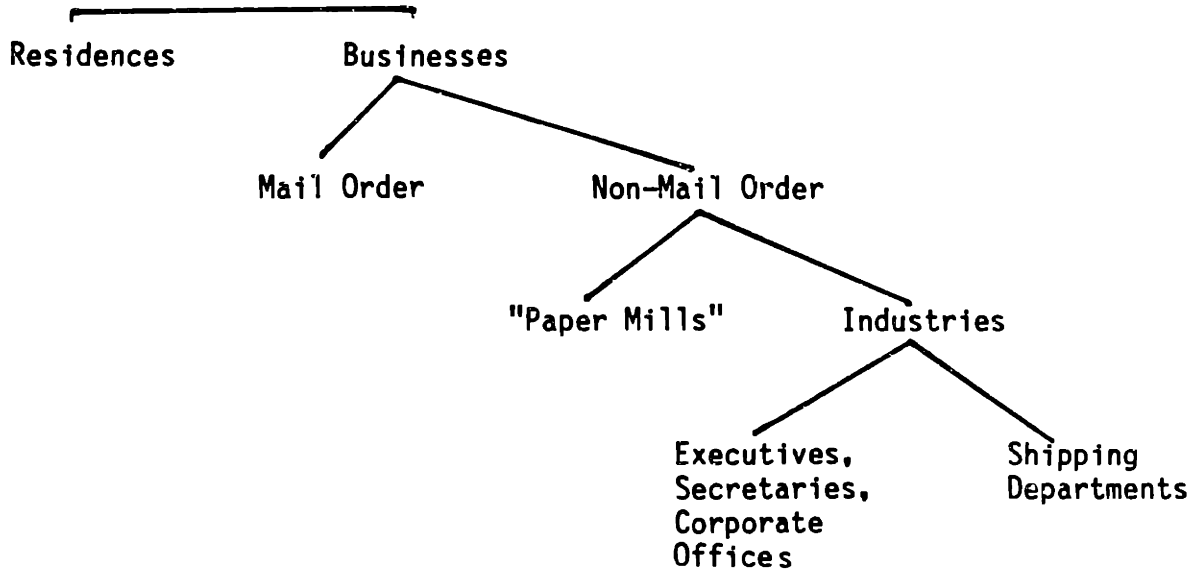
packages

WEIGHT

It has long been the realm of the United Parcel Service (UPS). It is nowadays a growing concern as more and more retailers go into direct distribution to avoid the high costs of store outlets. In the non mail-order business, one can distinguish "paper mill" industries, i.e. banks, insurance companies, consulting companies, ad agencies, architectural firms, law firms and other similar business and financial services. These businesses generate a considerable amount of letters and documents shipments and are a mine for the priority delivery business. For example, Purolator started its courier business with a contract to carry canceled checks from bank to bank and one of the expectations of Federal Express at its creation was to get a contract with the Federal Reserve to move checks among the seven federal banks after Sigafos (1984). Federal never got the contract but found a large untapped market for carrying small packages and documents, market generated by this sizeable paper mill industry.

In the remaining industries, one must distinguish the executives and secretaries from the shipping departments managed by professional traffic managers. The former generally are unskilled at shipping rules and ships documents and small packages with priority delivery. They need a simple procedure and can afford an extra cost to avoid confusion. The latter ships all kinds of packages from bulk to small shipments. They ship often, know the system and look for lowest cost.

Figure 2.4: A taxonomy distinguishes the different users of the services.



### Usage:

Users also differ in their usage rate. The break-down here is simply between occasional shippers and frequent users. All together, occasional shippers represent significant revenues but they are more difficult to serve. The market is generally made of residences or small businesses located away from the biggest shippers, therefore increasing the transportation costs. Federal has traditionally targeted this occasional shippers segment while Emery prefers restricting its services to frequent shippers. The latter generally ship frequently and massively. They are therefore more predictable and a carrier can schedule a regular service to those shippers with almost the certainty to get several shipments at once.

### 2.3 Competition

Many companies compete in the different segments of the industry. The companies that constitute the back-bone of the innovative segments are described below.

#### Integrated companies

**Airborne Air Freight:** originally an air freight forwarder, it acquired in 1981 its own fleet of planes to become an integrated door-to-door service. In 1984 it entered the international courier market. Figure 2.5 shows its services

DHL: based in Hong Kong, is the leader in the international market where it acts as a traditional freight forwarder. In 1983 it launched a door-to-door integrated domestic air courier to compete with Federal Express in the small packages business. It signed an agreement to join their forces with Purolator. Figure 2.6 illustrates DHL coverage.

Emery Air Freight: Emery was the major air freight forwarder when Federal started its unheard door-to-door integrated overnight delivery service. Emery criticized and attacked Federal but realized in 1975 that it had to follow its lead. To do so, it chartered more and more aircraft in order to meet its overnight customer service commitments. In 1981, Emery bought its own fleet of aircraft. In 1983, it started the delivery of letters overnight and in 1984 Emery moved aggressively into the international market. Emery's major market is still the big packages low priority delivery for big industrial accounts. Figure 2.7 depicts its market.

Federal Express: the innovative company that created the priority market in 1973, Federal has long specialized in the overnight delivery of small packages. In 1981, it entered the overnight mail business. In 1983, it raised the weight limit of its shipments from 70 to 125 pounds and promised overnight delivery by 10:30 AM and inaugurated services to Canada. In 1984, Federal raised the weight limit to 150 pounds, entered the international arena by acquiring the



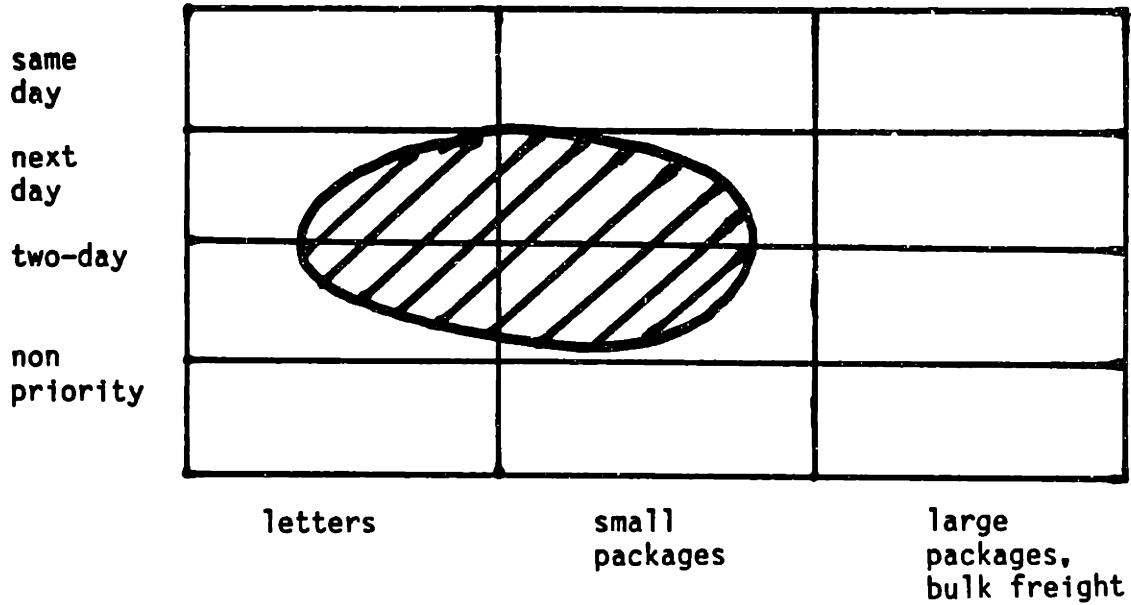
Gelco international courier, and launched its electronic mail service, Zapmail. Federal's strategy is to provide a top quality service to the whole spectrum of users, that is, residences as well as businesses and occasional shippers as well as regular frequent users. Figure 2.8 illustrates Federal's coverage.

Purolator: this company began primarily as an armored car and ground carrier service in the U.S. It has recently bought its own fleet of planes but still specializes in the short-haul markets. It has however expanded its operations worldwide through a venture with DHL, and has gone into electronic mail delivery service with MCI, a major telephone company. In this latter business, Purolator's role is limited to the delivery of MCI mail to consignees not equipped with an MCI connected computer terminal. Figure 2.9 shows its products.

United Parcel Service: UPS has traditionally been a ground carrier specializing in the short-haul deliveries market. Until the early 1970s, it could not operate nation-wide because of state regulation. Nowadays, UPS is allowed to operate nation-wide and is a leader in the non priority delivery of small packages. Its steadiest customer base has been the mail order business to deliver to private residences. In 1980, it bought a fleet of aircraft to operate its two-day delivery business. UPS is privately owned and has the reputation of being excellently managed. It was awarded in 1984 and

Figure 2.5 Airborne Freight Coverage

PRIORITY



PRIORITY

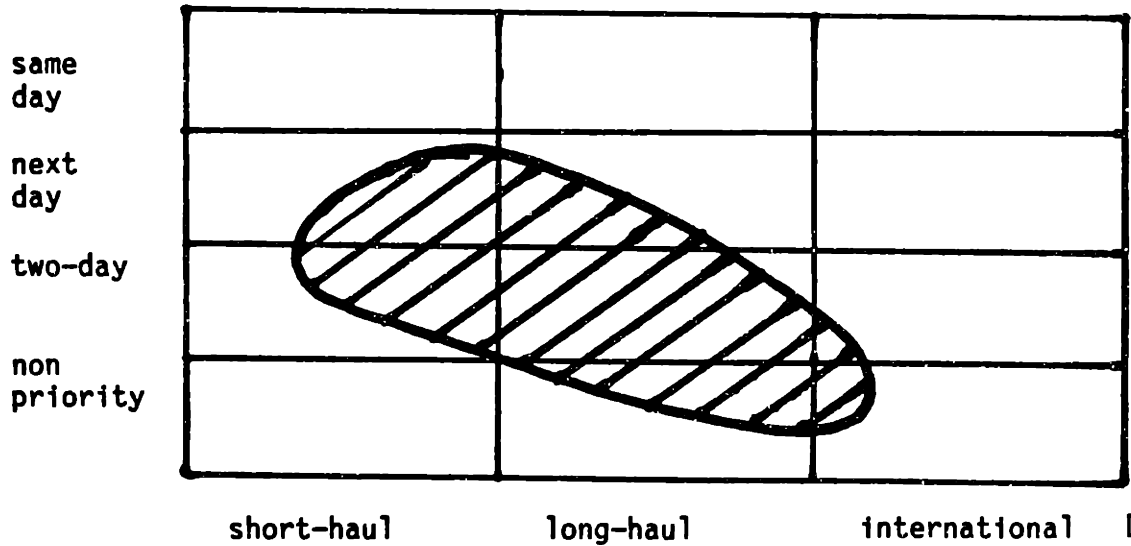
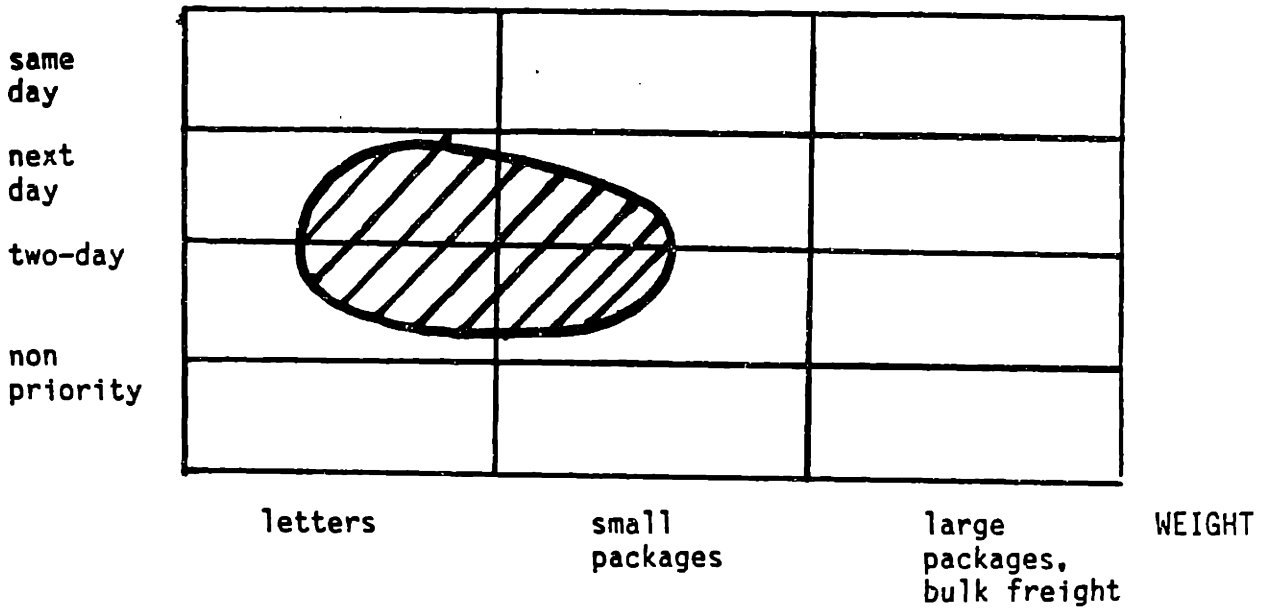


Figure 2.6 DHL Coverage

PRIORITY



PRIORITY

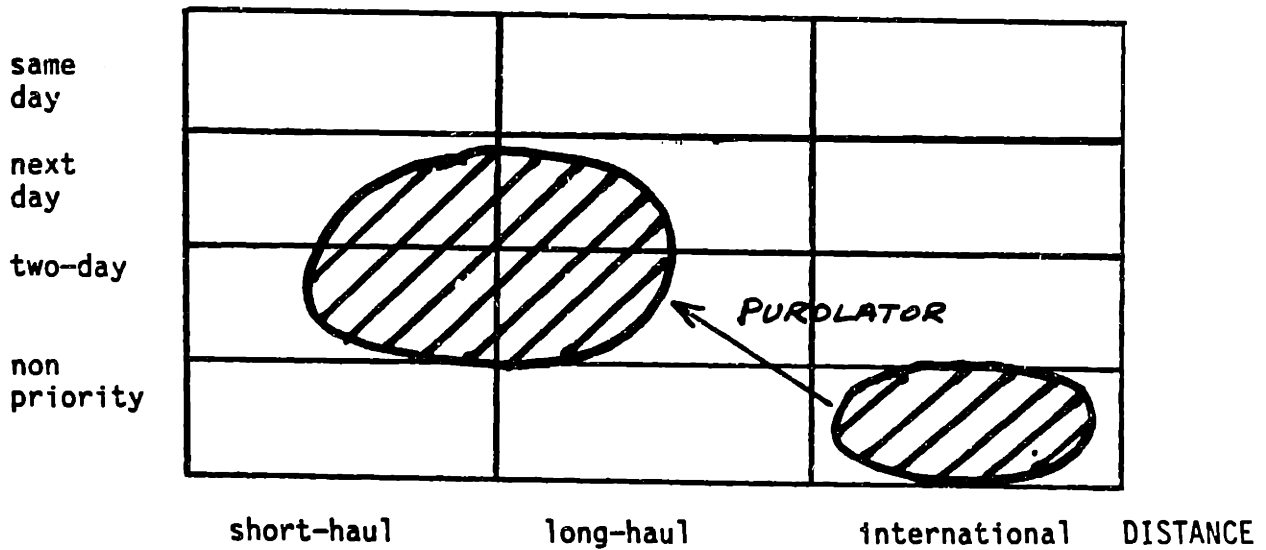
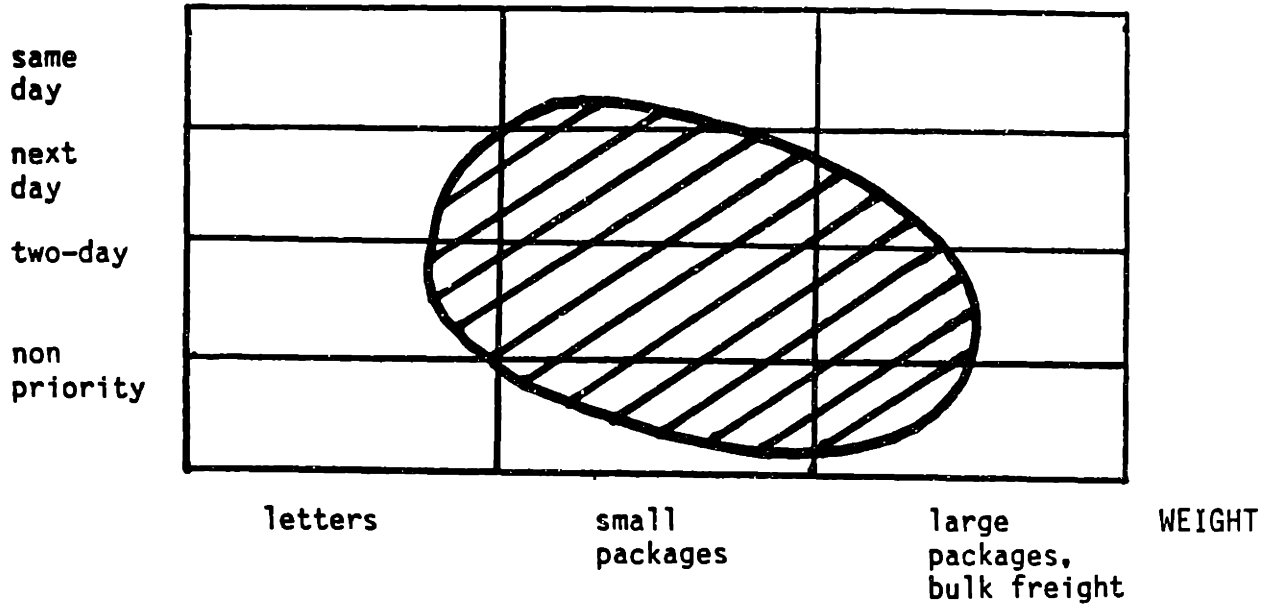


Figure 2.7 Emery Air Freight Coverage

PRIORITY



PRIORITY

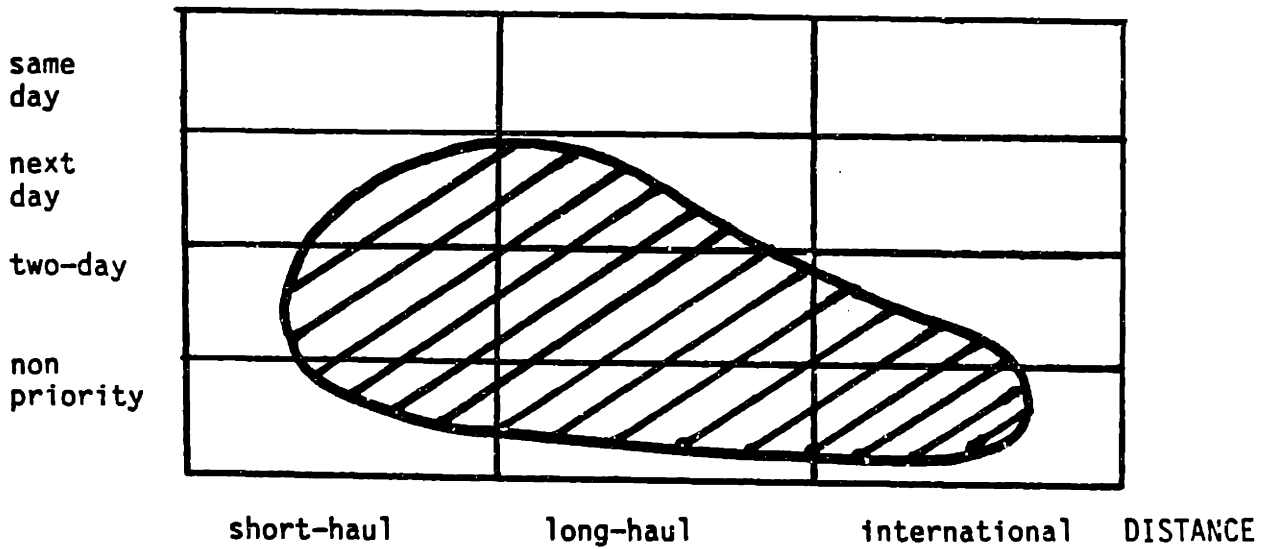
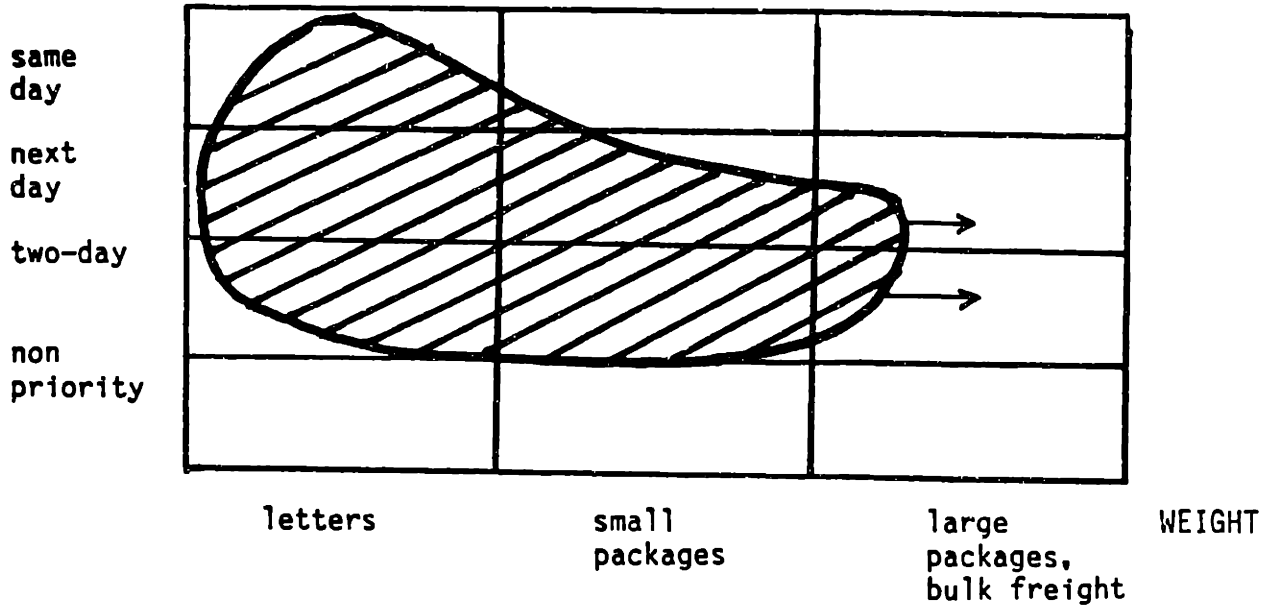


Figure 2.8 Federal Express Coverage

PRIORITY



PRIORITY

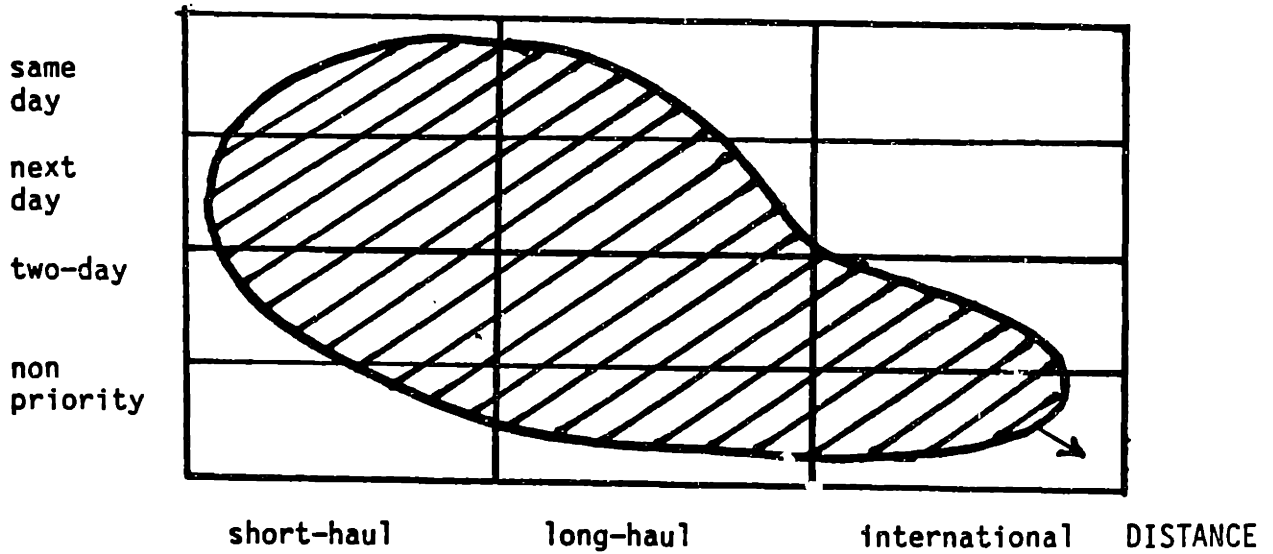
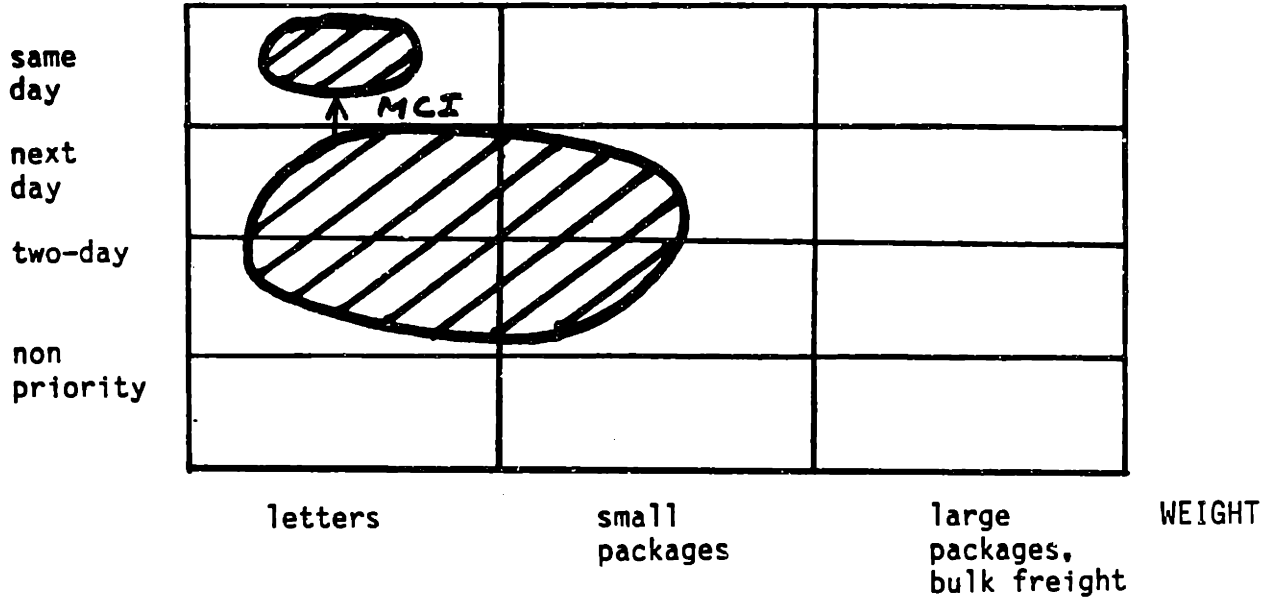


Figure 2.9 Purolator Coverage

PRIORITY



PRIORITY

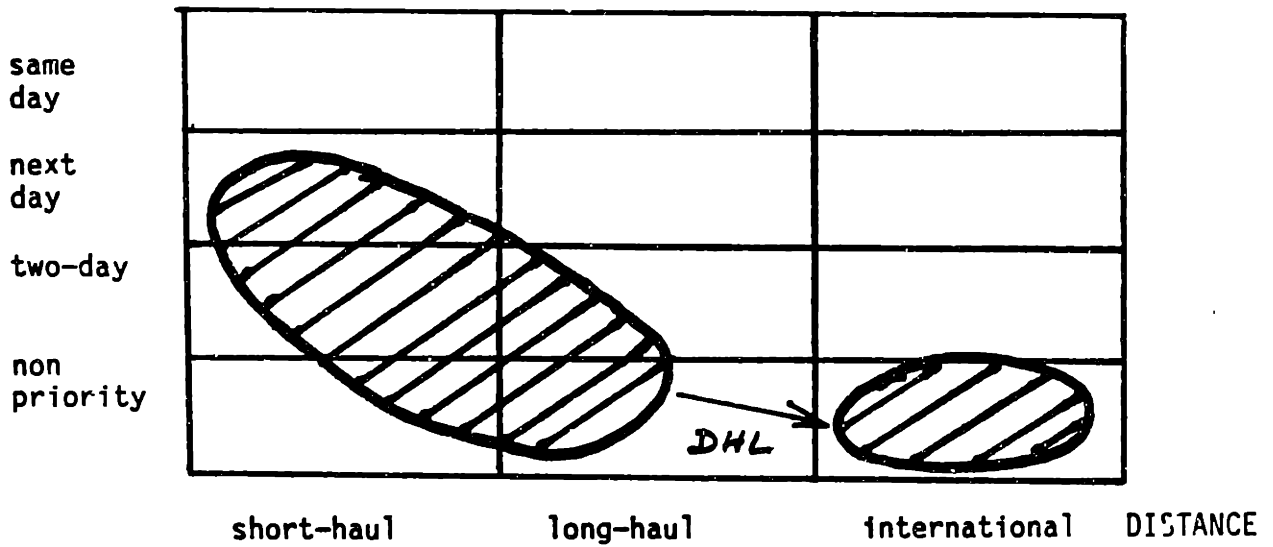
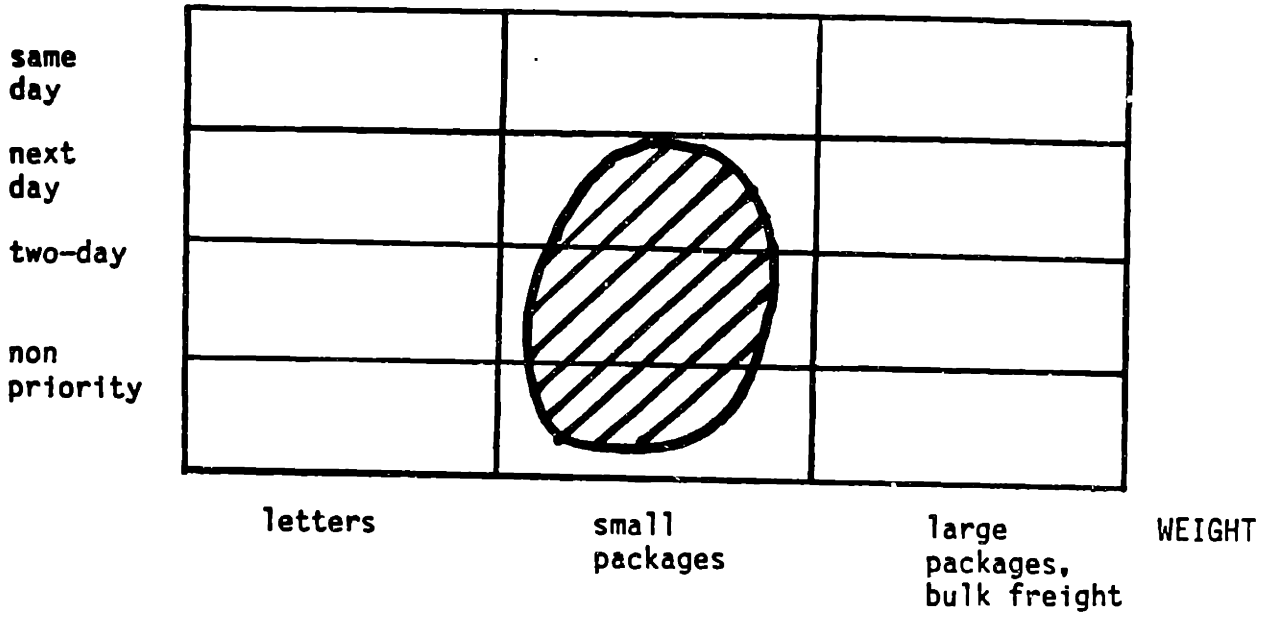
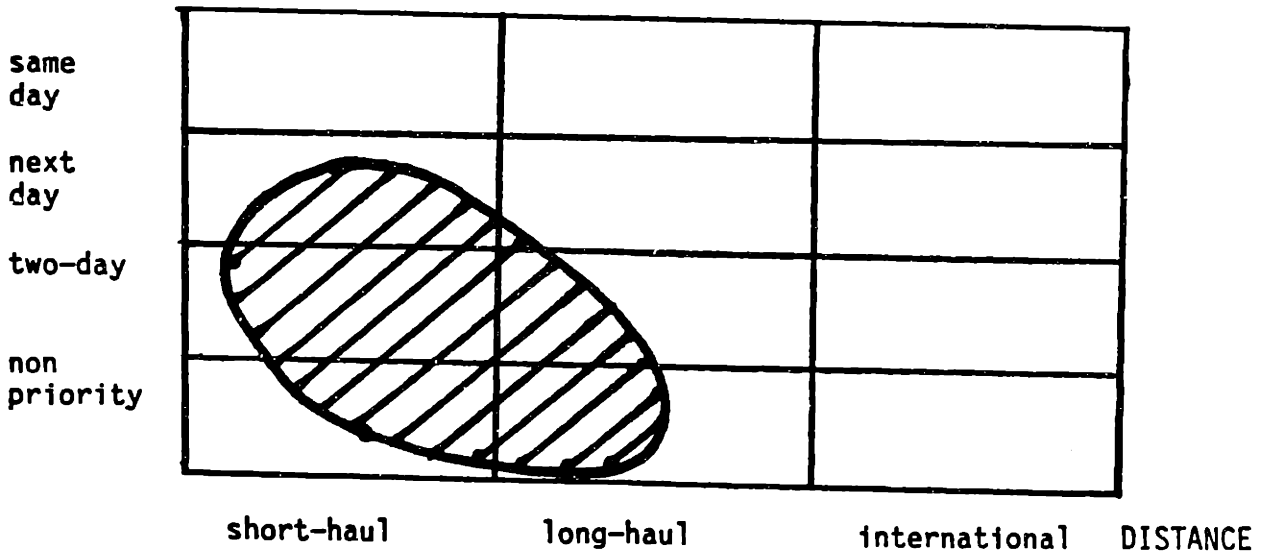


Figure 2.10 United Parcel Service Coverage

PRIORITY



PRIORITY



1985 the first place among transportation companies for its corporate performance, in top of Delta Airlines, by Fortune magazine.

### Non Integrated Companies

United States Postal Service (USPS): since the break-up of its monopoly in 1979, the Postal Service has to compete with the integrated companies. It generally does so by pricing much lower which compensates for a lower quality of service. The USPS has entered the overnight delivery market with its Express Mail service which is only about half the price of its competitors'. USPS serves the entire domestic U.S. and also has international ramifications in the non priority market through agreements with foreign postal administrations. Figure 2.11 depicts USPS coverage.

Burlington Northern Air Freight: from a rail freight forwarder, it has expanded to a trucking business specializing in the short-haul deliveries, and is one of the major non integrated, traditional freight forwarders. Despite its non integration, Burlington tries to compete with the integrated companies in the high priority segment, but finds itself naturally limited to the short-haul market. In 1984 and 1985, Burlington Northern was quoted among the top ten transportation companies in the annual Fortune magazine award



issues. Figure 2.12 shows the scope of Burlington's operation.

The integrated companies with Federal Express and to a smaller extent Purolator and DHL, integrated carriers move into the pure domestic electronic mail business and may be soon internationally. Figure 2.13 shows this development.

I shall now give some indications on the performance of the diverse products and their current stages of development.

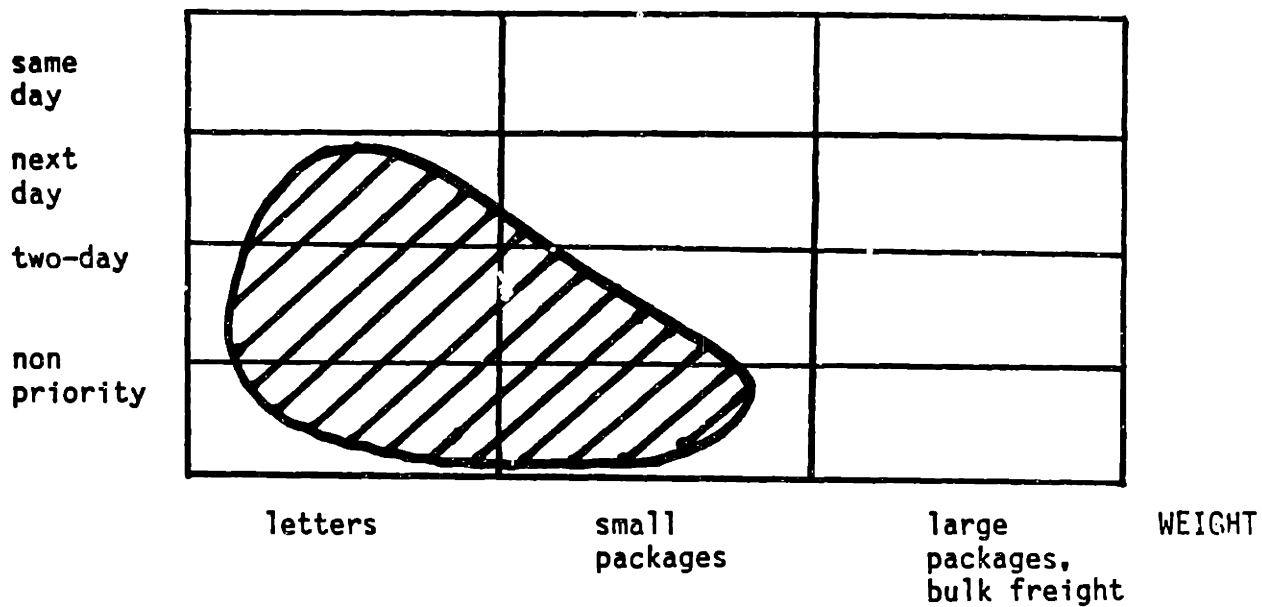
#### 2.4 Records and Trends

Not all products are in the same stage of development. One can distinguish mature, growth and introduction segments as shown in Figure 2.14 shows. This assessment is based both on number of shipments and in revenues, for which I shall give records later in this section.

The non priority delivery of letters and packages of all kinds forms a segment of its own which is undoubtedly mature. It is the domain of the USPS for the letters and small packages and of other non integrated air freight forwarders and carriers for all packages. The priority domestic delivery of letters and small packages, overnight or two-day, is a growth segment slowly maturing and is mostly served by the integrated carriers. Finally, the same day letters delivery segment is in its introductory phase as well as the priority delivery of packages internationally.

Figure 2.11 United States Postal Service Coverage

PRIORITY



PRIORITY

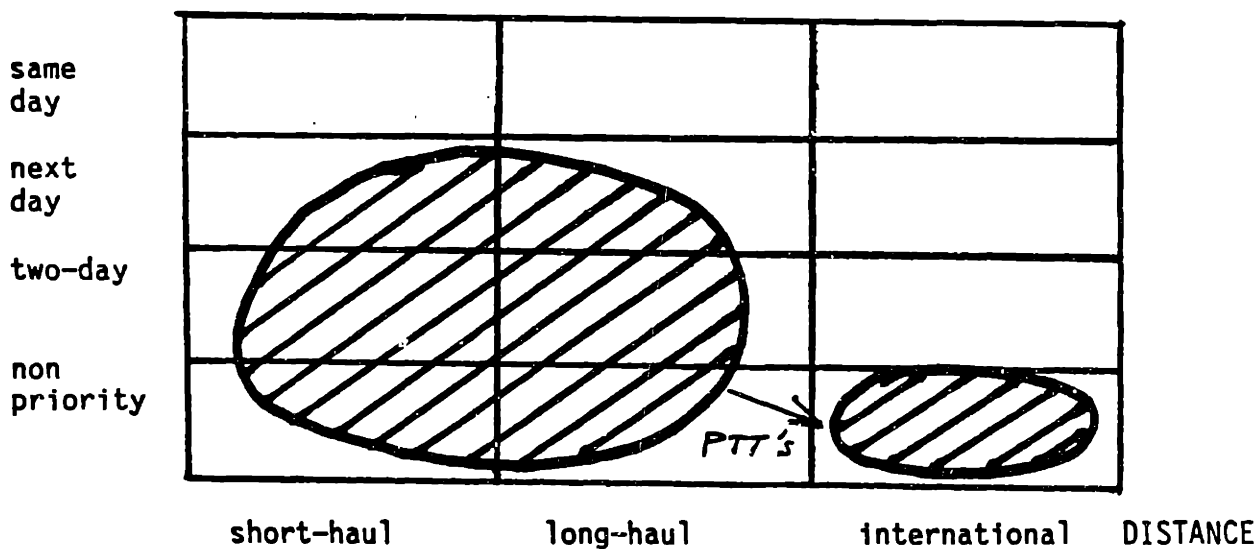
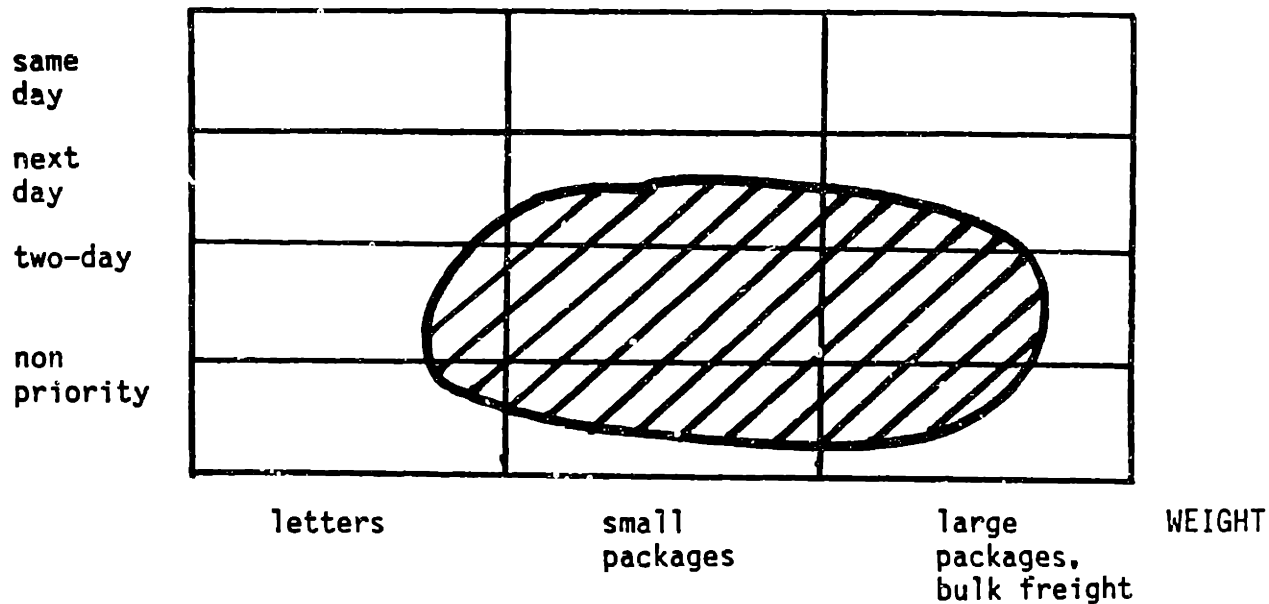


Figure 2.12 Burlington Northern Air Freight Coverage

PRIORITY



PRIORITY

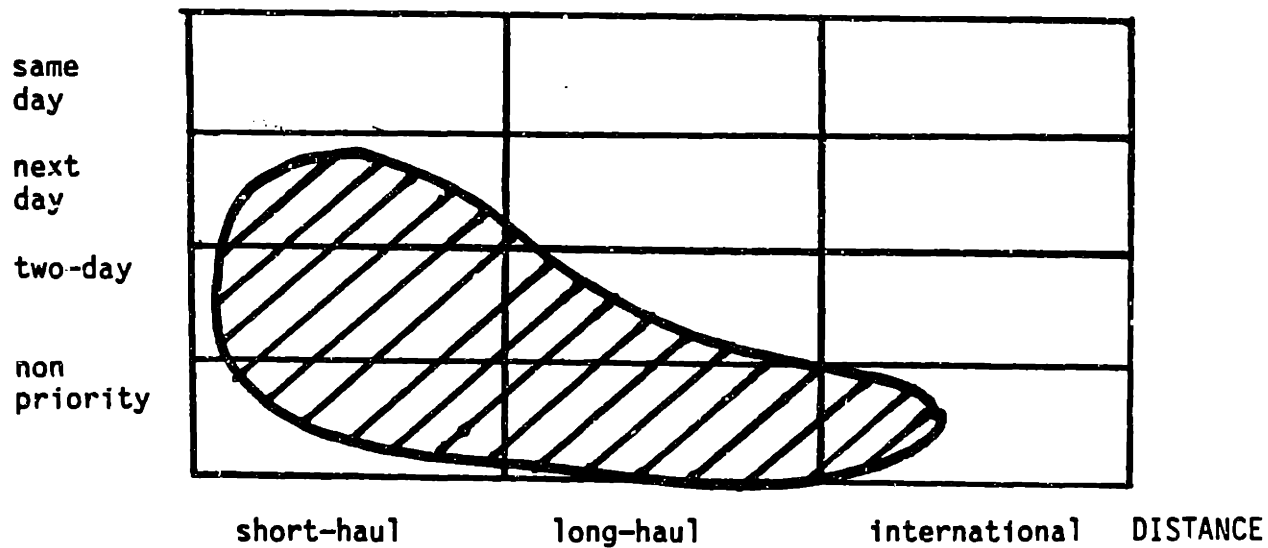


Figure 2.13 The different operation schemes are appropriate to specific products, but the integrated structures expands on the others' turf.

## PRIORITY

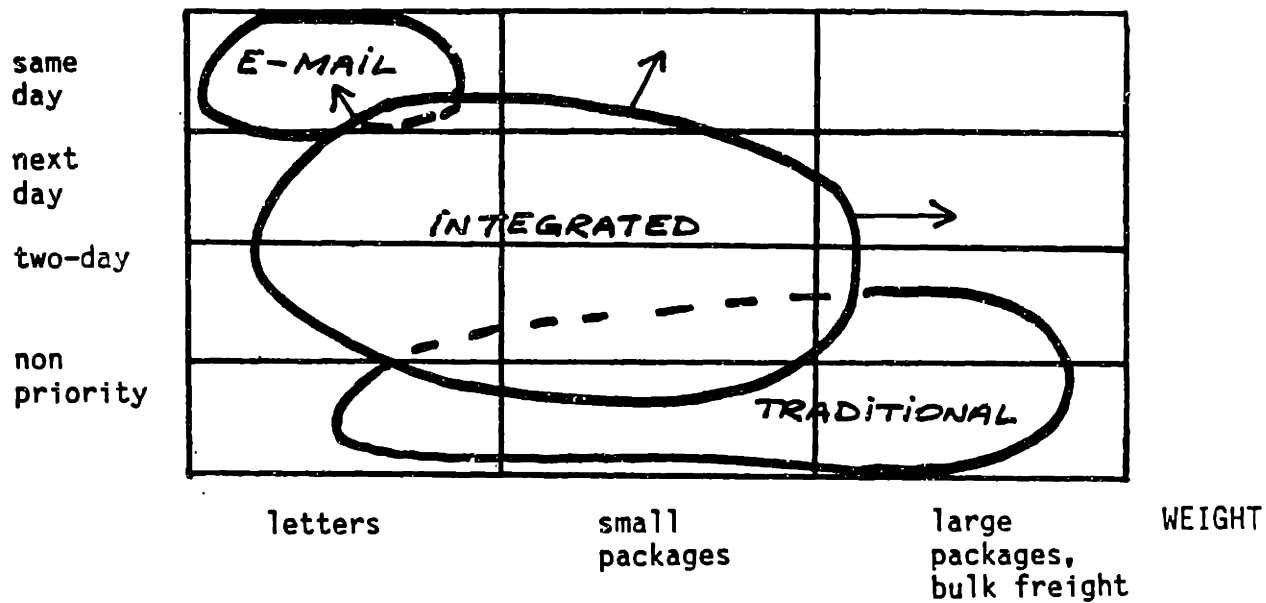
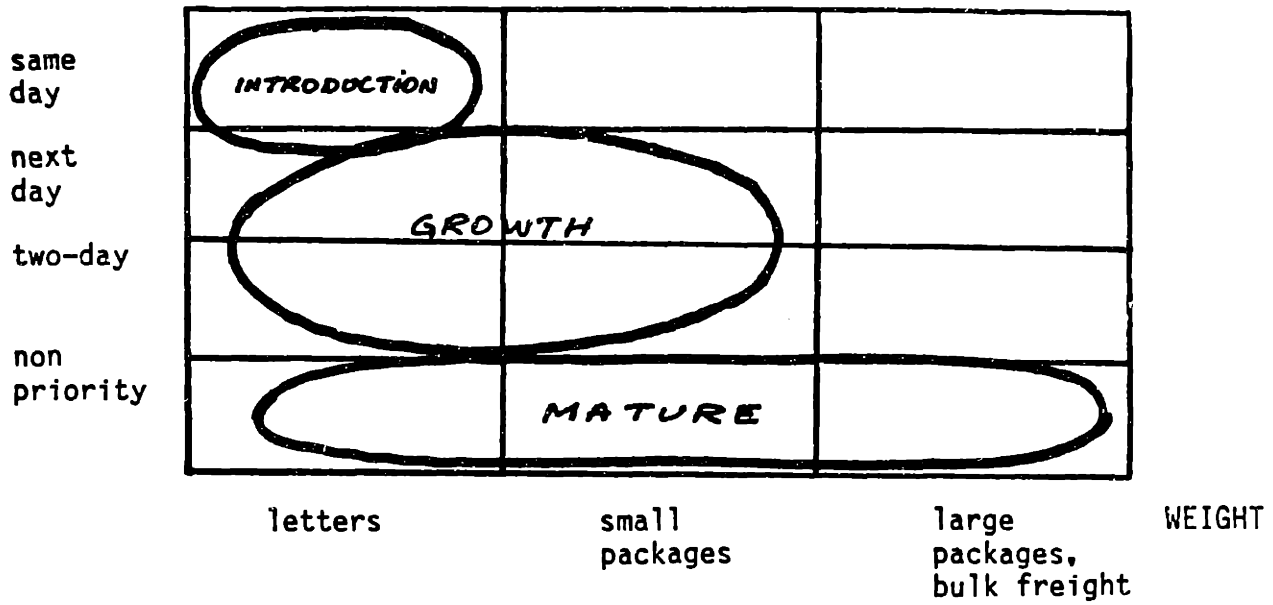
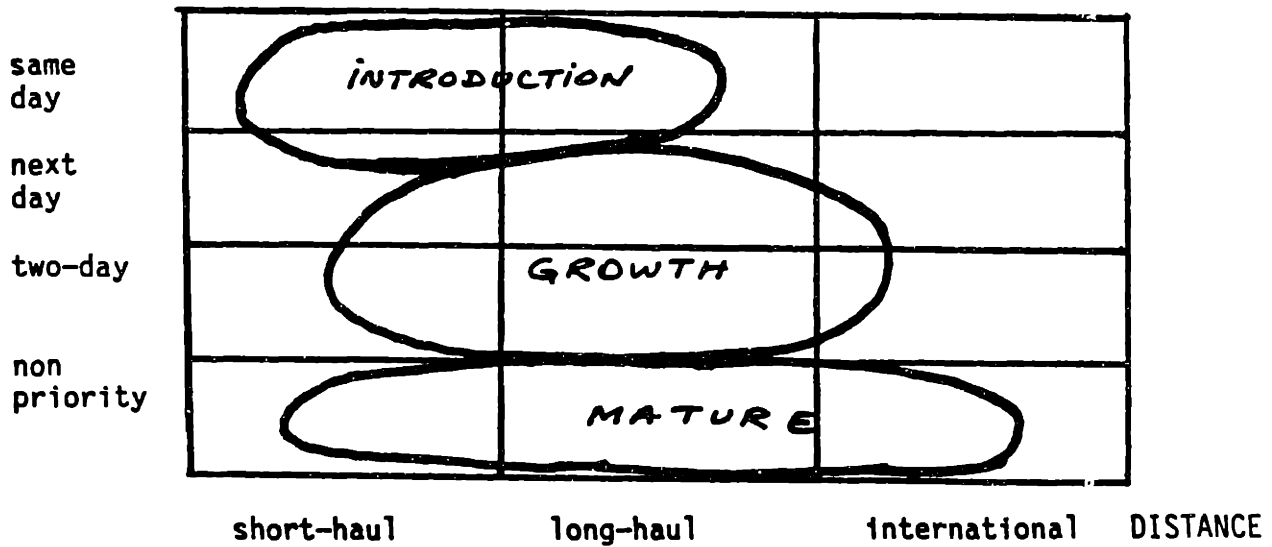


Figure 2.14: The market presents a segment in introductory period, a segment in growth period and a mature segment.

PRIORITY



PRIORITY



Revenues and traffic data are available from the companies but a lack of concensus on the definition of small package and priority and different reporting methods preclude a rigorous count. I will, however, give some records for the domestic market. For the priority delivery of packages and letters, the rate of growth for three carriers was about 40% in 1983 as Table 2.2 shows. For the same day delivery of letters, we only have the results of Federal Express' Zapmail for the first three months of operations as presented in Table 2.3. It shows a strong push the second month and a slight slow-down the third month. More data will be necessary to assess the market potential of the product. The non priority segment is a mature segment whose results have been following the performance of the overall economy, with rate of growth of about 5% annually, for over ten years now. It is the bread and butter of the traditional freight forwarders associated with air carriers.

After this review of the development stage of the products, one may ask what are the sizes of the growing and mature markets (it is difficult to have data on the introductory markets). The growing segment is mostly the field of integrated carriers while the mature segment has been the traditional domain of the non integrated companies. By pooling together the results of the integrated companies on one side and of the non integrated companies on the other, we can get an estimate of the segment sizes as shown in Table 2.4. The

Table 2.2 Number of shipments and rates of growth for the priority delivery of letters and small packages, circa 1983 for 3 carriers, Airborne, Emery and Federal Express [Source: A. Norling, Kidder and Peabody]

type of shipments	number of shipments (millions/year)	year-to-year change %
next-day letters/envelopes	39	41
next-day/ two day small packages	29	43

Table 2.3 Number of shipments for Zap Mail, the 2-hour letter delivery service of Federal Express. First months of operation (Source: J. Pincavage, Paine Webber).

Month	shipments ('000)	monthly change %
July *	6	--
August	22	267
September	34	55

\* first month of operation

table teaches us that the growth segment already accounts for over half of the revenue of the US air cargo market.

Most significantly, if one looks at the annual shipments for each segment, one is struck by the fact that the growth segment accounts for 95% of the total domestic air shipments. Table 2.5 makes the point.

A last question that arises concerns the relative performance in terms of market share for the different carriers. The answer is never clear cut as the market shares will vary with the products and since the companies have not adopted a common reporting procedure, estimates of the relative market share vary with the commentators. In addition, such estimates can hardly be proposed for the non integrated carriers due to the multiplicity of the agents. For integrated carriers, Appendix A contains several estimates of the companies' market shares according to various definitions.



Table 2.4 The growth segment accounts for over half the revenues of the Domestic Air Freight market (Source: de Neufville and Jacques).

Segment	Industry	Annual Revenues for Air Cargo	
		\$Billions	Percent
Mature	Traditional scheduled airlines	2.1	44
Growth	Integrated	2.8	56
	Airborne (1983)	0.3	
	DHL (1983)	?	
	Emery (1982)	0.6	
	Federal Express (1983)	1.5	
	Purolator (1983)	?	
	UPS (1982)	0.4	

Table 2.5: The growth segment accounts for about 95% of all air shipments (Source: de Neufville and Jacques).

Segment	Industry	Annual Air Shipments	
		Million	Percent
Mature	Traditional scheduled Airlines	12	5
Growth	Integrated	184	95
	Airborne	15	
	Emery	9	
	Federal Express	100	
	Purolator	11	
	UPS	49	

### 3. MARKETING VARIABLES

Marketing variables refer to the tools that can be used competitively by the companies. Five major marketing variables can be identified in the document/package delivery industry. These are quality of service, price, standardization, advertising and distribution.

#### 3.1 Service Quality

The quality of service is one essential marketing variable which broadly covers convenience, reliability and ease of use. Convenience addresses a wide range of items. The first is the availability of door-to-door service, i.e. the pick-up at the shipper's premises and the delivery to the consignee. In the small packages and documents segment, Federal and Emery provide such a regular door-to-door service in contrast with the USPS service which provides only delivery and not pick-up. Convenience addressed also the availability of pick-up the same day as the day of the phone request. Such a service, which is standard for Federal or Emery, cannot be proposed by UPS for their trucks are not radio dispatched. A delivery earlier than expected also adds to convenience, but this can generally not be guaranteed -- otherwise it would be proposed as a new or different service. Other convenient aspects are the availability of Saturday pick-up and/or delivery, and shorter phone answering time as advertised by Federal Express.

Reliability covers two aspects. The first is the probability that the shipment arrives by the time guaranteed. This is hard to quantify and is highly perceptual as it varies with each individual experience of the service. The second aspect of reliability is the availability of a computer/satellite system that enables the company and the shipper to check on the progress of the shipment at any time. This type of service has been early promoted by Federal Express, and has been soon copied by Emery and Airborne.

The last feature of the quality of service is the ease of use. It can be simplified billing forms as constantly advertised by Federal or Airborne. In particular, these companies offer a personalized billing form where all the vital information about the shipper is preprinted out of a computer database. This is particularly useful for regular shippers who send the same items to the same locations; they only have to choose the forms corresponding to the desired shipment. In addition, computer printed bills limit the risk of error in customer invoicing. An other aspect of ease of use is the simplicity of the rate calculation. Many companies such as Federal or Emery have adopted a single rate calculation based on weight regardless of distance, whereas other companies such as UPS or Burlington have kept a rate chart based on both weight and distance, thereby much less easy to use. A last element of ease of use is the availability of specially designed envelopes and packages which

can be rated for their design, i.e. dimensions, roominess, closing mode, resistance, etc.

Table 3.1 summarizes the diverse features of the components of service and attempts to evaluate the service of the different companies with regard to each of them. It shows that a company like Federal Express has a strong commitment to the quality of service whereas at the extreme UPS standard service is much lower. However, such a difference must be balanced by a difference in price. In effect, if service is an important marketing variable, price of course is also crucial.

### 3.2 Price

Price can be seen first at the inter-company level and second at the intra-company level. The inter-company level deals with rate differences across the industry for a same product. Differences in prices can reflect the costs of different level of service. For instance USPS rate is about half those of the competitors but its service is fairly poor: no pick-up, no tracking, no recourse. Rate differences can also be due to the geographic scope of the companies, an important variable in the operating costs, especially in the high priority market. Local companies will charge a lower rate on local shipments and will not provide long distance service, while companies with a nationwide scope will ship packages everywhere but at a premium, especially in the short-haul.

Table 3.1: The quality of service can be broken down in many attributes which reveal differences among the companies.

Service Attributes	Integrated		Non Integrated					
	Airborne	DHL	Emery	Federal	Purolator	UPS	Non Integrated Burlington	USPS
<b>CONVENIENCE</b>								
door-to-door	x	x	x	x	x	x	x	
same day pick up	x	x	x	x	x		x	
earlier delivery (speed)	-	-	-	-	-	-	-	-
Saturday deliver	x		x	x			x	
Saturday pick up			x	x			x	54
shorter phone answering time	-	-	-	-	-	-	-	-
<b>RELIABILITY</b>								
on time arrival	-	-	-	-	-	-	-	-
tracing	x	x	x	x				
<b>EASE OF USE</b>								
simple bill	x	x	x	x	x		x	x
personalized bill	x			x			x	
simple rate	x		x	x	x			
credit available				x				x

Tables 3.2 and 3.3 show differences in rates for the overnight delivery of letters and envelopes. Both demonstrate that Burlington and Purolator, which operate short-haul, charge lower rates than Airborne, Emery and Federal which operate long-haul as well.

The intra-company level deals with the company's rate of structure for different services. In general, for the standard products of overnight delivery of letters and documents, companies charge a fixed price regardless of the exact weight (limited in any case) and distance (for domestic deliveries). On the other hand, for the package segment, rates can be based either on both weight and distance, or on weight only. UPS and Burlington still charge by both weight and distance whereas Federal, Emery and Airborne have long ago switched to a single weight-based calculation.

### 3.3 Standardization

Standardization enables the customer to identify the various products of a company and to compare them to similar products offered by the competition. The issue for a company is whether to accept the standardization prevailing at the time or to set its own standards hoping its competitors will follow. For instance, Emery recently challenged the competition with the launching of a one-pound pouch concept. Emery plans to go further with a whole range of pouches of discreet weights. The drive towards standardization can

Table 3.2: Rates differ across companies for the standard overnight delivery of letters, on the basis of service quality and geographic coverage (circa 1984-1985).

Type of Service	Company	Service Quality	Geographic Coverage	Price (\$)
Expensive	Federal Express	high	wide	14
	Emery	high	major areas	14
Medium	Airborne	medium	major areas	12.50
	DHL	low	major areas	12.50
Cheap	Purolator	medium	local	11.75
	Burlington	low	local	10.50



Table 3.3: Rates differ across companies for the overnight domestic delivery of documents and light items under 2 lbs, on the basis of service quality and geographic coverage. (circa 1984-1985).

Type of Service	Company	Service Quality	Geographic Coverage	Price (\$)
Expensive	Federal Express	high	wide	25
	Emery	high	major areas	25
Medium	Airborne	medium	major areas	24
	Purolator	medium	local	23.50
Cheap	Burlington	low	local	20.95
Very Cheap	USPS	very low	wide	10.75

be viewed as a transition from a custom designed service to a ready-to-wear product. It allows to reach a larger mass market. It also helps the company internally as it eases the reporting of operations.

In the fast growing segment of document and package handling, three standard products have appeared. The first product is the overnight delivery of letters of generally less than 5 ounces. The second concerns the overnight delivery of documents and light objects in envelopes of less than 2 pounds. These two services come with specific envelopes, pouches, or packs of standard dimensions and design across the industry: they are "ready to wear." Tables 3.4 and 3.5 show in detail the letter and envelope products across the companies.

The last standard product is the overnight delivery of packages above one pound. Here the standardization lies on similar rate structures across companies. To further materialize this standardization in the customer's minds, those rate scales have similar names across the industry. For instance, Federal advertises its Priority One rate while Airborne and Purolator respectively propose their Express One and Priority Express rates. Table 3.6 summarizes the diverse names of this service across the industry.

Standardization is thus an important marketing variable that governs the identification of one company's services. Once a standard product has been launched by a leading company,

Table 3.4: The overnight domestic delivery of letters becomes highly standardized across companies (circa 1984-1985).

Company	Product Name	Standard Size (inches x inches)	Standard Weight (ounces)	Pages
Airborne	Letter Express	9 x 12	5	15
Burlington	Air Express Letter	8.5 x 12	5	not specified
DHL	Overnight Envelope	9 x 12	2	10
Emery	Urgent Letter	9 x 12	5	20
Federal Express	Overnight Letter	9 x 12	6	20
Purolator	Purolator Plus Envelope	8.5 x 12	no limit	no limit

Table 3.5: The overnight domestic delivery of documents and light items becomes highly standardized across companies. (circa 1984-1985).

Company	Product Name	Standard Size (inches x inches)	Standard Weight (pounds)
Airborne	Envelope	12 x 15.5	3
Burlington	Air Express Envelope	12.5 x 17.5	not specified
Emery	Urgent Pack	12 x 15.5	2
Federal Express	Overnight Envelope	12 x 15.5	2
Purolator	Purolator Envelope	12 x 15.5	no limit
USPS	2-1b Pack	12 x 15.5	2

Table 3.6: Standardization in the overnight delivery of small packages (1 to 99 lbs.) is based on a similar rate structure and similar product names:

---

Company	Product name	Rate Basis
Airborne	Express One	weight
Burlington	Standard rates	weight & distance
Emery	AM/PM Service	weight
Federal Express	Priority One	weight
Purolator	Priority Express	weight

---

the others generally follow suit, as shown by the current level of standardization in the industry. There are three marketing variable we have seen so far, service, price and standardization. However, in order to be effective, they must reach the customers' awareness. This is the purpose of advertising.

### 3.4 Advertising

Advertising plays an important role in the customer--oriented innovative and growing segments, compared to the mature part of the industry. As a basis for comparison, the total amount spent on advertising in the industry in 1973 when the express segment was not developed was only \$2 million (Advertising Age, September 29, 1975). Two years later, after the express segment had started to develop with Federal Express, the total advertising spending was already \$10 million, a 5 times increase (Advertising Age, September 29, 1975)! By 1983, the whole industry spent an estimated \$160 million on advertising (Advertising Age, August 29, 1983). The rate of growth of the advertising budgets for most of the companies was above 20 percent in 1983-84, and Purolator budget increased by about 100 percent! Table 3.7 gives that details.

All the companies have their own advertising agencies and have developed their specific messages and images. Federal is the high quality service and leader carrier, Emery is

Table 3.7: The advertising budgets of the different companies show a large increase in 1984. (Source: press releases)

Company	Budget (\$ x 106)		% Increase
	1983	1984	
Airborne	10.6*	12.6*	19
DHL	n.a.	10	n.a.
Emery	n.a.	19.5	n.a.
Federal	34.6**	39.3**	14
Purolator	5.5	10-15	90-180

\* TV only

\*\* Source: Federal Express Corporation 1984 Annual Report

the world-wide carrier and USPS, the low price service. Table 3.8 summarizes the advertising agencies and the mottos of the different companies. The media are generally network TV, radio, consumer magazines, and newspapers for the growing and innovative segments, while they are limited to trade reviews for the mature traditional segment. One easily recalls the TV spots of Federal and Emery or the big placard of Federal for Zapmail in Newsweek and Fortune in early 1985. DHL advertises in INC. and Business Week but also in foreign publications such as the French magazine L'Express. Table 3.9 illustrates the kind of print media used by the carriers.

Once the customer is aware of the services and of their prices through appropriate advertising, the carrier has to make sure to make that these services available. This is the role of distribution.

### 3.5 Distribution

Distribution refers to the availability of the service. Its most basic form is a telephone number in the Yellow Pages. But availability can also be made proactively with a salesforce who calls or visits each potential customer to have him use the service. This is the most aggressive form of distribution and is mostly recommended for large industrial customers so to get exclusivity contracts on their shipments. It would be totally inappropriate for residences as it would require significant sales costs (salespersons salaries, travel and



Table 3.8: Each company has developed its own motto with a particular advertising agency.

Company	Ad Agency	Message
Airborne	Della Femina, Travisano and Partners	We deliver
Burlington	?	People, not planes, deliver. #1 for service worldwide.
DHL	Ted Bates Advertising Agency	#1 international express service. Changing the way the world works. The total express network.
Emery	Benton and Bowles	Emery worldwide.
Federal Express	Ally and Gargano	Absolutely, Positively Overnight. Zap mail: When there is no tomorrow. When tomorrow is too late. Why fool around with anyone else.
Purolator	Geers, Gross Adv. Wells, Rich, Green	Overnight, not overpriced. Cheaper in the short run. You want it, you got it. At your service worldwide.
USPS	Young & Rubican	We deliver excellence for less.

Table 3.9: Carriers largely use public print media.

<u>Purolator</u>	<u>DHL</u>
Time	Business Week
Sports Illustrated	INC.
People	L'Express
Fortune	
Forbes	
Cosmopolitan	
Golf Digest	
<u>Federal Express</u>	
Business Week	
Fortune	
Newsweek	
The Wall Street Journal	
Large metropolitan dailies	
US News and World Report	
Air Cargo Magazine	
Industry Week	

telephone expenses) in comparison to the revenues. It has traditionally been Emery and Airborne's policy to maintain an important salesforce to capture industrial accounts. Estimates from company annual reports and diverse press releases show that in 1983, Airborne spent 13 million dollars on sales expenses and Emery, an amount in the range of 40 million dollars.

A different mode of distinction exists that is less aggressive and reaches a larger market, mostly residences and corporate offices. It is the availability of drop-off boxes-- such as the mail boxes--where customers can throw their urgent letters and packages. Following on this idea, companies have develop real offices on the model of the Post Offices, where direct assistance and customer service are be provided. Federal Express has been the early promoter of the idea in 1984 and maintains 300 of these offices (Business Office Centers) in the major metropolitan areas as of 1985. Airborne is just starting to experiment the idea with the opening of three drop-off offices in Chicago. This type of distribution and may develop considerably as the market becomes more competitive.

## PART II THEORY

This part presents theories of marketing strategies with their application to the package/document delivery industry. Two broad types of strategy are available in the literature, one deals with the competitive respect in the fairly mature industry, the other with the dynamics of the industry life cycle.

### 4. MARKETING STRATEGIES: CROSS SECTION

In this growing market it is important for a firm to have an overall marketing strategy so to be the most profitable. Success requires a good understanding of the market, i.e. products and users, and of the marketing variables. By looking at a cross section of the market characteristics one can formulate generic strategies to go after particular segments. These strategies for a growing industry will be discussed here after a short review of similar strategies advocated by Michael Porter (1980) for mature industries.

#### 4.1 Porter's 3 Generic Strategies

Michael Porter argues for three strategies; focus, differentiation and cost leadership. Focus refers to the concentration on a few segments where the firm tries to be the leader thereby carving niches protected from competitors' invasions. Such a strategy can be followed by matching exactly the product features with the target market needs, thus eliminating substitute

rival products. This is the strategy of the Armstrong Rubber Company which has specialized in making superior tires for farm equipment vehicles and recreational vehicles. The second strategy differentiates the product from its rivals. This is done by pushing the product along one of its strengths so to be unbeaten on this ground. The product therefore gains its uniqueness and can be successfully marketed on the basis of its unmatched strengths. This is the strategy of Hewlett Packard in computers. The last strategy is cost leadership. The firm which follows this strategy has a higher margin and should be able to set a lower price thus finding a large base for its product. Such a strategy is the one of Texas Instruments.

How do these strategies translate in the package/document delivery market? Consider the focus strategy first. Chapter 2 shows that the market can be segmented both in terms of product and in terms of user. This suggests two distinct focus strategies, one on the product, for instance small package next day, and another on the user, for example executives and CEOs frequently shipping. In the first case, the carrier will produce a limited number of products to all the classes of users that are potentially interested and in the second case, the carrier will provide all the products desired by the particular classes of users it has chosen to use.

As regards differentiation strategies, there seems to be only one dimension of differentiation in the industry,

the quality of service. This quality of service described in Chapter 3 is itself intimately related to the costs: it is very difficult for a carrier to provide a good service at low cost and there is generally a trade-off between quality of service and costs. The implication of this is that service differentiation and cost leadership are here antithetical. As a consequence, a carrier which provides a high quality service will have to charge a higher price to cover the extra cost. This will suit the categories of users who want a high quality of service regardless of price. On the other hand, a price leadership strategy synonymous here of cost leadership strategy will be necessary to serve those users who prefer cheaper service at the expense of quality. My approach here is to account for a certain level of trade-off between quality of service and price, and to recognize both as the two major attributes of the product. This allows to consider price or cost leadership as a subcase of differentiation. Thus, in this new framework, a differentiation strategy can occur along two lines, service quality and price.

#### 4.2 Product Focus

A company can decide to go after one or more particular products either proactively because there is a large untapped revenue potential, or defensively as a result of an aggression in the company's own turf. An example of proactive strategy is the focus of Federal Express from 1975 to 1980 on the

small package overnight delivery segment. Federal established itself as the leader in this segment and enjoyed considerable profits. Conversely, a company can focus on a product defensively against an internal attack from competition within the industry, or against the external threat of a substitute. An example of the former is UPS move against Federal's overnight delivery territory in 1982. Federal's defensive focus was to invade UPS's niche, the 2nd day delivery market. One example of external threat is the advent in the 1980's of electronic mail which endangered the overnight letter business. This led Federal to focus defensively on the same day letter delivery business, introducing its own electronic mail service.

Targeting a product segment is an important decision whose results can substantially affect the company. It is therefore crucial that the decision be well prepared. This requires in first instance an understanding of the sensitivities of the market. Some segments are more sensitive to price than others and it could be disastrous to charge too high a price. Other segments are sensitive to service and would not be suited by a weak service quality.

It is intuitive that the higher the priority, the more the service sensitivity and the less the price sensitivity. For higher priority segments, one should provide a high quality of service and be able to charge a high price. The underlying user behavior is fairly simple. Under considerable time pressure, the shipper is ready to pay dearly to be sure his

shipment will arrive at the destination in the guaranteed time (reliability), with minimum work (convenience) and the easiest way possible (ease of use). To illustrate the price sensitivity, consider a one-pound shipment and the price charged by UPS for next day, 2-day and non-priority delivery. The rate increases by 200% from non-priority to 2-day, and by almost 300% from 2-day to overnight. Table 4.1 shows the details. Figure 4.1 visualizes the price and service sensitivities in relationship to priority.

Price sensitivity also varies with the weight. the customer ready to pay a premium price for the guarantee of delivery does not expect that this premium should increase proportionally with the weight. The rate per pound should decrease with the weight of the package. This has been captured in the rate structures of the companies. Typically, the overall shipment increases less than proportionally with the weight. Figure 4.2 illustrates this point.

### 4.3 User Focus

The focus strategy aimed at the users can be extremely successful if we believe in a certain level of customer lock-in. A carrier can tailor design its services for a particular class of users and obtain a great level of specialization through a knowledge of the routines peculiar to these users. These users in turn get accustomed to the service provided



TABLE 4.1: UPS rates for a one-pound shipment increases drastically with priority. (Source: UPS Service Guide, 1983)

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priority	rate (\$)
next day	11.50
second day	3.00
non-priority	1.83-1.74 (depending on zone)

---

FIGURE 4.1: Price and service sensitivities vary with the priority

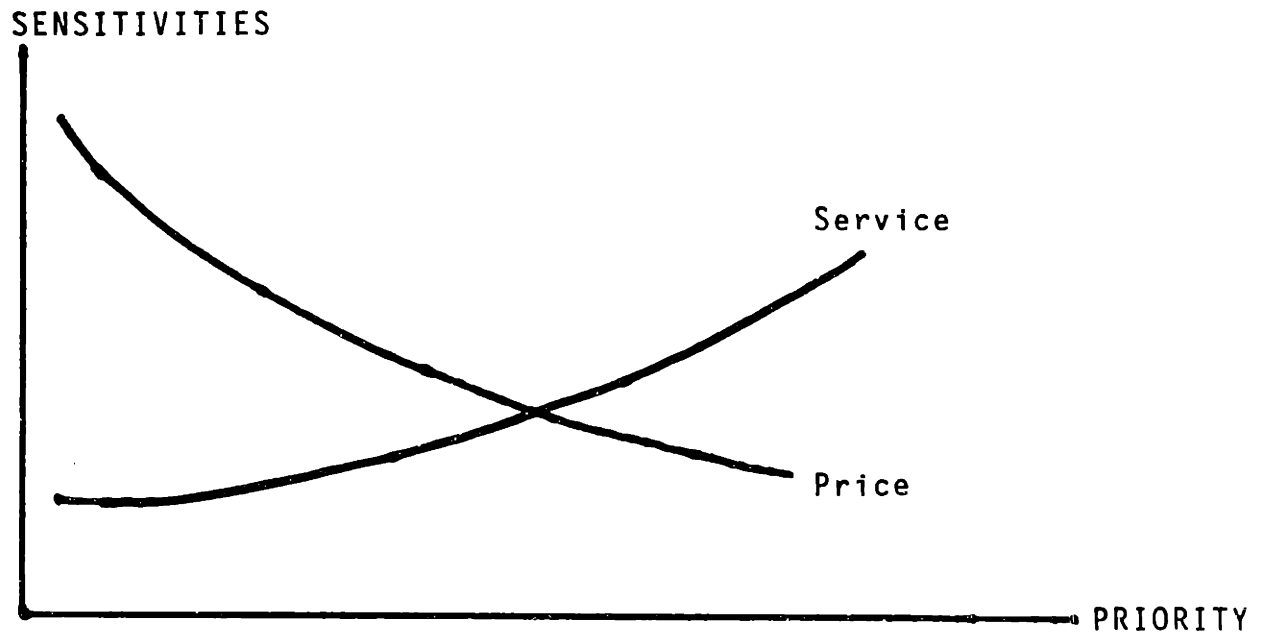
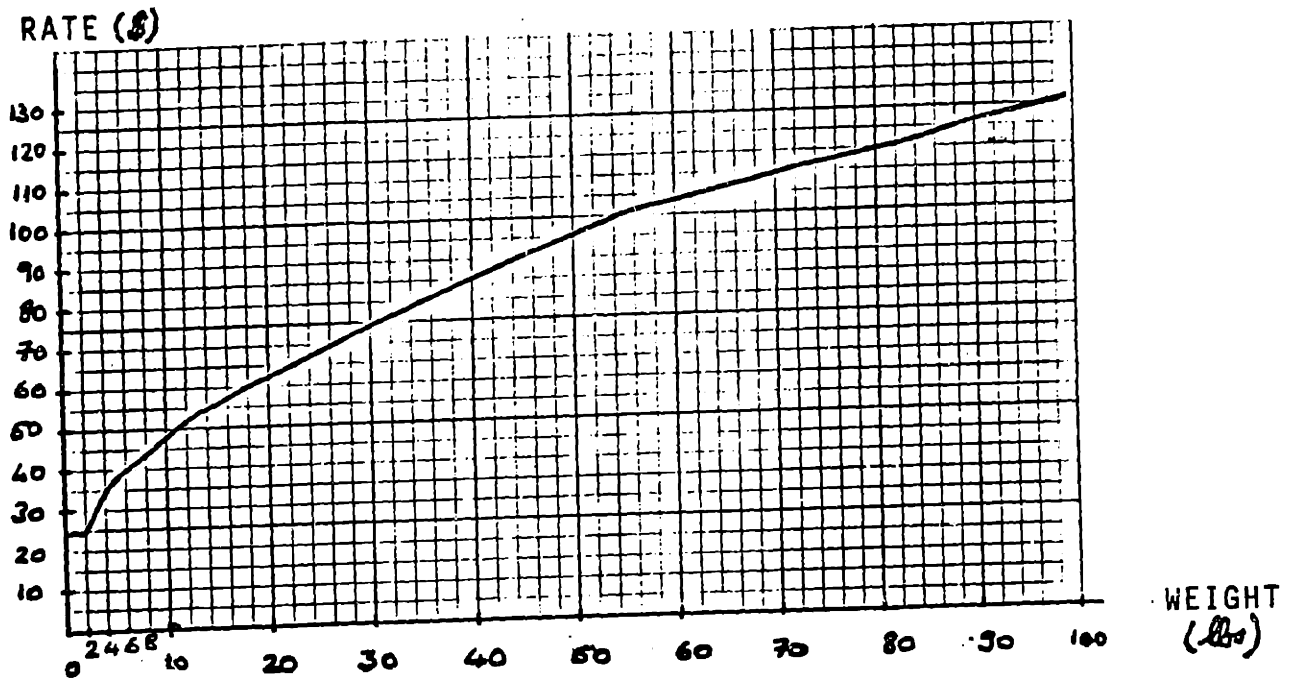


Figure 4.2 The price per unit of weight decreases with the total weight of the shipment as shown by the convexity of the rate chart =  $f(\text{weight})$ . (Sources: Airborne, Emery and Purolator identical rate charts, 1984).



by the company, that is the same telephone number, the same uniform, the same procedures, etc. Switching to the services of another carrier implies for them the loss of these advantages and the risk of experiencing a new service not essentially better. There are thus reasonable switching costs to the user in terms of learning and satisfaction which makes a case for some level of shipper lock-in and to a certain extent, shipper loyalty. This in turn advocates for a user focus strategy both in terms of nature and in terms of usage rate.

#### Nature Focus

The choice of particular market segments can be done by using the taxonomy presented in Chapter 2 and by assessing the specific feature of classes of shippers according to their nature. Consider first the market of individuals. These send mostly non-priority mail but also high priority, reliability sensitive legal and business documents. Examples of the latter range from testimonies to job applications and Federal income tax declarations. Individuals also ship small packages, most of them gifts and personal effects for which reliability, and to a certain extent, speed are the issues. A birthday present must arrive and must arrive on time. There are substantial problems in serving residential customers. First, they do not generate much volume individually. A little incident I encountered with Emery illustrates that point. I personally called Emery to obtain the latest issue of their service guide and was denied my request with the

following comment "We are sorry but as an individual you would not generate enough volume to interest us." This example of course is a bit biased, as it is notorious that Emery concentrates on volume industrial shippers. It should not hide that all together, residences represent a very large revenue source because of their number. Yet, they are scattered across the country, away from the main business centers, which thus raises the transportation costs to serve them.

The second problem for the carriers is that the residence owner may not be home when the pick-up truck or delivery arrives. This translates as sunk transportation costs and calls for a rescheduling later on. To remedy this problem, carriers must plan to develop drop-off boxes or centers such as mail boxes or post offices. Part of the burden of collecting the items is thereby passed on to the individuals themselves. However, the carriers are faced with the choice between the costs of maintaining those boxes and offices versus the cost of direct pick-ups.

In terms of specific actions, several recommendations come to mind when focusing on residences. First, because residences are generally not frequent shippers, and have little familiarity with the service, they need a very good quality of service with emphasis on convenience and ease of use. Second, individuals are willing to pay a premium price for such a service since they use it only once in a while or on an individual basis. As a result, carriers should

not be afraid of setting premium prices for this market. Third, individuals need to be aware of the services. For this purpose, mass advertising should be planned with the traditional media: TV, radio, newspapers and consumer magazines. Also, companies should make sure that enough drop-off boxes and office centers be provided. This can actually become a marketing tool to gain market share: developing more drop off boxes than the competitors will raise consumers' awareness and subsequent choice: the battle for market share is in the street!

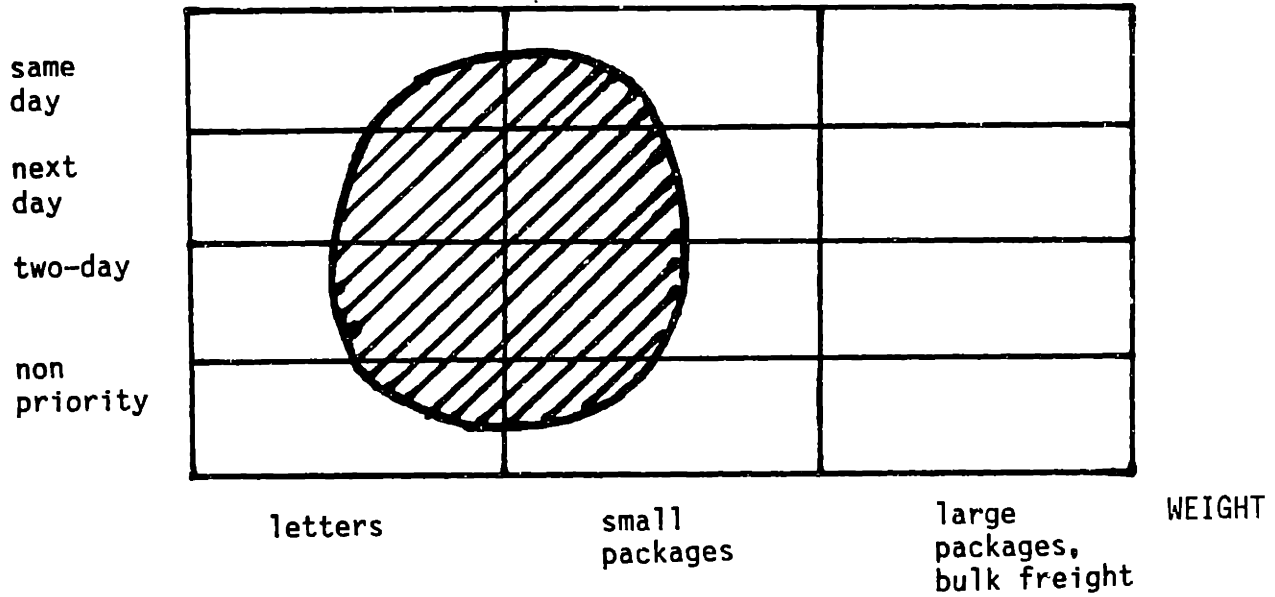
A fourth consideration is that residences should expect a certain level of product standardization. In effect, individuals are not specialist of the shipping process and consequently they expect the carrier to provide the relevant services ready to use immediately. These can be pouches with a simple standard fixed price and a standard design, or for the packages a single rate chart. Figure 4.5 shows the demand coverage of residential users. After this review of the individual market, I shall turn to the mail order business.

The direct distribution business bears some similarities to the home market. It has a bright future according to many industry commentators. Central to its development is the fact that many retailers realize the costs of maintaining warehouses and retail stores and balance them with the significant economies associated with direct distribution. The major

aspect of serving the direct retailing business is that it is a business of delivery to residences. It consequently bears the same problems as those encountered by the carriers who decide to pick up shipments for residences: destinations may be in remote areas and the consignee is often absent from home when the delivery truck arrives. Note that this absence is even more likely than for a residence pick-up since the consignee quite often does not expect the delivery. There is yet an enormous advantage to serving the mail order business. Namely, the shipments are grouped and there is a regular flow of order every day, ensuring a large and stable market. Certain cyclicalities should be observed with typically a peak for Christmas to Easter (the gifts season) and a slow down during the summer. The latter can be explained as more people are away from their homes and as the customers tend to shop around in the sun rather than stay at home reading mail order catalogs. In terms of marketing, a discount policy should be set given the economies that result from grouped shipments. This is all the more justified as mail order businesses will definitely look around for the most competitive rates. The task, therefore for the carrier is to gain the exclusivity of delivery for one or several mail order enterprises. One minor but colorful example which attracted public attention in 1984 was Emery's successful contract to deliver the famous Cabbage Patch dolls. Such contracts can be settled most effectively through advertising in business reviews.

Figure 4.5 The demand of residences centered on medium priority light-weight shipments.

PRIORITY





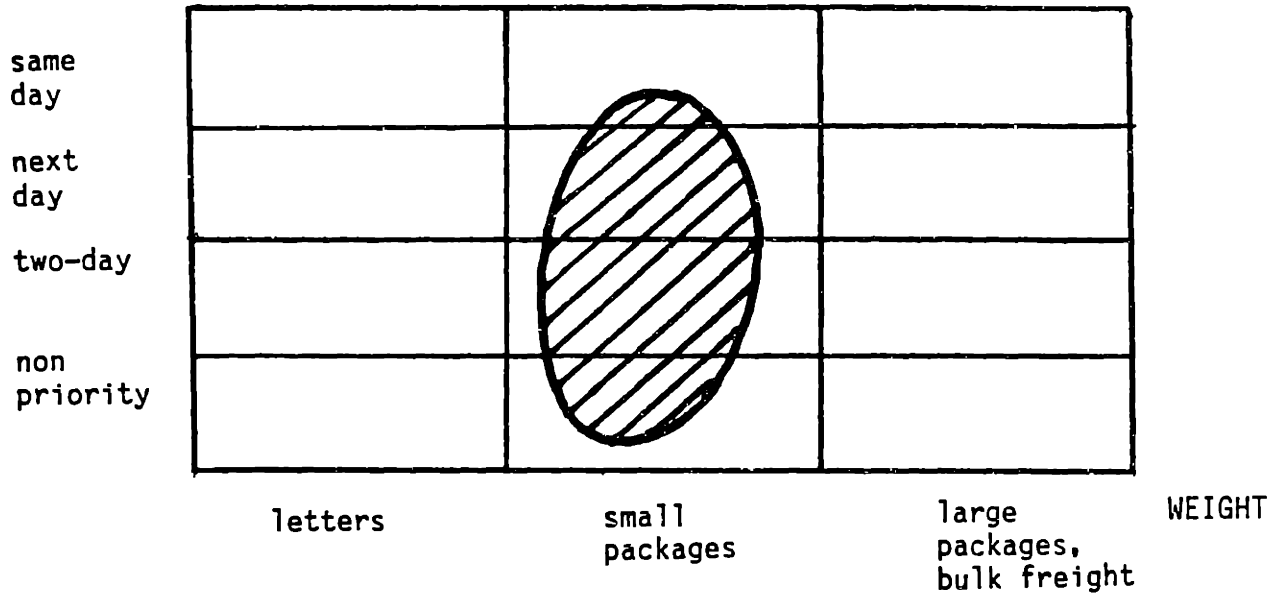
direct calls and individual visits to the mail order and direct distribution companies one by one. One should not expect the service requirements to be too high for this industry: convenience and ease of use are not crucial in a business where the users are themselves specialists of the shipping process. Figure 4.6 shows the demand coverage of the mail order business.

A different set of users I consider are the "paper mill" industries: banks, insurance companies, and other similar services. These industries are great generators of priority documents. They require a very good service as they are not professionals in shipping documents and do not want to be bothered by complicated administrative procedures. Rather, they look for convenience, ease of use, reliability, and a certain level of standardization which helps them save time. In return, they are willing to pay a premium price, which makes their market attractive to the carriers. In order to reach them, printed advertisements should be placed in banking, insurance, and other industry-specific reviews and also business newspapers and magazines such as The Wall Street Journal, the New York Times, Business Week, Fortune, Forbes, Inc., etc.

Most of the requirements of the "paper mill" users are shared by the bulk of the corporate offices. This latter user segment is constituted by executives and secretaries who need the fast and reliable delivery of important docu-

Figure 4.6 The mail order segment centers on medium priority small packages.

PRIORITY



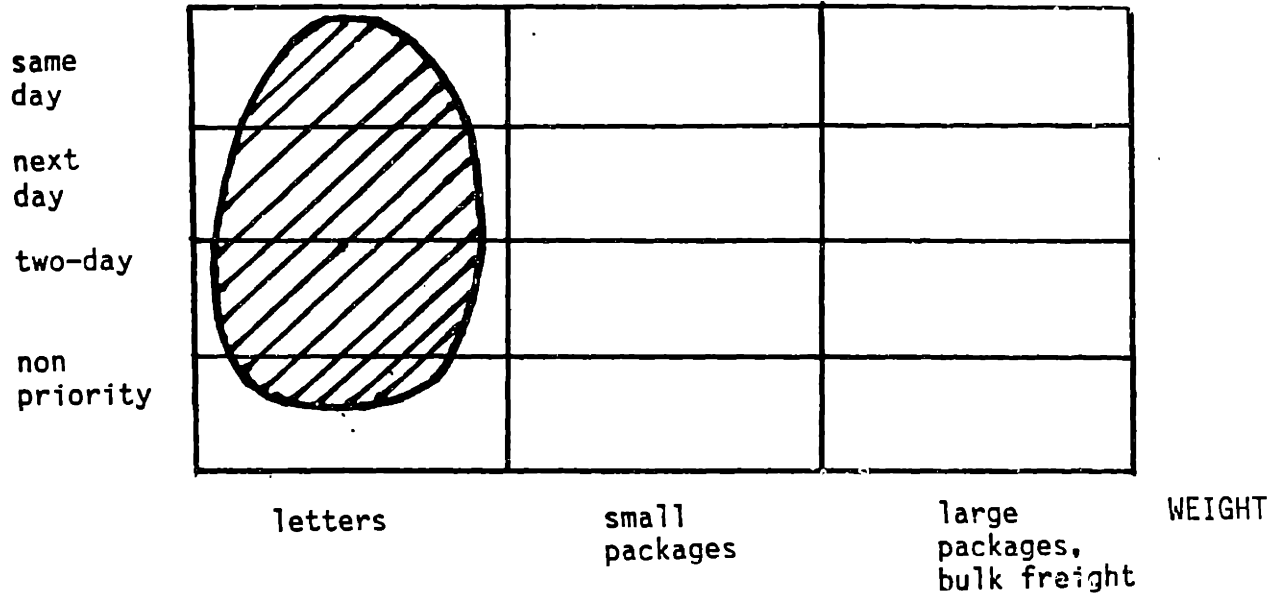
ments. They too are ready to pay a premium for a top-quality service even if some of them are frequent shippers and are familiar with the shipping process. The reason is again that their business is not to ship documents and they rely on the carrier to insure maximum convenience. Figure 4.7 shows the demand of both paper mill industries and general corporate offices.

Quite the opposite, the shipping departments of the same industries represent the professional market. As such they resemble much the mail order market: they are specialists who care less about convenience and ease of use than price and reliability. Typically they will take time to look up the service guides of the different companies to find the most competitive rates. In particular they will look for significant discount rates for their volume shipments. In addition, the shipping departments of manufacturers producing high value items such as in the high-tech industry will seek higher reliability and will be ready to pay a premium for it. Those therefore represent a very attractive market that Federal Express has traditionally included in its focus strategy. In general, advertising for this segment will be limited to specialized trade reviews specific to the industries targeted. Also direct calls and information letters will be appropriate.

The major advantage of serving the shipping departments is that they represent a large market fairly easy to serve

Figure 4.7 The demand of the paper mill industries and of the corporate offices centers on the letters segment.

## PRIORITY



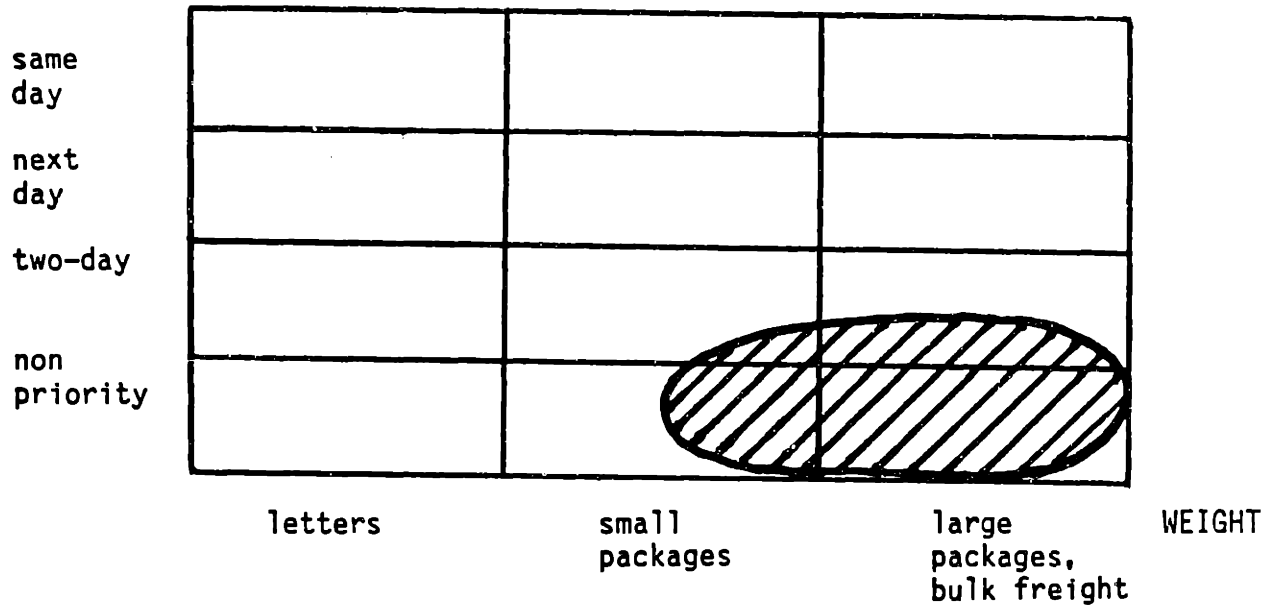
as they are generally located in the same industrial areas. They therefore guarantee large volume of shipments with less distance to cover. Emery has traditionally sought the market of big industrial shippers. Among its largest customers are General Electric and General Motors, each with monthly accounts worth two million dollars, after the New York Times, November 13, 1984. A danger with the shipping departments is that their activity is fairly linked to the overall state of the economy and thus their market is very sensitive to recession. Figure 4.8 depicts the demand coverage of the shipping departments.

Usage Focus:

A second type of user focus strategy concentrates on the usage rate of the shippers. In Chapter 2 the usage rate was retained as a criterion to distinguish two broad classes, occasional shippers and frequent, volume shippers. Because occasional shippers are not specialists, they should be served with a high quality of service, typically convenience and ease of use. In return for such a service, the shipper will be willing to pay a significant premium. This is what makes the market attractive. However, this premium is balanced by the cost of added transportation time necessary to serve a large number of points which generate little volume individually. Quite at the opposite, volume shippers generate a lot of shipments and by serving only a small number of those, a truck can be filled in a short period

Figure 4.8 Shipping departments demand centers on low priority, heavy weight freight.

## PRIORITY



of time. The market is thus attractive but for the fact that those volume shippers pay large bills and thus will look for the most competitive rates. As a consequence, the carrier will have to propose discount plans rather than a premium. In addition it is not obvious here that service will make the difference. Many of those big shippers will accept a lower quality of service provided the bill is smaller.

#### 4.4 Service Quality and Price Differentiation

The last type of strategy consists in differentiating the company in terms of service and price industrywide vis-a-vis the competition. The question that arises is how tenable is such a differentiation or, in other words, what if another carrier adopts a similar strategy and attack on price or service? This is the kind of question that Hauser and Shugan (1983) and Hauser (1984) addressed in their study of defensive marketing strategies. In this method, I do not want to review the totality of Hauser work, but rather I will present simply the concept of perceptual positioning which is at the basis of his investigation and is a very useful tool to understand competitive strategy.

The idea of perceptual positioning is to plot the companies on a map whose two dimensions are, in this industry, quality of service on the vertical axis and price as globally perceived by the user on the horizontal axis. Since price has a negative

connotation (the higher the price, the less preferred the product), we will use one over price instead of price.

The usual assumption is that users all have the same perception of the service qualities of the diverse companies. Yet if they share the same perceptions, users have different tasks which translate as different preferences for service quality and prices.

The map provides an easy way to model the choice of the user. If one approximates preference trade-offs as linear, one can represent each consumer's taste by the angle  $\alpha$  its indifference curve makes with the the vertical axis. If  $\alpha$  is 90°, the user cares only about service quality and not about price. If  $\alpha$  is 45°, the user trades off service quality for price and if  $\alpha$  equals 0°, the user cares only about price regardless of service quality. Figure 4.9 illustrates this point. This representation allows us to estimate the market shares of the companies. Assume there are three companies, A, B, and C, positioned as shown in Figure 4.10.

If:  $\alpha_1$  is the angle of [BC] with the vertical axis  
 $\alpha_2$  is the angle of [AB] with the vertical axis  
 and  $\alpha$  is the taste angle of a generic user,  
 then,

if  $\alpha \in ]\alpha_2, 90^\circ]$ , the user will prefer A

if  $\alpha \in ]\alpha_2, \alpha_1[$ , the user will prefer B

if  $\alpha \in [0, \alpha_2[$ , the user will prefer C



If we now know the number of users having the same  $\alpha$  i.e. the market size  $M(\alpha)$  for each  $\alpha$ , we can derive the market share of each company:

$$A: \int_{\alpha = \alpha_2}^{900} M(\alpha) d\alpha$$

$$B: \int_{\alpha = \alpha_1}^{\alpha_2} M(\alpha) d\alpha$$

$$C: \int_{\alpha = 00}^{\alpha_1} M(\alpha) d\alpha$$

the total market being  $\int_{\alpha = 00}^{900} M(\alpha) d\alpha$ .

Figure 4.11 visualizes the result.

Perceptual mapping allows therefore to visualize the companies' position in terms of price and service quality and to estimate their market share.

Figure 4.9: Users trade offs are represented by their preference angle.

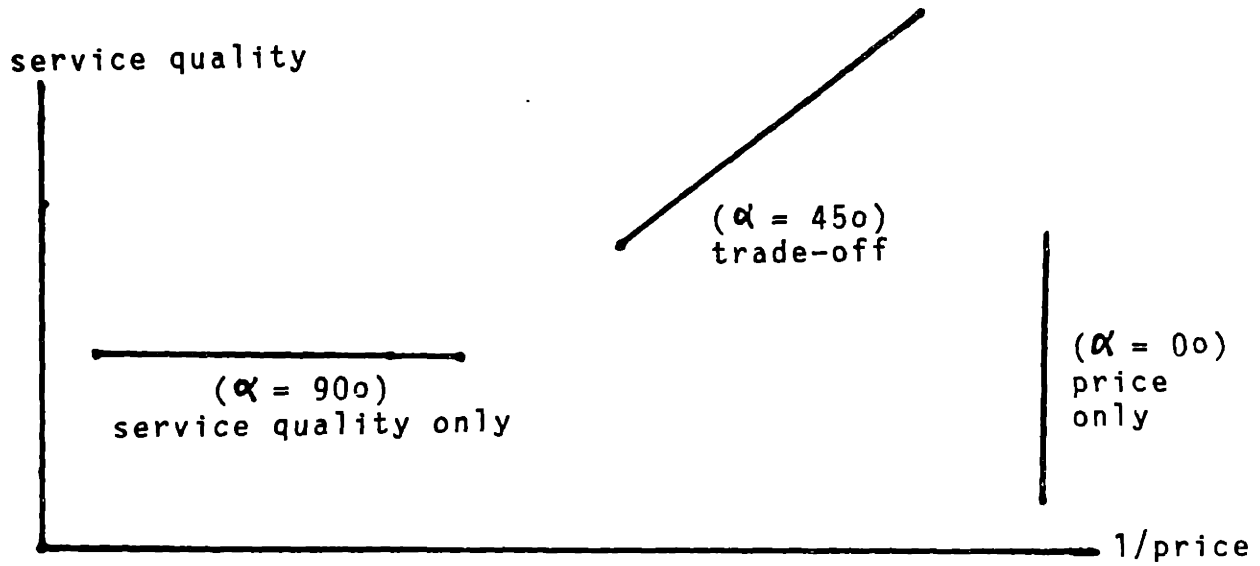


Figure 4.10: Positioning of three companies, A, B, and C.

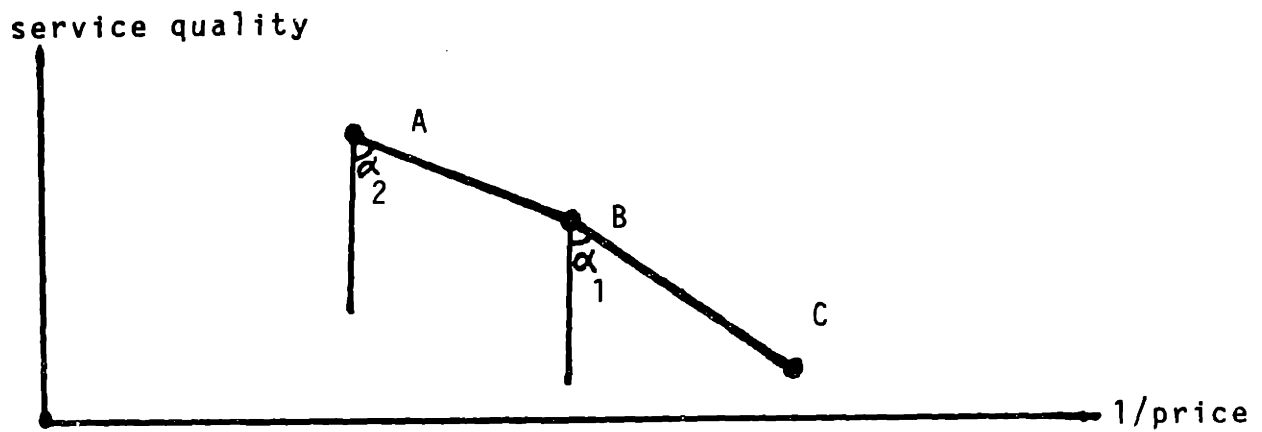
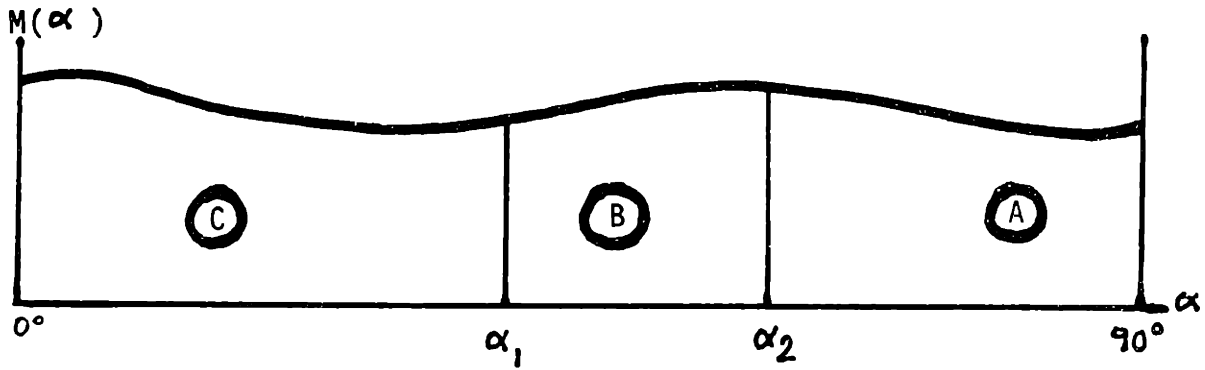


Figure 4.11: The market shares are function of the positioning of the companies.

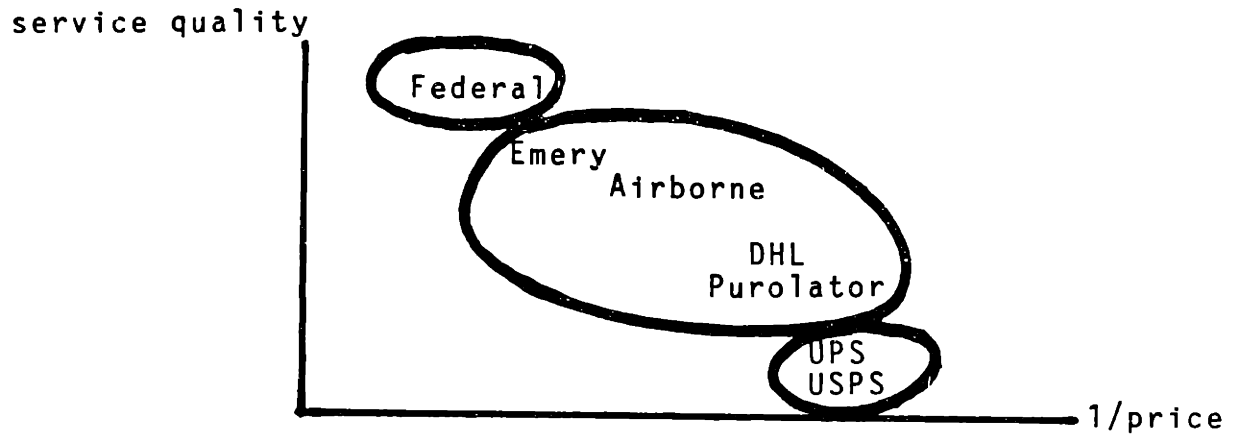


We can see that companies like company A which have differentiated their service quality enjoy a significant market share as well as those companies like company C which propose a low price. We also see that middle-of-the-road companies like company B can enjoy a market share between those of the other two. However, if company A moves aggressively along the service quality dimension and/or company C reduces its price further, company B's market share will be diminished and can almost disappear. This advocates for Porter's extreme strategies of service or price differentiation although they should be seen rather for the long term. Before they can be implemented, much competitive moves should be seen on the perceptual map as analyzed by Hauser. For further details on this subject I refer the reader to Appendix B.

With a perception of the quality of service and average rate of each company as described in Chapter 3, we can attempt to position the companies on a map as Figure 4.12 shows. Typically Federal Express and the USPS follow respectively service and price differentiations. In the long run they may be able to get all of the market if they can respectively increase their differentiation and price leadership. Yet, in the meantime, their advance is not big enough to prevent the operation of middle-of-the-road companies such as Emery, Airborne, etc.

Overall, focus strategies, service differentiation, and price leadership seem to be implementable and relevant in this industry. It seems however that the latter strategies be more relevant at longer term. This remark leads us to question the validity of looking at the market in a static cross section way which ignores the dynamics of the market over time.

Figure 4.12: The competitive positions of the carriers can be represented on a perceptual map.



## 5. MARKETING STRATEGIES: DYNAMICS

So far, we have described cross section strategies which did not account for the stages of development of the market. Rather we supposed that all the products were known, that all the different users were identified and that the marketing variables were mastered. This might be true in a fairly mature industry but is rarely the case at the onset of a new industry. In fact, as an innovative industry develops it passes through different stages which, according to theories of industry lifecycles, call each for specific marketing actions. These are reviewed here.

### 5.1 Industry Lifecycle

The concept of industry lifecycle is fairly simple. Based on a gross biological analogy, four basic stages can be identified in the development of an industry, introduction or birth, growth, maturity and decline. The different phases are most observable when the industry revenues are plotted over time. The general pattern one can expect to observe is a S-shaped curve as shown in Figure 5.1. The introduction phase is identified as the lower portion of the curve, the growth phase as the ascending portion, the mature phase as the maximum area, and the decline phase as the plunging part.

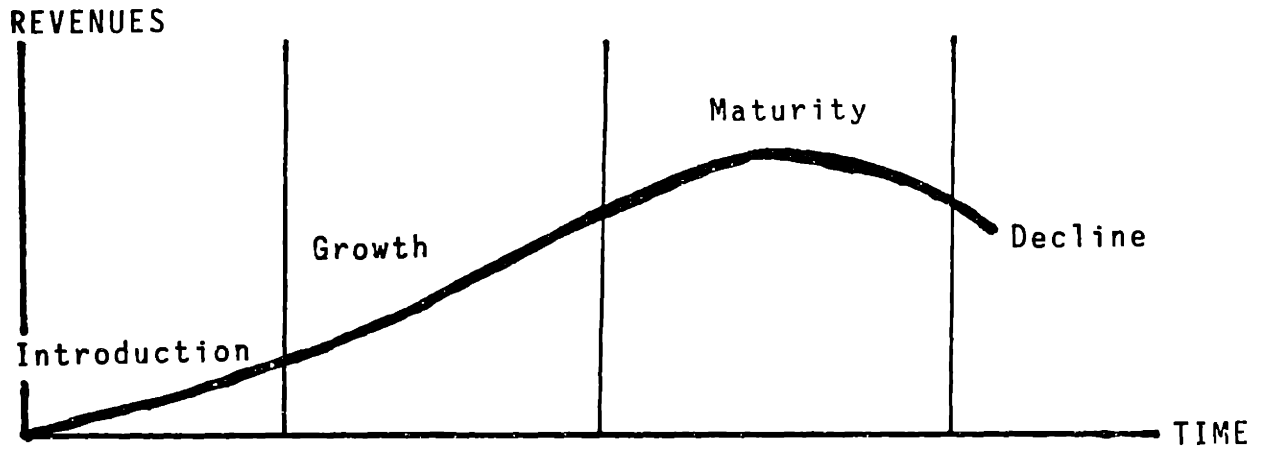
The phenomenon underlying the industry lifecycle is nothing but the development of the users market. In the introduction phase of the industry, few users are aware of

the services provided and revenues are therefore sluggish. As time goes on, more potential customers come to know the services either by appropriate advertising or by word-of-mouth. Revenues then start increasing and the industry enters its growth stage. Once the potential market has been developed, the industry enters its maturity period. Later, if the services provided by the industry fall out of fashion, revenues will decrease and the industry will lapse into its decline phase. This development of the customer market calls for specific marketing actions during each stage of the life-cycle: service quality, price, standardization, advertising and distribution will have to adapt over time.

Day (1981) makes clear the controversy as to whether the lifecycle applies to the industry as a whole or to specific products within the industry. An industry can in effect provide various products in different stages of development. In the automobile industry, for example, there are the traditional four-door sedans whose market is mature, the compact and subcompact cars still in their growth stage and the just introduced revolutionary cars which can be arranged for meetings and other uses. The concept of the individual product lifecycle has been investigated by many researchers among them Levitt (1965), Wasson (1974), and Kotler (1984). The conclusions are always the same, either for a whole industry or a particular product. My approach is therefore to consider all the different products in the industry as variants of a basic



Figure 5.1: Four phases can be identified in the life of an industry: Introduction, Growth, Maturity, and Decline.



product which has its overall lifecycle.

In the case of the document/package delivery services, the industry is still overall in its growth stage but counts a new segment with electronic mail, a growing segment with priority small packages, and a mature segment with nonpriority bulk.

## 5.2 Introduction

As the industry emerges, few potential customers are aware of its services. Therefore a high level of advertising is required to create awareness of the service usefulness. At the same time, a careful distribution must be planned to make the services available to the most likely users. At that stage of the industry, there is very little segmentation: the products are fairly basic and have no refinements. Also the price may not be well defined as the value of the service to the customers is not yet known.

This is not a problem for the few innovators since competition is generally not developed: the first task is to develop the market. Generally, the price will reflect closely the cost of the service and the margins will be low. In the introduction phase, one can also note that the level of standardization is naturally very low as the exact demand of the users is not yet identified.

### 5.3 Growth

In the growth stage of the industry, more buyers come to try the product and the total customer base is getting more aware of the product value. In other words, customers come to appreciate the quality of the service and to evaluate its price. This allows them already to make choices among different competitors. In turn, as more customers want the product, new competitors enter the market that has proved to be fruitful. It has for instance always been the strategy of IBM to enter second once the market had actually proved enough promises. In the small package priority delivery industry we find the exact replica: Emery first criticized Federal Express' innovative service, waited for two years before it observed that Federal was making profits and finally decided to enter the market. Having to face the growing competition, a company has therefore to set its price and service quality competitively. In the growing industry the battle for market share opens as competition heightens. The companies should standardize their services and try to also impose their standards to the whole industry so to gain an edge vis-à-vis the competition. This was successfully done by Federal Express with its envelopes, packs, tubes and rate structures.

At the same time, the market becomes more segmented: new products are created and existing products are refined

to form a whole product line. Also new users appear and the user market becomes more segmented.

Distribution needs to be intensified so to reach more customers and be present in any potential user market. For instance, Federal Express has established an "800" telephone number to reach the totality of the country and is developing drop-off and business office centers. Advertising must progressively shift the emphasis from mere awareness to comparative judgment. In effect, on the one hand, as more potential users become aware of the service, there is less need for awareness advertising and on the other hand, as the fight for the existing users intensifies, advertising needs to be comparative. It becomes crucial to stress the quality of service or the price vis-à-vis the competition. In the package delivery services, Purolator has attacked Federal Express with such messages as "Inflexible Express" or "overnight, not overpriced". Airborne and Emery also took aim at Federal Express. Federal's Marketing head, Tom Oliver explained the phenomenon as such: "How do you gain awareness in a game that has so many different competitors? Going after the big guy is one way" (Advertising Age, August 29, 1983).

#### 5.4 Maturity

The competitive trend continues to build as the industry matures. The different companies vie for the defense and

expansion of their market share. The market is highly segmented and the products standardized to answer the particular needs of the users. Service quality and price in the mature industry become crucial as regards the competition and the customers' taste distribution. Advertising is mostly comparative and will stress the brand rather than the product. Distribution intensifies even more than in the growth phase. One can observe this in the maturing segment of small package priority delivery. The carriers try to develop more drop-off and business centers in the large cities. Table 5.1 summarizes the strategies associated with the industry lifecycle.

Table 5.1 Stage of the industry lifecycle and specific marketing strategies. (Adapted from Levitt (1965), Wasson (1974) and Kotler (1984)).

	Introduction	Growth	Maturity
<u>BUYERS</u>	need to be aware	increasing customer base	choose among competing brands
<u>COMPETITION</u>	low, not organized	new entrants	high
<u>PRODUCTS</u>	few, basic	improved new products concept of product line	segmentation full coverage or market
<u>STRATEGIES</u>			
Service quality	low	improved	competitive
Price	vague (Cost-plus) promotion	competitive	competitive
Standardization	more	increasing	high
Advertising	awareness	competitive awareness	comparative brand focused
Distribution	selective	intensive	more intensive (competitive)

### Part III: APPLICATION

This last part integrates the theories developed in Part II in a single proactive strategy which, if correctly implemented, should increase the chances of success for an innovative company.

#### 6. STRATEGY FOR AN INNOVATOR

The strategy of innovation will be analyzed first in detail before being applied to the package/document delivery industry. A generalization to other innovative industries is proposed and the conditions of implementation are further stressed.

##### 6.1 Proposed Strategy

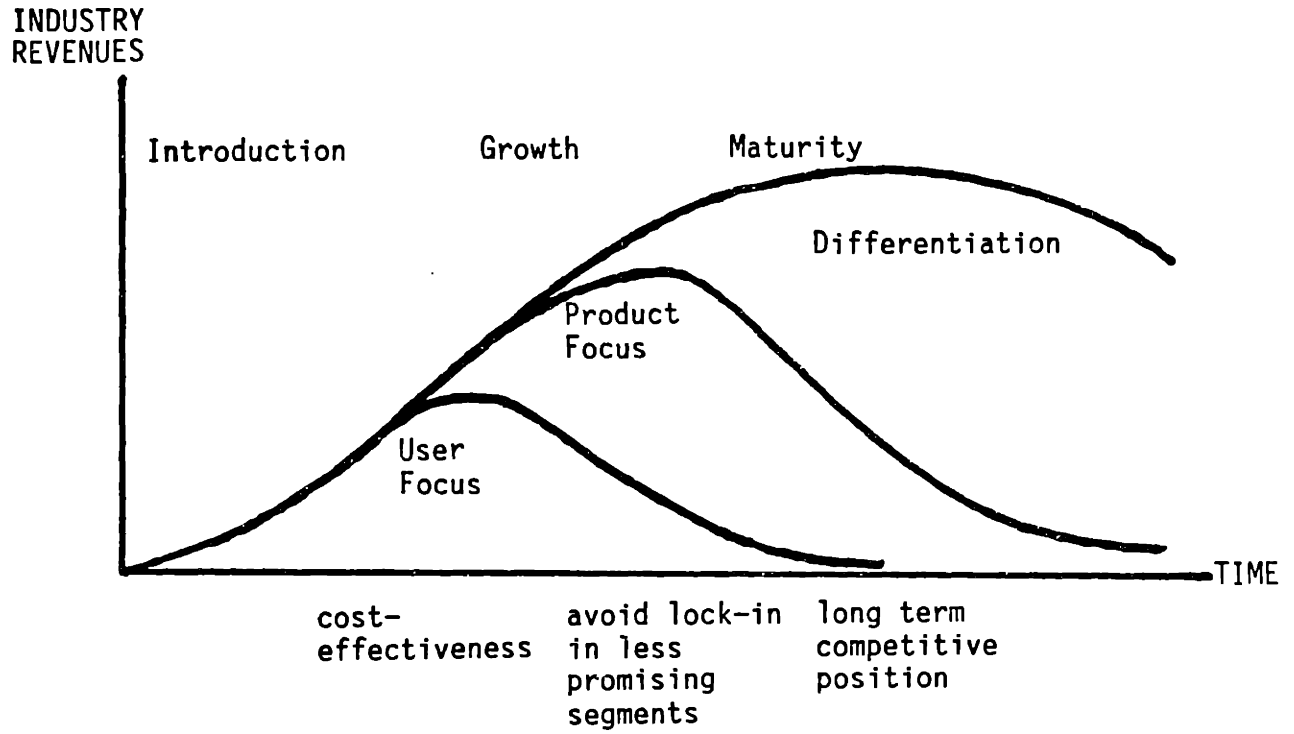
Before the proposed strategy be exposed, it is important to identify the criteria for evaluating the strategy. Typically, the challenge for success faced by an innovator is threefold: be cost-effective during the entire development of the industry, avoid to be locked in declining segments, and establish a strong competitive position as the industry matures. To answer this challenge, a strategy therefore needs to account for the specific requirements of the market and for the stage of development of the overall industry. This seems to make a reasonable case for an integration of the two classes of strategies reviewed in Part II.

The proposal is to adopt successively a user focus strategy, a product focus strategy and finally a differentiation strategy as illustrated in Figure 6.1. At the onset of the industry, a user focus strategy seems recommended. By targeting specific user segments with a few basic products, the company can reach cost-effectiveness most rapidly: the market to be covered is reasonably limited which in turn reduces the operating and advertising costs. In addition, awareness can be created more rapidly when focusing on specific user segments. Some product focus can be developed but it should be limited to the personalization of the products for the diverse basic user segments.

A product focus strategy at the early age of the industry would not be appropriate. It would require the coverage of broad markets for each product, going into all directions of user segments. This would result in exaggerated costs of operations and distribution which would take a longer time to recover. Rather, the company needs to be cost-effective soon. A differentiation strategy would be too early as the potential customers are just discovering the services offered by the industry and the competition is minimal. Thus, a user focus strategy seems to be the most reasonable in the introduction phase of the industry. It provides not only short term cost-effectiveness but also a clear target customer base upon which to develop long term profitability. Starting with a user focus strategy therefore satisfies the first



Figure 6.1: Recommended strategy for an innovator through the stage of development of the industry.



criterion: business profitability.

As the industry grows, new priorities appear gradually. In particular, the product market tends to segment and the innovator must think of a product line. Sticking to the user focus strategy would be dangerous as it would lock the company into developing specific products for the users focused. These products might later be endangered by substitute products within the industry and the company would find itself in declining segments with mobility barriers to expansion in other product segments. Thus, keeping the user focus strategy would result in what Levitt (1975) once addressed as "marketing mania" i.e. satisfying the existing users with tailor-made products at all costs without thinking of different product segments. The same point was made by Hayes and Abernathy in criticizing American business's exaggerated reliance on a customer-oriented strategy in contrast to a product-oriented strategy:

Satisfied customers are critically important, of course, but not if the strategy for creating them is responsible as well for unnecessary products proliferation, inflated costs, unfocused diversification, and a lagging commitment to new technology and new capital equipment. (Hayes and Abernathy, 1980)

In brief, a user focus strategy can prove blinding if kept too long and too strong during the growth stage. Rather a transition should be made progressively to a product focus strategy. This strategy would select the promising products and use the existing customer base targeted in the first

phase, as the first candidates for these new products. This allows the company to diversify away from the less promising product segments, while providing an existing base for the new products. The second aspect of the product focus strategy would be the refinement of the existing products as competition strengthens, and the consumers become more demanding. As a matter of fact a quality differentiation strategy for the existing products will become more relevant as the industry approaches maturity. But price differentiation at the expense of quality can also be possible. Therefore the push towards quality need not be strong. Rather, emphasis should be put on the clear segmentation of the market and the adoption of a focused product line backed with a growing standardization.

In summary, the relevant strategy in the growth stage should be the product focus strategy. It answers the second criterion which requires that the company not lock itself in some definite product segments which might mature earlier.

As the industry matures, the market becomes fully developed in terms of both users and products. With the preceding strategy, a company has a selected number of products which cover classes of users including the ones targeted in the introduction phase. But the competition has grown and even though the company is profitable and occupies the growing segments, it faces increasing pressure to beat its competitors on the ground of service quality and price. It therefore

appears that a new transition is required, this time from the product focus strategy to a differentiation strategy.

In the mature phase, a product focus no longer pays as all potential products in the market have been developed and as companies start expanding in each other's niche. It becomes difficult to carve out niches protected by the competition. The only way to beat the competition is actually to differentiate the product either in terms of service quality or in terms of price. The issue for the company is to avoid being stuck in the middle of the road where it has much chance of being attacked both in terms of service and price. William Hall, in his study of eight mature industries moving into a hostile environment points out that: "uniformly, the successes come to these companies that achieve either the lowest cost or most differentiated position." (Hall, 1980) In many industries such as the one of package/document delivery services, low cost is synonymous with low price and service. It is therefore a category of differentiation. Hall also mentions that companies that had kept specific niches could "survive" if they diversified, but this was not the way to success as much as differentiation was. The differentiation strategy answers the criterion for success of a long term competitive position.

Keeping a product focus or user focus strategy in the mature industry is much riskier as specific niches can be attacked by stronger competitors. Conversely, differentiation

by price of services can be used as a tool to invade product and user segments which had not been focused on earlier. It seems therefore that a differentiation strategy is the most relevant as the industry matures.

To summarize, the strategy formulated passes the test of the three criteria for success. Each strategy lays down a sound base for the implementation of the following one while cumulating their benefits.

## 6.2 Validity

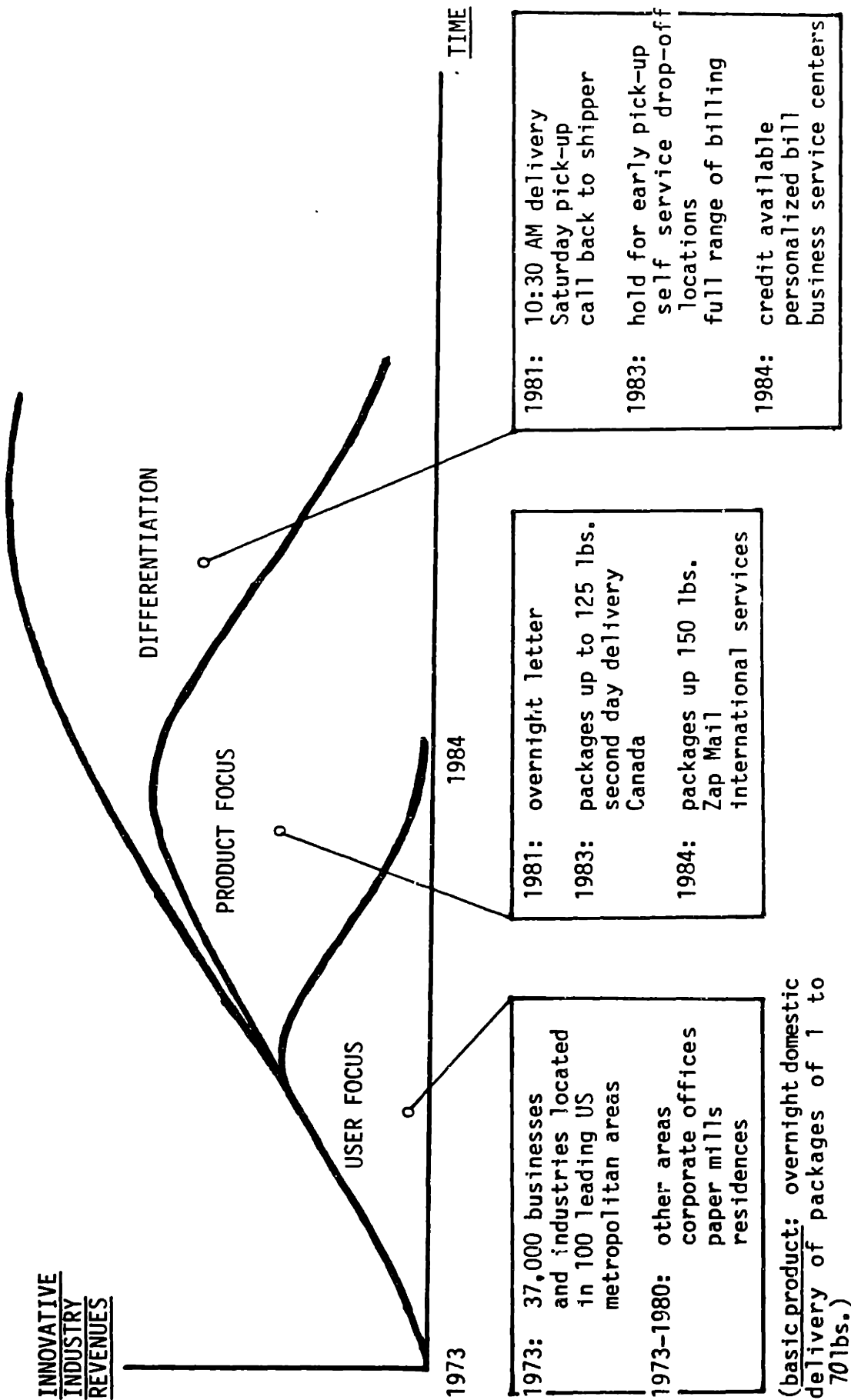
To test the validity of the strategy I will look at the success of Federal Express, the difficulties of Emery and the recent strategies of UPS and Purolator.

Consider first Federal Express. It is unquestionably the story of a successful innovator according to the three criteria: it is a cost-effective company which has diversified in the most advanced product segments such as electronic mail and is the leader in the growth segment of document/package delivery industry. Federal's strategy over time seems to fit very well with the proposed strategy. First in 1973, Federal started with a single product, the overnight delivery of packages and focused specific classes of users: 37,000 business and industries located in 100 leading U.S. metropolitan markets representing 84% of all domestic air shipments. Then it got a contract with the Post Office to carry mail overnight, expanded to other geographic

areas and progressively added some new target groups: corporate offices, paper mills and residences all through the 70s. Then as the industry moved in to its growth phase, Federal shifted the emphasis on the products: it improved existing products, i.e. overnight delivery of packages and introduced new products such as overnight letter, big packages, international service and electronic mail. At the same time, anticipating a maturation of the industry, Federal dramatically increased the quality of its services thereby achieving a highly differentiated position. Figure 6.2 summarizes the steps of Federal's strategies.

As Federal Express' example supports the proposed strategy, Emery shows a case where the strategy was not followed and the carrier failed to be successful. In 1973, when Federal Express introduced the innovative service of door-to-door overnight delivery of packages, Emery was the leader of the freight forwarding business. Emery reacted with scorn at Federal's venture and totally ignored that there was potential classes of users for the type of service provided by Federal. This was a first error: Emery did not see the opportunity, and stayed in existing mature business. Meanwhile, Federal's revenues were building up and in 1976, Federal posted its first profit, \$3.5 million, at that stage. Emery admitted the fait accompli and decided to react to the innovative segments. It did so without an understanding of the product

Figure 6.2 The steps of Federal's marketing strategies follow the pattern of the proposed strategy.



or the market needs. Emery's strategy was to make every user of Federal Express service aware that Emery had been the leader in the air freight forwarding business for ages and that there was no reason to choose Federal. Clearly Emery had not understood the product and a fortiori the users. Emery advertized heavily in attacking Federal services on their ground which proved worthless as expected: Emery revenues did not increase while Federal was growing at rates of 50% per year.

Finally Emery decided to launch a service very similar to Federal's but they focused on the product itself, and not on the users. Their advertisements focused on Emery's name, its newly acquired fleet of trucks, and its higher service quality. This wrong focus translated in disappointing results in business where Federal was still growing at 20% yearly. Emery had the right product but the wrong marketing strategy. Emery did not know in which business it was in. The problem remained until the early 80s when Emery's chairman, John C. Emery, conceded the importance of understanding the market and gave the priority to marketing. Reportedly he said

[We are looking] for a strong marketing-oriented guy to head up the domestic business. We are turning this into a selling organization. [John C. Emery, after Business Week, 1983]

At the same time, Emery launched new products such as Urgent Letter and international services. By a clear understanding and targeting of the user segments for those products they quickly enjoyed revenues on these services, but they had



missed the big start ten years before, letting Federal carve its leadership position.

Emery's example shows two things: first, a clear understanding of the different user segments is necessary at the beginning, therefore advocating for a user focus action; second, that the proposed strategy is applicable for any new or growing product segment of the innovative industry, such as overnight delivery of documents and international service. This latter point is confirmed by the recent strategies of UPS and Purolator.

In 1982, UPS decided to enter the still growing market of overnight delivery of small packages below 50 lbs. Its first marketing action was to target the former regular users of UPS's non priority service for 24 domestic cities among the big metropolitan areas. Such a precise action was the outcome of an extensive market survey undertaken before the product was launched. It was a perfect example of user focus strategy. Then, as revenues for the product increased, UPS started shifting its emphasis to the product with the introduction of a similar service for packages up to 70 lbs.

A similar strategy is currently followed by Purolator for its previously unfocused services and its new products:

During 1984, the "Year of Transition," a great deal of emphasis was placed on marketing support for our decision to direct most of our resources toward expanding our participation in the small package delivery business. Extensive consumer research was undertaken to identify specific market segments and a program of direct mail marketing was developed for implementation in 1985. We identified

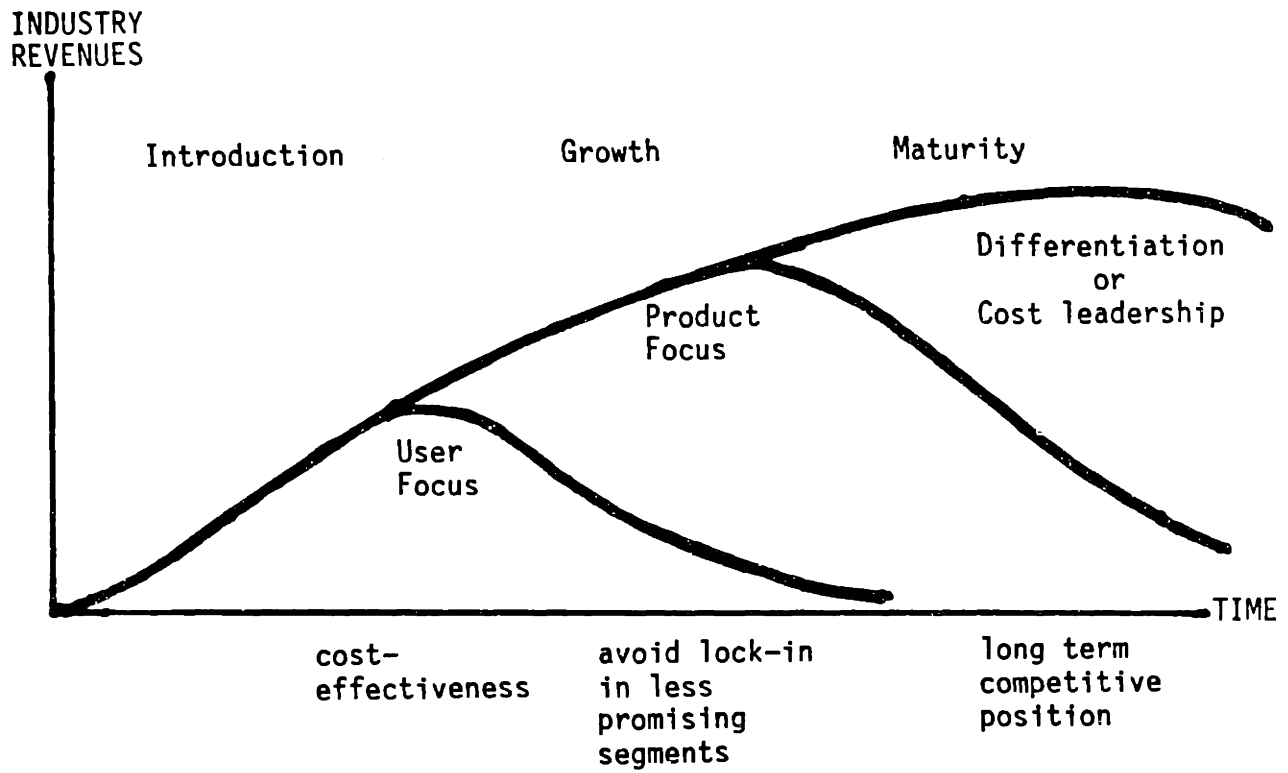
profitable market conditions and we are improving our basic service and product lines to take advantage of the opportunities. [Purolator Courier, Annual Report, 1984]

All these examples are satisfactory for the proposed strategy which could be generalized to other innovative industries.

### 6.3 Generalization

The proposed strategy should be generalizable to other innovative industries or innovative segments of existing industries. In effect, it is self consistent and does not rely on assumptions unique to the particular industry we studied, except for the last part of the strategy, differentiation. It was peculiar to the package/delivery industry that differentiation strategies encompassed cost leadership. In effect service quality was directly linked to cost and price. This may not be so in other industries. Generally, quality differentiation may not be congruent with cost leadership. This leads to a reformulation of the strategy for a company moving in an innovative industry as follows: first target the users for a defined new product; then as the innovative industry grows, focus on products; and as the industry matures, differentiate the products or be a cost leader. The generalized strategy is illustrated in Figure 6.3.

Figure 6.3: Generalized Strategy



#### 6.4 Implementation

The proposed strategy can be worthless if it fails to be correctly implemented. This section reviews the conditions necessary to the successful use of the strategy. The first condition is to know what is the product the company is selling. This might look obvious, but it is actually the most difficult question faced by an innovator. In effect, there are hundreds of ways to define the product or the service depending on the level of aggregation. For instance, one could say Federal Express was in the business of shipping small packages overnight, door-to-door with planes and trucks. But a broader definition of the business as the convenient delivery of anything from goods to information. The difficulty in defining the product is to avoid marketing myopia. Levitt has described the problem: "[many] industries have been and are now endangering their futures by improperly defining their purposes" (Levitt, 1975). A good understanding of the purpose of the industry i.e. of the product around which it is organized, can be obtained by looking at the future and guessing at the latent customer needs. One method which is increasingly used is the focus group method whereby a group of individuals sit together and brainstorm about the product concept under the guidance of an experienced mediator. According to Sigafos (1984) such a method has been used by Federal Express in its early stages of development.

A second necessary condition for a successful implementation is for the company to know where it is going. Once the product has been defined, there must be a strong determination to grow by targeting the relevant market segments and to continue to innovate. The latter point might also seem obvious but the temptation is great in an expanding segment to stick to the few existing products and enjoy the revenues generated by their developing market. However, this dooms the company to be stuck in a soon-to-mature segment where it might be endangered by more powerful outside competitors or by substitutes. Staying in the maturing segment of the industry would be the clear expression of marketing myopia. Innovation, rather, is part of the original understanding of the industry and should be demonstrated in the product focus phase. The question is then as to where the vision of the market and the determination to innovate come from. The answer is that it must come from a visionary and determined leader is who necessary for the innovative company to grow and innovate actively. The vision may be wrong and this is its risk, but there is certainly no success without a vision at the start. Yet vision is not enough: the leader must also have a strong will to implement the vision and actively direct the company into new segments. Levitt mentions:

No organization can achieve greatness without a vigorous leader who is driven onward by his own personal will to succeed. He has to have a vision of grandeur, a vision that can produce eager followers in vast numbers. In business, the followers are the customers. [Levitt, 1975]

Frederick Smith the creator of Federal Express, had that kind of vision of grandeur. He declared retrospectively,

Steamboats and trains were the logistics arm of the Industrial Revolution's first stage, trucks became a good logistics arm later, and still are because of their flexibility. But moving the parts and pieces to support the Electronic Age requires very fast transportation over long distances. I became convinced that a different type of system was to be a major part of the national economy. [from Nation's Business]

Had Smith envisioned he would go into transmission of information? Perhaps not at that time, but one cannot help admire his extraordinary growing vision of the market.

A visionary and strong leader makes the whole organization believe in what it does and move actively in the market.

This is a necessary condition to the correct implementation of the strategy, which can be compared to Peters and Waterman's (1982) principle number one for excellent management: bias for action.

I believe these conditions, vision of the market, strong leadership and bias for action are the two fundamental components for a successful implementation of the proposed strategy.

## APPENDIX A: Companies market share

Market shares, by type of product, in percent, based on revenues in 1982, of the integrated carriers in the United States (Source: de Neufville and Jacques)

Company	Type of market			
	next morning		next day	next or second day
	less than 350 miles	over 350 miles		
Purolator	56	7	-	-
Federal Express	26	58	21	-
UPS	-	-	21	31
USPS	10	8	59	69
Airborne	3	11	-	-
Emery	3	10	-	-
Misc.	1	6	-	-

Domestic Overnight delivery of document and package 1984 Revenues and Market Shares for the integrated carriers (Source: Business Week, December 17, 1984.)

Company	Revenues (\$ million)	Share (percent)
Federal Express	1,720	43
UPS	675	17
Purolator	590	15
USPS	500	13
Airborne	305	8
Emery	175	4
Total	3,965	100



## APPENDIX B: Hauser's defensive strategies

Perceptual mapping is useful to represent "attacks" and "defensives" between companies in terms of power and service. A company can attack an existing company either by increasing service or reducing price. Three of Hauser's findings are of practical interest and are reproduced here, adapted for our situation.

- 1) If the taste distribution is uniform and the competitor attacks on service, then at the margin:
  - a) profits are increasing for improvements "away from the attack" i.e. by lowering price.
  - b) under certain conditions, profits are increasing for improvements "toward the attack" i.e. by improving service quality.
- 2) If the market size  $\int_{\alpha=0^{\circ}}^{90^{\circ}} M(\alpha) d\alpha$  does not increase dramatically as the result of the new competition, the best advertising strategy includes decreasing the budget for awareness advertising.
- 3) If consumer tastes are uniformly distributed and the competitor attacks on service, then, at the margin,
  - a) profits are increasing in repositioning advertising spending along the defender's strengths, i.e. price.

- b) under certain conditions, profits are increasing in repositioning advertising spending along the attacker's strength, i.e. service quality.

BIBLIOGRAPHYCHAPTER 1 and PART IINDUSTRY GENERAL

Bell, D. (1976), The Coming of Post-Industrial Society, Basic Books, New York, NY, USA.

\_\_\_\_\_ (1979), "Federal Hustles to Keep Ahead of Emery in the Fast-Growing Air-Express Market", The Wall Street Journal, September 11, 1979

Friedman, M. (1962), Capitalism and Freedom, The University of Chicago Press, Chicago, IL, USA and London, UK.

Haugh, L. (1975), "\$10 Million Ad Blitz Heats Up Air Delivery Warfare", Advertising Age, September 29, 1975.

\_\_\_\_\_, "Industry Roundtable: Air Freight Industry", The Wall Street Transcript, 14 May 1984, pp. 73,8081-73,817.

Mackie, V. (1984) "Air-Courier War Goes Abroad", Advertising Age, March 5, 1984.

de Neufville, R. and Jacques, F. Air Cargo in the 1980s and Beyond, United States, Federal Aviation Administration, Office of Airport Planning and Programming, Washington, DC, USA, 1984.

Norling, A. (1984), "Federal Express Corporation", Kidder Peabody & Co. New York, NY, April 15, 1984.

Pincavage, J. (1984), "Airfreight Report", Paine Webber, New York, NY, USA, November 1984.

\_\_\_\_\_ (1983), "The Air Delivery Free-for-All", The New York Times, March 2, 1983.

\_\_\_\_\_, "Transportation Stocks", The Wall Street Transcript, January 7, 1985, pp. 76,438-76,444.

Sigafoos, R. (1984) Absolutely Positively Overnight! The Story of Federal Express, New American Library, New York, NY, USA.

United States, Senate, Committee on Commerce, Science, and Transportation, (1979) First Session on Regulation of air cargo freight transportation, serial No. 96-37, Washington, DC.

ON DHL:

\_\_\_\_\_ (1983), "An International Courier takes on Federal Express", Business Week, May 9, 1983.

\_\_\_\_\_ (1983), "DHL Aims at Courier Service Expansion", Aviation Week & Space Technology, November 14, 1983, pp. 189-193.

DHL Corporation, Quick Reference Guide, November 1984.

ON BURLINGTON NORTHERN:

\_\_\_\_\_ (1983), "Burlington Northern: A Forwarder's Challenge", Air Cargo World, February 1983.

Burlington Northern Air Freight, Worldwide Rates & Service Guide, July 1, 1983, January 1, 1984.

\_\_\_\_\_ (1985), "How Companies Rank in 25 Industries", Fortune, January 7, 1985, p. 30.

ON AIRBORNE:

Airborne Freight Corporation, Annual Report, 1983.

Airborne Freight Corporation, Express Service Guide, 1983-84.

\_\_\_\_\_ (1979), "All Aboard the Bandwagon!", Forbes, November 26, 1979.

Raissmon, R. (1983, "Airborne Deliveries Challenge", Advertising Age, August 29, 1983.

ON EMERY:

\_\_\_\_\_, Aviation Week and Space Technology, September 3, 1979.

Emery Air Freight, Annual Report, 1983.

Emery Air Freight, 1984 Fact Book.

Emery Air Freight, Service and Rate Guide, June 6, 1983, October 1, 1983, August 1, 1984.

\_\_\_\_\_ (1983), "Emery's Gamble in Overseas Deliveries", Business Week, January 31, 1983, September 25, 1978.

\_\_\_\_\_ (1984), "Emery's Successful Niches", The New York Times, November 13, 1984.

Mahon, G. (1975), "Air Freight Turbulence", Barron's, September 15, 1975.

\_\_\_\_\_. The Wall Street Journal, August 3, 1979, April 9, 1985.

#### ON FEDERAL EXPRESS:

Altman, H. (1981), "A Business Visionary Who Really Delivered", Nation's Business, November 1981.

\_\_\_\_\_ (1982), "A Stampede of Overnight Package Deliverers", Business Week, February 15, 1982.

\_\_\_\_\_ (1979), "Business Triumphs of the Seventies", Fortune, December 31, 1979.

Calvin, G. (1981), "Federal Express Dives into Air Mail", Fortune, June 15, 1981, pp. 106-108.

Dun's Business Month, "Federal Express: The Creative Courier", Bunes Business Month, December 1981, pp. 68-69.

Federal Express Corporation, Annual Report, 1980.

Federal Express Corporation, Annual Report, 1982.

Federal Express Corporation, Annual Report, 1984.

Federal Express Corporation, Service Guide, first quarter 1980, July 1, 1983, October 1, 1984, January 1, 1985.

Federal Express Corporation, Zapmail Service Guide, Memphis, TN, July 1984.

\_\_\_\_\_ (1985), "Federal Express Bites the Bullet on Zapmail", Airport Press, April 1985, p. 11.

\_\_\_\_\_ (1980), "Federal Express Rides the Small-Package Boom", Business Week, March 31, 1980.

\_\_\_\_\_ (1981), "Federal Express vs. the Institutions", Financial World, August, 1982, p. 32-33.

Louis, A. (1984), "The Great Electronic Mail Shootout", Fortune, August 20, 1984, pp. 167-172.

Montgomery, J. (1984), "Federal Express Has \$1. Billion Plan

to Expand its Electronic Mail Service", The Wall Street Journal, July 30, 1985.

Sigafoos, R. (1984), Absolutely Positively Overnight, New American Library, New York, NY, USA.

ON PUROLATOR:

Bolger, B. (1984), "Purolator Aims for Full Service", Airport Press, January 1984, p. 13.

Purolator Courier Corporation, Annual Report, 1984.

Purolator Courier Corporation, Worldwide Directory, Spring 1983, 1984.

\_\_\_\_\_ (1984), "Purolator Courier's New Ads Take Aim at Federal Express" The Wall Street Journal, April 23, 1984.

\_\_\_\_\_ (1984), "Purolator Courier's New Spots", The New York Times, January 19, 1984.

Stroller, G. (1984), "Purolator Opens New York Air Hub", Airport Press, September 1984, p. 9.

\_\_\_\_\_, The Wall Street Journal, September 29, 1983.

ON UPS:

\_\_\_\_\_ (1983), "Behind the USP Mystique: Puritanism and Productivity", Business Week, June 6, 1983, pp. 66-70.

Curtis, C. (1981), "The Brown Giant Tries Wings", Forbes, October 26, 1981.

\_\_\_\_\_ (1985), "How Companies Rank in 25 Industries", Fortune, January 1, 1985, p. 30.

Kreisman, R. (1981), "UPS Touts 2-day Service Price", Advertising Age, September 7, 1981.

Meck, T. (1982), "UPS Delivers a Challenge", The New York Times, September 25, 1982.

Moreau, D. (1982), "UPS vs. Federal Express -- Will the Brown Giant Pull the Trigger", Barron's, November 22, 1982.

Raissman, R. (1982), "UPS Delivers Overnight Parcel Competition", Advertising Age, September 27, 1982.

\_\_\_\_\_ (1984), "Reaching the Top at United Parcel",  
Business Week, May 7, 1984, p. 40.

United Parcel Service, Territory Served Guide, October 1,  
1983.

\_\_\_\_\_ (1982), "UPS's Powerful Push into Small Packages",  
Business Week, September 6, 1982, p. 33.

\_\_\_\_\_ (1982), "UPS Prepares to Offer Next-Day Air Delivery  
Beginning on September 20", The Wall Street Journal, August  
24, 1982.

PART II and PART III

Anderson, C., and Zeithaml, C. (1984), "Stage of the Product Life Cycle, Business Strategy, and Business Performance", Academy of Management Journal, Vol. 27, No. 1, pp. 5-24.

Calder, B. (1977) "Focus Groups and the Nature of Qualitative Marketing Research", Journal of Marketing Research, Vo. XIV, August 1977, pp. 353-364.

Day, G. (1981); "The Product Life Cycle: Analysis and Applications Issues", Journal of Marketing, Vol. 45, pp. 60-67.

Hall, W. (1980), "Survival Strategies in a hostile environment", Harvard Business Review, September-October 1980, pp. 75-85.

Hauser, J. (1984), "Theory and Applications of Defensive Strategy", Paper prepared for the Dean Symposium in Applied Economics, September 13-14, 1984 at Columbia University, MIT, Sloan School of Management, Cambridge, MA, USA.

Hauser, J. and Shugan, S. (1983) "Defensive Marketing Strategies", Marketing Science, Vol. 2, No. 4, pp. 319-360.

Hax, A., and Majluf, N. (1984) Strategic Management: An Integrated Perspective, Prentice Hall, Englewood Cliffs, NJ, USA.

Hayes, R. and Abernathy, W. (1980), "Managing Our Way to Economic Decline", Harvard Business Review, July-August 1980, pp. 67-77.

Hofer, C. (1975), "Toward a Contingency Theory of Business Strategy", Academy of Management Journal, Vol. 18, No. 4, pp. 784-810.

Kotler, P. (1984) Marketing Management: Analysis, Planning and Control, Prentice-Hall, Englewood Cliffs, NJ, USA.

Levitt, T. (1965), "Exploit the Product Life Cycle", Harvard Business Review, November-December 1965, pp 81-94.

Levitt, T. (1975), "Marketing Myopia", Harvard Business Review, September-October 1975, pp. 26-37.

Peters, T. and Waterman, R. (1982) In Search of Excellence, Warner Books, New York, NY, USA.



Polli, R. and Cook, V. (1969) "Validity of the Product Life Cycle", The Journal of Business, Vol. 42, October, 1967.

Porter, M. (1980) Competitive Strategy, The Free Press, Macmillan, New York, NY, USA.

Standt, T., and Taylor, D. (1970) A Managerial Introduction to Marketing, Prentice Hall, Englewood Cliffs, NJ, USA.

Urban, G. and Hauser, J. (1980) Design and Marketing of New Products, Prentice Hall, Englewood Cliffs, NJ, USA.

Wasson, C. (1974) Dynamic Competitive Strategy & Product Life Cycles, Challenge Books, St. Charles, IL, USA.