To the Graduate Council:

I am submitting herewith a dissertation written by Gray Cargile Ligon entitled "An Examination of Air Express Entry into the Intra-European Community Market: 1985-1989." I have examined the final copy of this dissertation for form and content and recommend that it be accepted for the degree of Doctor of Philosophy, with a major in Business Administration.

Gary N. Dicer

[Gary N. Dicer]
Major Professor

We have read this dissertation
and recommend its acceptance:

James H Foggin

Edgar D Patton

[illegible]

Accepted for the Council:

C W Minkel

Vice Provost and
Dean of The Graduate School

AN EXAMINATION OF AIR EXPRESS ENTRY INTO THE INTRA-EUROPEAN COMMUNITY MARKET: 1985-1989

A Dissertation
Presented for the
Doctor of Philosophy Degree
The University of Tennessee, Knoxville

Gray Cargile Ligon

May 1990

This dissertation is dedicated to my mother, Betty Tyson Mallory,
who has provided emotional support to me
and loving care for my son, Grant,
who arrived during this study.

I acknowledge the contributions of my dissertation committee, especially my chairman, Gary Dicer. James Foggin, Pete Patton and Robert Peterson, along with Gary Dicer, added insight and assistance, which made this project possible. I would like to thank the many knowledgeable people who contributed to this study. Special mention goes to Ed Robinson (US Department of Transportation), James Campbell (International Express Courier Conference) and Brian Campbell (Leeper, Cambridge and Campbell) for providing invaluable sources and contacts.

Ed Wheatley (Chairman of the Department of Marketing), Ernie Uhr (Dean of the School of Business) and the rest of my marketing colleagues at East Carolina University supported my dissertation efforts; Marty Meloche lent his fine editing skill. I also would like to thank the many librarians who provided assistance with this study. Marion Mistrik (Air Transport Association), Cesira Klayman (US Delegation of the EC) and Pat Guyette (East Carolina University) were especially helpful.

ABSTRACT

This dissertation investigates the a) barriers to market entry as perceived by five non-European Community-based air express firms entering the intra-EC market between 1985 and 1989 and b) the form of entry these firms utilized.

The literature review describes the development of the international and US air express industry; many expected the US experience to be repeated within the EC market. Entry barrier theories and the use of coalitions are drawn from economics, finance, strategic management and marketing. The research methodology consists of three parts; the first provides exploratory background information through interviews of government, association and consultant sources. Entry histories of the five firms were compiled from secondary sources in the second phase. Employees of these firms verified the entry histories and commented about entry problems in the third phase.

The subject firms have had varying approaches to entry problems possibly due to their level of international expertise. There appears to be a continuum represented by absolute barriers to entry at one extreme moving through mobility barriers into problems of doing business at the other extreme. The firms with the most international experience have viewed many entry barriers as "doing business problems." Postal and customs regulations were two of the major entry problems identified. The study discusses the reasons behind the extensive reliance of the air express industry on trucking within the EC as a means of dealing with many entry problems.

The form of entry selected in this market varied depending on the firm. United Parcel Service preferred joint ventures with local established partners, most of whom it bought out within two years of formation. Federal Express utilized local agents (many of which it then acquired) and acquisitions. TNT and DHL used a few key acquisitions while Emery

preferred direct entry. The EC began its movement toward single market integration as this study began in 1985. The study describes many of the market changes occurring in the EC and its neighboring countries through 1989. This analysis of entry problems may assist other service firms entering the EC and other foreign markets.

TABLE OF CONTENTS

CHAPTER ONE

INTRODUCTION

During the 1980s transportation and logistics played a major role in the development of international business. By 1990 most US firms could no longer sit in isolation protected from international competition. As foreign competitors entered many US markets, US-based firms were forced to play on an international field. As their home markets matured, US-based firms began producing and selling abroad in order to retain existing market shares and to develop new markets (Finn 1988). International expansion provided these firms with lower unit costs and greater efficiency, especially as to economies of scale in marketing and customer service.

Developments in the field of logistics enabled businesses to expand internationally through improved communications and transportation systems, which increased the firms' control over their worldwide operations. Within the transportation and logistics field, the growth of the air express industry provided firms with the customized distribution services enabling them to prosper not only in home country markets but abroad as well. Businesses, including air express firms, became capable of segmenting their customers and designing a level of customer service that maximized customer satisfaction.

During the 1980s the international air express industry developed in spite of numerous governmental restrictions on market entry; firms in other service industries often were not as adept at foreign market entry. By 1990 the air express industry offered overnight or second day service to most developed countries; that revolutionized the way in which many firms competed throughout the world.

It was difficult to measure the precise size of the air express industry during the 1980s because of the blurred boundaries between courier, express and heavy freight services and the lack of public information (Davisson 1987, Field 1985, Toll 1987). That made it hard to define exactly what was an air express company (Mahoney 1985). The size of the international air express market (excluding the US market) was estimated to be about $6.5 billion in 1988 (Christie 1988a). The size of that market is projected to increase to $28 billion by 1995 (Ross 1987).

There were several factors behind the rapid development of international air express. The demand for this transportation service was derived to a large extent; it tended to increase as international trade expanded (Magnier 1988). During the 1980s there was a tremendous increase in international trade as some governments viewed it more favorably and relaxed many of the barriers to international trade. That led to the opening of new markets such as those encompassed by the European Community (referred to as the EC). The increased use of just-in-time (JIT) inventory techniques and the outsourcing of production at foreign locations were two other factors behind that growth. Increasingly international firms developed greater needs for servicing foreign accounts and for expedited, time-definite shipments of parts and documents.

The air express industry itself enabled firms to provide goods and services that were not feasible before its advent. As of 1990 there was little published about international air express due to its extremely rapid growth during the 1980s. More information was needed about this industry in order to better understand how an international service could expand in light of the governmental restrictions.

While the major focus of this study was five selected air express companies, the twelve countries belonging to the EC provided the setting for this analysis of market entry. The EC was chosen as the subject market because of the relatively undeveloped state of intra-EC air express service prior to 1985. A look at the similarities and differences between these twelve countries could provide background information for understanding why certain types of entry techniques might have been preferred in particular countries.

While there were differences during the 1980s between the EC countries, most of them were found near the center of the continuum between free market and centrally planned economies. These countries, like most of Western society, had embraced many of the tenets of both capitalism and socialism. They allowed private ownership of production factors while restricting activities they considered vital to state ownership (Schnitzer, Liebrenz, and Kubin 1985). Within the EC there was extensive government ownership of the transportation, postal and telephone systems; that included most of the airlines, except for British Airways and KLM of the Netherlands (Barnard 1989a). Such control limited airline competition and resulted in extensive use of charter flights for European air travel (Button and Swann 1989).

The privatization of government-owned companies was a growing trend during the 1980s; Western European countries joined that movement as citizens began questioning why they should support government-owned firms, which were extremely unprofitable in many instances. In the EC, Britain led the way under Prime Minister Thatcher as many of its government-owned businesses, including British Airways, were sold off during the 1980s (Ball and McCulloch 1988).

During the 1970s and 1980s, many of the differences between the EC countries appeared to be cultural in origin. Hofstede surveyed 116,000 employees of IBM in fifty countries and found significant differences between countries. Those four dimensions of culture included the distribution of power as measured by power distance, the avoidance of uncertainty, individualism as opposed to collectivism and the importance of visible material and career success as opposed to cooperative relationships, which he referred to as masculine versus feminine features. Geographically or historically close countries tended to cluster using the four above dimensions (Hofstede 1980, Hofstede 1983). Marketers used Hofstede's study to segment the European market into six clusters of countries (Kale and McIntyre 1988). Culture, which was difficult to measure and understand, had a great impact on business, and yet, many firms were slow in recognizing its importance.

The most attractive markets for air express were those in which the material standard of living and income per capita were high and the level of government ownership and control of transportation, telephone and postal systems was low. In such markets there tended to be greater demand for imports, which often required expedited transportation, and less government competition for and regulation of firms, such as air express.

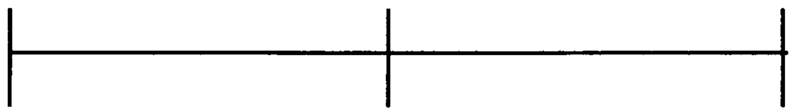
The international air express industry developed during the 1980s as a response to the needs of businesses, which were expanding into global markets. Air express firms faced entry problems because most governments, including those in the EC, had not deregulated aviation by early 1990. The successful air express firms utilized innovative entry strategies in order to overcome numerous entry problems.

STATEMENT OF THE PROBLEM

Air express firms increasingly desired to serve countries other than their home markets but were limited by international aviation regulations and other types of entry problems during the 1980s. While it was difficult for air express services based in the EC to offer their services between EC countries, it was even more challenging for firms not based in the EC to serve that market.

The objective of this study was to determine during the period of 1985 through 1989 a) the perceived barriers to entry facing five major air express companies not based in the EC to operate within the EC (referred to as the intra-EC market) and b) the forms of entry selected by those firms in that market. That time period was selected because competition between the major non-EC based air express services became significant within that market as the EC began its move toward a single integrated market in 1985.

This study required the identification and analysis of factors along a continuum ranging from the problems of doing business (known as doing business problems), through mobility barriers to absolute barriers to entry at the other extreme as shown below.



Absolute barriers to entry | **Mobility barriers** | **Doing business problems**

Some of the restrictions to entry were relatively minor while others could absolutely prevent entry in the view of some potential entrants. Competing firms viewed these restrictions differently due to their individual capabilities and expertise. The most successful air express services devised entry strategies allowing them to serve most of the destinations they desired. This study was directed at identifying how they entered this market.

The objectives of this study led to the following two research questions:

1. What were the perceived barriers facing the selected air express firms entering the intra-EC market for air express between 1985 and 1989?
2. What forms of entry did the selected air express firms use to enter the intra-EC market during this time period?

IMPORTANCE OF THE STUDY

During the 1980s increases in global trade led to the demise of many firms not equipped for international competition. Especially hard hit were American firms with large US market shares in industries which previously faced limited foreign competition. Foreign competitors pushed many American markets to the saturation point forcing all of the firms involved to look elsewhere for new markets (Main 1989, Root 1982).

The increasing level of international competition required many firms to lower their production costs and to enter new markets (Christie 1988a). Those needs led to a greater reliance upon just-in-time inventory techniques, which required dependable, time-definite transportation services. The air express industry began to provide reliable overnight service throughout the United States during the mid 1970s. In the 1980s the air express firms sought to meet the demands of US firms for increasing international air express service required for foreign expansion and to educate foreign companies about the benefits of air express and time-definite service.

During the 1980s much of the growth in international trade occurred in the highly regulated area of services, which accounted for over half of the gross domestic product (GDP) and almost sixty per cent of total employment in the countries belonging to the Organization for Economic Development and Cooperation (OECD) in 1987 (Ochel and Wegner 1987). The US was the largest exporter of services with a ten per cent share of that total in 1980 (Aronson and Cowhey 1984).

International transportation services, such as air express, were strictly regulated by most governments during the 1980s in order to protect federal postal services and domestic airlines, many of which were state-owned. A study of the entry problems faced by the air express industry and the entry strategies those firms adopted may assist other service firms considering foreign entry.

Bilateral agreements between governments controlled international air service between most nations during the 1980s. This study of foreign entry problems by air express firms may provide greater knowledge for future US bilateral air negotiations with other governments. The US Departments of State and Transportation addressed the problem of the decreasing air cargo market share during the 1980s of US carriers, which handled forty-two per cent of volume by weight to and from the US in 1975 and only thirty-one per cent in 1986 (Leister and Spiro 1987). In the US/European market, US air carriers saw their market share decline from forty per cent (by volume in weight) in 1975 to twenty-five per cent in 1986. That study concluded that entry restrictions needed more attention if US-owned firms were to maintain their share of the international air cargo market.

The air express industry was created in response to the demand of shippers for dependable, time-definite, door-to-door service, which was not provided by the airlines and traditional air freight forwarders. By 1988 the size of the US air express market was approximately $5.5 billion. The US air express market annual growth rate peaked at thirty per cent during 1986 and dropped to twenty-two per cent during 1988 (Christie 1988a). Intense price competition in the US led to lower yields per package (Helms 1989). Thus, the larger US-based air express firms began looking abroad in the mid 1980s in an effort to satisfy their customers' increasing demands for international service and to locate new growth markets as the home market began to mature.

While a small percentage of US exports by weight were transported by air during 1988, approximately thirty-two per cent by value (equal to $115 million) moved by air (Breskin 1987a). That represented an increase over the twenty-seven per cent of US exports by value that traveled by air in 1987. Air became responsible for moving an increasing share of the more valuable US exports, and air express firms wanted a larger share of that growing market.

The countries of the EC were the setting of this study because in its move toward a unified, single market of over 350 million people in 1992, the EC held the most promise as the next big area of air express expansion (Toll 1987, Woolley 1987). The EC lacked a well-developed air express industry, which made it most attractive to large air express companies based elsewhere. The level of trade within the EC was projected to increase steadily as 1992 approached and afterwards due to the lowering of trade barriers between its members (Christie 1988a, Heard 1987, Lyon 1988).

In addition, it was projected in 1987 that one half of all EC air freight by value would move by air express companies during 1990 as the demand for air express grew. The intra-EC market for air express was estimated to equal $500 million in 1987 (Heard 1987). In 1987 the EC door-to-door market including all modes of transportation was estimated to be $6 billion (Woolley 1987).

During 1989 and 1990 there was a revolutionary opening up of countries in Eastern Europe as the Berlin Wall and numerous governments fell and were replaced by more free market systems. That made the intra-EC air express market even more attractive as there was increasing trade with Eastern European countries. It was believed by many that several of those countries desired to join the EC. The members of the European Free Trade Association (known as EFTA) also sought a closer relationship with the EC and signed a trade agreement with the EC during 1989. If one combines the 325 million citizens of the EC with the 32 million of EFTA and the 140 million residents of the Eastern bloc, that would represent a potential market of almost 500 million consumers (Nulty 1990, Stewart 1990).

By 1989 there was a belief held by many air express firms that they needed to be part of a worldwide network to compete in the future (Christie 1988a, Preble 1987, Thompson 1987). Likewise, it was stated that whoever provided the best international air express service would dominate the US air express market (Illingworth 1988). Porter supported this belief in his description of how successful firms must compete in global markets (Porter 1985).

Many non-EC providers of services were eager to enter the EC market before 1992 arrived. They believed that entry might become more difficult for nonmembers and competition would be much more intense after the single market was created (White 1989). This study provides insight into how a service firm could enter the intra-EC market by identifying the entry problems facing and strategies used by selected air express firms.

SCOPE

This study focuses on international entry into a specific market by five major firms in one specialized transportation mode. These firms were selected because they were not based in the EC and they had the largest international or US market shares in the mid 1980s. Many transportation companies were eager to enter foreign markets, but they were stymied by strict governmental controls. While the types of entry problems varied from market to market and industry to industry, an in depth study of the entry activities of the five major firms within one specific market increases the project's internal validity.

There is no guarantee that other service industries will face the same problems entering the market being studied nor that the subject firms will face the same problems entering other markets. Thus, one cannot assume the generalizability of the findings of this study to other industries and markets. However, there is much to be learned from a longitudinal study focusing on the major firms in one industry entering one specific foreign market.

The next chapter contains a review of the literature pertaining to this study. The third chapter describes the research methodology utilized in the study. That is followed by a discussion of the results in chapter four. The final chapter contains the conclusions made, the marketing implications of the study and implications for future research.

CHAPTER TWO

LITERATURE REVIEW

INTRODUCTION

The objective of this literature review was to provide background information about prior research on topics related to the study. The first subject discussed, which is the air express industry, was relatively new; before the mid 1980s it received little attention in the press. By 1990 there were numerous articles describing the US air express industry, but there still was limited coverage of international air express. The second topic discussed is that of international services within the EC, which began to receive more coverage as the 1992 target date for the creation of a single market approached. The third area to be reviewed is that of market entry and the use of entry alliances or collaborative efforts between companies; this section is drawn from industrial and financial economics, strategic management and marketing.

The general literature of international business has not been included here because it tended to be less specific than the subjects covered above. Several international business authors have analyzed the relationships of host governments with foreign-based multinationals. Within strategic management it has been argued that the marketer of services has a much more difficult relationship with a host government than does a marketer of goods (Carman and Langeard 1980). That type of information has been helpful in understanding how the subject firms have entered a specific market. This review begins with a look at the development of the US air express industry, which reveals how a national market for air express could expand. Many believed that the intra-EC market would follow a similar pattern about a decade after the US market matured.

THE AIR EXPRESS INDUSTRY

The History of the Air Express Industry

The development of the US air express industry provides a basis for understanding the international expansion of air express. The industry developed in the 1970s as a response to the needs of shippers for more reliable, door-to-door, overnight delivery (Davies 1984). Hubs located at uncongested airports near the economic center of the US, total control over the shipment at all times by a single party and nighttime cargo-only flights were the key to meeting those needs (Chestler 1985). Chestler also mentioned that the use of trucking for shorter air express deliveries could become widespread and that the demand for international air express service was rapidly developing.

An update on the air express industry was provided in a 1989 study about the impact of proposed US noise regulations on the all-cargo carriers (Leeper 1989). DHL Worldwide Express (DHL) was founded in 1969 and derived its name from the last initials of its three founders. The firm split in 1972 and formed a US company, DHL Corporation, which was owned by US investors and was tied to DHL International, a Hong Kong-based company, through an operating agreement. That structure allowed DHL Corporation to own and operate aircraft in the US.

DHL and TNT, which was a subsidiary of Thomas Nationwide Transport, entered the air express industry as courier services utilizing the scheduled passenger carriers. As an Australian-owned company, TNT was prohibited by US law from owning more than a twenty-five per cent interest in a US airline. In 1987 it acquired an eighteen per cent interest in the third largest US air express firm, Airborne Freight Corporation (Davies 1989b). United Parcel Service (UPS) was solely a ground carrier and air freight forwarder until it began offering overnight air service in 1982 (Abruzzese 1985). In 1988 UPS became the largest US transportation company based on annual revenues (Fortune 1989).

Emery began as an air freight forwarder before introducing its own fleet of aircraft in 1981 (Lueck 1984). In 1989 Emery was acquired by Consolidated Freightways, the third largest US trucking company, which continued to operate Emery under the Emery Worldwide name (Feldman 1989, Kaufman 1989). The Federal Express Corporation began as an integrated air express service in 1973 and was responsible for many of the innovations in US air express (Chan and Ponder 1979). In 1989 it acquired the Flying Tiger Line, the largest all-cargo carrier in the world (Christie 1988b). Except for TNT, each of the subject air express companies by 1989 controlled their own fleets in the US market and most did in international markets. These firms all provided on-demand pickup service with UPS being the last to add that service in the US during 1989 (Lelyveld 1989).

The courier services began by transporting documents, primarily financial ones including checks that needed to be cleared overnight, between major financial centers (Bond 1985). The couriers moved into small and then heavier packages after they began using their own dedicated fleets and no longer had to rely on individual couriers checking their shipments as baggage on passenger flights. Federal Express began by carrying small packages and moved into documents with its Overnight Letter after the US Postal Service monopoly on letters ended in 1979 (Colvin 1981). Federal Express moved into heavy air freight after it acquired the Flying Tiger Line in 1989 (Hastings 1989b).

The US Postal Service continued to be a major source of competition for US air express companies after the latter were allowed to carry documents in 1979. In 1970 it introduced Express Mail, an overnight mail service with pickup and delivery performed by the customer at the local post office (Journal of Commerce-Air Commerce 1986). Express Mail was not the same service as air express because it did not offer pickup and delivery at the origin and destination and its performance record was not as reliable as air express. However, the US Postal Service had the financial and political power to compete both domestically and internationally on the basis of lower prices and its contracts with other national post offices guaranteed reciprocal services abroad (Taylor 1985). It could subsidize the operations of Express Mail, if necessary, from its other services (Breskin 1987b, Breskin 1988a). The Postal Service was targeted for privatization in 1988 under President Reagan after an executive study showed that postal users would save between four and eight billion dollars annually if the postal monopoly was ended. The political obstacles to privatization appeared to be insurmountable as of 1989 (Lipkin 1988).

While a large portion of air express shipments initially consisted of documents, that part of the market began dwindling as air express customers started to rely more heavily in the late 1980s on facsimile machines and electronic mail systems to rapidly transmit documents. It was estimated that as much as thirty per cent of Federal Express' Overnight Letter market could disappear due to increased use of facsimile machines (Gelfond 1988). The facsimile document market began to outgrow the air express document market in volume in the late 1980s as use of facsimile machines became widespread (Lipkin 1988).

Thus, air express firms had to look for new markets and devise new services in order to survive threats posed by facsimile machines, increased competition and government interference, such as the expansion of the US Postal Service's Express Mail Service. As new competitors entered the US market, growth rates began to decrease and excess capacity led to intense price competition. That produced a shakeout of air express companies that resulted in the failure of several firms and a trend toward numerous consolidations and acquisitions among the survivors, such as Emery's purchase of Purolator in 1988 and Consolidated Freightways' acquisition of Emery in 1989 (Solomon 1989). Competitive pressures forced several air express firms to increase their package weight limits, and most further segmented their services; that tended to erode some of the differences between air express and traditional air cargo services (Helms 1989). Some of those differences are described below.

The Unique Characteristics of Air Express Service

Before air express service became widely available, shippers relied on the airlines and air freight forwarders for expedited or emergency shipments. The air express industry introduced several features which differentiated its services from those of the traditional air freight services. Some of these differences included the following:

1. Integrated, intermodal hub-and-spoke systems that relied extensively on the use of trucks for on-demand pickup and delivery as well as short hauls between cities (Chan and Ponder 1979, Hall 1989, Helms 1989, Mahoney 1985).
2. User friendly documentation and communications systems which automated much of the process including routing (both on the ground and in the air), tracing of enroute shipments and billing (Purchasing 1984, Ross 1987).
3. Single vendor handling and control of shipments, which was critical for meeting the shippers' needs (Drozdowski 1984, Helms 1989, Waller 1987, Willmott 1987).
4. Late afternoon pickups, nighttime transport, and early morning deliveries (Hall 1989, McCarthy 1986).
5. Time definite and reliable delivery ranging from same day to third day service with greater emphasis on speed (Bakal 1985, Feldman 1985c, Preble 1987, Russ 1984).
6. Widespread geographical coverage to most addresses in the US at competitive prices (Bakal 1985, Chan and Ponder 1979, Chestler 1985).
7. Lower prices than scheduled airlines for smaller shipments such as documents and lightweight parcels (McCarthy 1986).

8. Uniform pricing usually based on weight and not related to distance (Chestler 1985).
9. Relatively low utilization (compared to the scheduled airlines) of aircraft as measured in flight hours per day requiring a higher yield per shipment and a trend toward heavier freight and larger shipments in order to increase utilization rates (Mahoney 1985).

By 1990 the services offered and customers served by the air express industry were highly segmented. There were several methods of categorizing air express services; one method segmented air express services into courier/document traffic, postal/remail, small package express and heavy freight segments (Avmark Aviation Economist 1987). Most air express firms specialized in particular market niches because it was impossible to serve all the air needs of shippers (Air Cargo World 1986). Air express services were designed to increase customer satisfaction, and as such, they were marketing and service oriented rather than production oriented like most traditional air freight services.

During the late 1980s air express firms focused on adding value to the services they offered shippers. That resulted in a continuing battle to improve their relative competitive advantages and increased differentiation of services offered. Shippers were the main beneficiaries of this intense door-to-door competition, which most traditional airlines ignored in their commodity approaches to air freight emphasizing airport-to-airport service (Kandix 1987).

By 1988 the traditional airlines and forwarders realized how large the air express industry was and how that market had slipped out of their hands. Even in 1990 some airlines and forwarders continued to argue that they could meet all the air needs of shippers and that the air express industry did not offer a significantly different product. The airlines' customers would be the first to disagree with that claim (Feldman 1985a). There was a wide, qualitative difference between the services of air express firms and traditional air freight providers (Breskin 1988b, Malkin 1988, Ross 1987, Willmott 1987). That qualitative difference in service provided by air express firms during the 1980s had a great impact on the revolutionary changes in distribution, which are discussed below.

The Role of Air Express in Distribution

International trade expanded greatly between 1985 and 1990 as many firms adopted a global perspective and sought to maximize their market shares in markets outside of their domestic bases. Some of the major reasons for such a rapid expansion of international trade were the tremendous innovations in retailing and distribution. By 1989 customers could get what they wanted when they wanted it without the restrictions characterizing traditional distribution systems (Melcher 1989). A look at the development of air express describes some of these changes in distribution systems.

A review of the role of air transportation in distribution sheds light on the development of air express. The early users of air tended to be classified either as emergency users or normal, routine users. Lewis and Culliton argued that the uses of air freight tended to be represented on a spectrum ranging from emergency uses at one end to routine uses at the other extreme. They stated that emergency users were not sufficient to support the existing air freight industry, which depended more on non-emergency users (Lewis and Culliton 1956). Few shippers recognized the advantages of air in lowering total distribution costs, which was one of the major objectives of physical distribution management (Stock and Lambert 1987). Sletmo and Picard studied the evolution of air in international distribution and the strategies available to firms. They concluded that air freight was more suitable for direct service to foreign customers but not for warehousing at foreign sites as was common under traditional distribution systems (Sletmo and Picard 1985).

As businesses became more international in scope, many firms were able to use speed as a competitive advantage (Dumaine 1989). Companies such as Benetton of Italy began to rely on a single distribution center to serve 5000 stores in sixty countries. Wider use of air enabled many firms to adopt similar, simplified distribution systems which cost less and provided better service than traditional ones with multiple warehouses in the field (Bakal 1985).

During the 1980s many companies formed alliances with air express firms in order to meet their needs for support in the field. The Federal Express PartsBank, an example of such a service, created a centralized parts warehouse for its customers. The PartsBank used a customized computer system to manage customer inventories and to process orders requiring immediate shipments. The PartsBank could load any item in its warehouse any time of the day or night into a Federal Express airplane in fifteen minutes, and its turnaround time from receiving the order to delivery averaged six hours to US destinations. That service provided its customers with one central warehouse for all emergency parts and a ninety-nine per cent reliability rate for deliveries (Ernst & Whinney 1987). As the air express companies developed their international networks, those types of services became available on a worldwide basis allowing companies anywhere to contract with third party providers of logistics services.

Bakal further described how time-definite air service enabled firms to upgrade their distribution systems while adopting techniques such as just-in-time (referred to as JIT) inventory methods. The object of such programs was to increase customer flexibility, productivity and profitability. A vendor could help the customer select the level of service that best met the customer's needs partly due to the wide variety of services offered by air express firms (Bakal 1985).

Stenger described the new manufacturing technologies that increased the demand for air transport for different types of products based on their complexity, value and volume manufactured at a time. He stressed that flexible manufacturing techniques were becoming more popular and often required air express service in order to provide customized products made to order as opposed to traditional systems relying on production for inventory techniques (Stenger 1986).

McCarthy stated that air express systems evolved to meet the need for late night freight service providing next morning delivery, which was required by the growth of firms using JIT inventory practices. In turn the widespread geographic coverage of air express firms enabled businesses to thrive in the hinterlands, where costs of labor and land often were lower than in the major metropolitan areas (McCarthy 1986). Some air express firms incorporated JIT techniques into their own operations as a method of increasing the reliability and predictability of their own services (Bloomberg and Williamson 1986).

US air express companies designed their hub-and-spoke systems around the needs of their customers, who frequently required late afternoon pickups and early morning deliveries in order to satisfy their customers and keep production lines moving. Those services often minimized inventory holding costs while raising customer service levels through the use of overnight or second day delivery. Air express firms sorted the late evening shipments upon arrival at regional hubs as the largest US air express companies operated multiple US hubs by 1990. After the sorting operation, shipments were routed to the proper aircraft or truck for early morning departure from the hub and delivery at their destination usually by noon. Thus, the nighttime operations of air express firms were critical to their success in meeting shippers' needs and differentiated air express services from those of traditional air freight providers (Leeper 1989).

In its response to customer needs, air express evolved into a distribution method rather than just an expedited transportation service (Davies 1988). By 1990 the air express firms expanded into heavier freight because the growth rates in their existing markets leveled off and their customers desired heavier freight service (Breskin 1988b, Callari 1988). In 1990 it was not yet clear just where air express industry expansion would lead as those firms continued to add innovative services, some of which had before been offered by other transportation companies and others which were completely new.

In a study of customer service for the Council of Logistics Management, it was found that at the more innovative firms studied, customer service was transformed from a reactive activity to a proactive activity of management during the 1980s. The study also concluded that much of the change in companies' logistics systems was driven by the buyers' needs rather than sellers' desires and that customer service expectations were becoming more complex as firms extended their operations into the international environment. That resulted in the development of new technology in order to improve and increasingly monitor customer service performance on a real time basis (La Londe, Cooper, and Noordewier 1988).

By 1990 it was believed that the demand for increasingly higher levels of customer service would continue to fuel much of the growth in both domestic and international air express as firms tried to outperform their many competitors. That competition was evident within the air express industry as the major players moved up their US overnight delivery times from early afternoon to mid-morning (and even earlier in some metropolitan areas) so that their customers and their customers' customers could receive the shipments early enough to utilize them on the day of delivery. The air express industry provided a much needed, dependable service that enabled many firms to use the JIT production and inventory methods, which were crucial to the distribution systems of a growing number of companies. The development of the air express industry was in part due to changes in the US legal environment, which is discussed below.

The Legal Background of the US Air Express Industry

As a transportation service, air express was subject to government control in every country of operation, and the US was no exception. A review of US transportation law reveals several legal reforms which enabled the air express industry to develop in the US during the 1970s. Those reforms were the result of public demand for improved air service through increased market competition (Taneja 1981). Kane and Vose described the events leading up to US air deregulation (Kane and Vose 1982).

The US air cargo industry was deregulated as of November 9, 1977 under amendments to the Federal Aviation Act, Title IV, Section 418. Air cargo deregulation opened the door for the US air express industry, which was no longer restricted to operating small aircraft under the air taxi exemption in the US (Leeper 1989). The Motor Carrier Act of 1980 extended trucking deregulation to include vehicles operated by air carriers, which enabled air express firms to expand their vital trucking operations (Mahoney 1985).

Postal regulations were another major type of US government restriction limiting domestic air express expansion. US private express laws prohibited anyone except the US Postal Service from delivering mail. The air express industry led by Federal Express successfully fought those statutes and the monopoly of the Postal Service. The express companies were exempted under 1979 administrative regulations allowing private carriage of time-sensitive material (Hazen 1987). Federal Express began to emphasize domestic document delivery and heavily promoted its "Overnight Letter" (Colvin 1981).

The integrated air express firms using dedicated aircraft and the air couriers, who depended on the airlines scheduled flights, emerged during the 1970s as a result of US deregulation and market demand. Traditional US freighter services decreased as most airlines ended their freight-only services and sold off their freighters during the early 1980s. That forced air couriers and forwarders to either begin aircraft operations on their own or rely on the capacity provided by the scheduled all-cargo carriers or the supplemental air carriers providing charter service (Leeper 1989).

The rapid growth phase of the air express industry began when deregulation lowered governmental barriers which had constrained its development (Chestler 1985, Leeper 1989, McCarthy 1986). Alfred Kahn, who led air deregulation under President Carter, stated that air express growth was one of the greatest accomplishments of deregulation (Lovell 1986). Kahn also said that air express firms faced continuing problems in global markets due to existing barriers. Deregulation was one of the main reasons that the US air express market became the largest one in any country by the mid 1980s.

In 1990 one growing legal problem that the air express industry still faced in the US was that of aircraft and airport noise restrictions. Those were being promulgated by local governments for the most part. However, the federal government had not totally delegated its authority over aircraft noise to other government entities such as local airport authorities (Breskin 1988c, Harper 1988, Higdon 1988a, Mecham 1987, Selwitz 1988).

As of 1990 the air express industry faced restrictions on the type of aircraft it could operate in the US because of the phaseout of noisier aircraft as designated by the Federal Aviation Administration in 1977. The federal government scheduled a phase out of Stage Two aircraft, which were the workhorses of the air express industry (Harper 1988). In 1990 the air express industry was the major operator of those aircraft, which it usually purchased used from the scheduled airlines. The air express industry faced greatly increased capital investment requirements if Stage Two aircraft were phased out before the useful lives of those aircraft ended (Leeper 1989).

In addition to aircraft phaseout rules, the air express flights generally occurred during the nighttime hours because the sort operations at most domestic hubs were scheduled between ten p.m. and three a.m. By 1990 there were operating hour restrictions at many major US airports, and air express firms were forced to move to other airports. Those secondary airports were often not as efficient for air express operations, but they were not as tightly restricted by nighttime noise rules. Those airport noise regulations, which were mostly local in origin, had a major impact on domestic air express operations (Abruzzese 1989a, Breskin 1988c, Goldstein 1988, Leeper 1989, Selwitz 1988).

A serious problem for the air express firms was that there was no uniform federal policy on airport noise, and the firms were faced with a wide variety of local rules limiting operating hours, especially during the critical nighttime hours (Leeper 1989). Noise restrictions and other legal problems are discussed further in the following sections addressing international air express and governmental regulations.

International Air Express

During the 1980s international air express expanded to a surprising extent considering the many problems it faced. Kahn was very perceptive in his statement that while deregulation enabled the US air express industry to develop, the many barriers facing those firms in the global market continued to be major constraints on their international growth (Lovell 1986).

Mahoney identified some of the major hurdles to international air express expansion as being rapid customs clearance, postal competition, and the opposition of some national airlines to international deregulation. He stated that the courier services led the way in international air express growth because they minimized the customs problem to a great extent by declaring their shipments as baggage. That avoided the often slow customs clearance procedures that greatly slowed the delivery of express shipments at most international airports (Mahoney 1985).

As domestic competition intensified during the early 1980s, US air express firms sought to move into international markets but faced major restrictions due to customs rules designed to handle other modes. It became clear to industry leaders that their international expansion required more uniformity in customs procedures if air express firms were to offer a reliable and timely service. The International Courier Conference, which represented the air express industry, led the way with a proposal made to the Customs Cooperation Council, an international union of customs officials, to obtain rapid clearance of what it called "urgent air consignments" in international trade (Campbell 1986).

The scheduled passenger airlines routinely opposed expedited customs procedures for air express shipments in the 1980s because they did not believe that any one class of air shipments should receive priority over another during customs clearance. Through the International Air Transport Association (IATA), the airlines proposed the creation of "express handling centres," which would provide dedicated terminals open to all air shippers for rapid customs clearance (IATA Review 1989). As of late 1989 air express companies were continuing their push for expedited customs clearance processes located at their individual hubs, which tended not to be at the major international airports where the airlines wanted the express handling centres located.

As stated above, by 1990 airport noise restrictions had become increasingly important within the US as well as in many other countries such as Japan and Hong Kong. Air express flights generally occurred at night, and those were the hours that tended to be more severely restricted by local airport authorities (Leeper 1989). The noise and operating hour limitations became critical within the EC as airports such as Maastricht in the Netherlands adopted even stricter noise regulations. KLM airlines was forced to sell its XP Parcels System subsidiary to TNT in 1989 after the Maastricht regulations became too constricting and opposition by Dutch environmentalists prevented KLM from transferring XP's hub from Maastricht to the Amsterdam airport (Barnard 1989b). In addition to airports restricting their hours of operation, national governments and the EC began proposing aircraft noise limits that would apply to air express fleets (Higdon 1988b). Those restrictions began to increasingly affect the operations and expansion plans of air express firms in most developed countries (Hastings 1986, Lloyd's Aviation Economist 1986, Unsworth 1985).

Other governmental restrictions on air express firms included limitations such as those on advertising, especially on state-owned or controlled television stations (Bond 1985). The most successful US air express firms relied heavily on television advertising in developing the domestic US market. They faced major restrictions on television advertising abroad, especially within Europe, because many governments tightly controlled that medium and generally limited television advertising as to both airtime and permissible content (Rijkens and Miracle 1986).

The air express industry was also restricted by international aviation treaties, which were the product of bilateral negotiations between individual countries. At the Chicago Conference in 1944, the representatives of fifty-four nations adopted a bilateral approach to international aviation after rejecting a multilateral approach (Kane and Vose 1982). That meant that each national government had to negotiate with the governments in each of the countries where it desired air rights and that international routes tended to be tightly regulated. During the 1970s and 1980s, air cargo interests were usually underrepresented in US bilateral negotiations, which focused on passenger rights (Feldman 1988b). That need was addressed in the Statement of U.S. International Air Cargo Policy, which arose out of the air cargo study by the US Department of Transportation and Department of State (referred to as the DOT/DOS) (Murphy 1989).

During the 1980s there were several attempts to include international airline services under the General Agreement on Trade and Tariffs (referred to as GATT), but those attempts were not successful. GATT was a voluntary agreement between signatory nations that was designed to lower trade barriers on goods through the reciprocal treatment of its members. During the 1980s there were long discussions about adding international services, including aviation, to GATT's coverage, but little progress was made (Feldman 1988a).

Kane and Vose provided an excellent history of international air transportation and an explanation of why the US desire for deregulation was not accepted by most countries (Kane and Vose 1982). The International Air Transportation Competition Act of 1979 was directed at international air deregulation; it focused on passenger services and only mentioned cargo as an afterthought (Taneja 1981). During the 1980s international air deregulation was not widely supported outside of the US for a number of reasons, including the fact that many international air carriers were government owned or controlled (Toh and Shubat 1985).

McCarthy of Emery Air Freight described the bilateral limitations placed on the air express industry and some of the resulting problems (McCarthy 1986). In 1986 an attempt was made to identify and address the problems of all US air cargo services (including air express) in a US government study of international air cargo (Leister et al. 1988).

An objective of the above US DOT/DOS air cargo study was to determine the needs of the US air cargo industry in bilateral treaty negotiations, which tended to favor the passenger airlines. The study concluded that most US air carriers had de-emphasized air cargo service and that they had competed strongly only in certain markets. Within those selected international markets US carriers were limited by inadequate flexibility in routing, their lack of combi aircraft (which accommodated both freight and passengers with great flexibility), operating restrictions, a lack of freight capacity and marketing restraints (Leister and Spiro 1987).

That study resulted in the Final Statement of US International Air Cargo Policy, which recognized that the air cargo industry required greater consideration in the bilateral negotiation process. It recommended that the US consider the actual market size and status of the operating environment in the bilateral negotiation partner country. The US had to remain flexible in its negotiating posture and might have to resort to unique actions to resolve international problems of doing business. The final report also addressed the importance of ground activities, especially for the air express firms providing international door-to-door service (Murphy 1989).

While the above study delineated the needs of US air cargo and air express companies to be addressed in the bilateral negotiations, the odds of those needs receiving the proper attention remained low. Air cargo had never been a major priority in US bilateral negotiations because of the clout wielded by the US passenger carriers, who had ignored cargo for the most part during the 1980s. The large failure of air express firms in receiving direct international route authority led them to develop methods of operation that minimized and often avoided the problems of governmental regulation.

The attractiveness of the international market for air express expansion was highly debated because of major disagreements over the size of that market. As an example there was such a disagreement over the intra-EC market size. In 1986 Gordon Barton of TNT argued that that market was much smaller than estimated and that many firms would be disappointed by their lack of success there because they had overestimated the market size (Sterne 1986). Even in 1990 there still were disagreements over the size of that market.

Some of this confusion over market size estimates was due to the fact that intra-EC air express deliveries often moved by truck or other ground services rather than by air. By 1989 the more successful air express firms within the EC had developed extensive trucking networks in order to improve service to all of their customers (Unsworth 1989d). The growth in European trucking was the reason that the 1988 and 1989 Boeing air cargo studies projected only a four per cent growth rate on intra-European air routes during 1987-2000 (Boeing Company 1988, Boeing Company 1989). While Boeing was projecting such a low growth rate in European air cargo, Federal Express reported an intra-European annual growth rate of 125 per cent; other firms estimated a twenty to sixty per cent annual growth depending on the country (Heard 1987).

In 1989 Federal Express stated that its success in the European market was critical for its international success (White 1989). That company was credited with much of the growth in the US air express market because of its innovative services. Federal Express officials believed that the intra-EC market would respond to its new offerings and that door-to-door express there would repeat the explosive growth pattern seen in the domestic US market (Unsworth 1989c).

Thus, by 1989 the intra-EC market had become critical to the global success of major air express firms. Ohmae stated in 1985 that global firms had to operate in the three major markets of Western Europe, Asia and North America in order to achieve success. He labelled this concept "triad power" and noted that more and more industries were becoming global as international competition increased (Ohmae 1985).

Some people believed that most of the air express growth within the EC would be through increased use of ground and not air service, partly as a response to governmental controls over direct flights within the EC. The chairman of TNT, Peter Abeles, estimated the European door-to-door freight market to equal $10 billion for all modes of shipment when his firm signed an option in 1987 to purchase the following five years of production of British Aerospace's quietest new freighter aircraft (Keeble 1988).

According to Abeles, TNT was a major ground operator within the EC and viewed its market as anything that needed to be moved door-to-door. That became the view adopted by more air express firms as they focused on their customers' needs under the marketing concept. That led air express firms to increasingly utilize the most suitable mode of transportation regardless of their traditional modal orientation (Helms 1989). As in the US domestic market, the international air express industry experienced a tremendous increase in the use of trucking and other ground services, which better enabled those firms to satisfy their customers' needs (Erickson 1989, Stoner 1988, Unsworth 1988, Wiersum and Rutges 1987).

By 1989 one of the high growth areas for some international air express firms was in remail, which involved carriers delivering bulk corporate mailings destined for another country to the post office of the destination country or a nearby country having lower international postal rates. While that service was offered by passenger carriers, such as KLM, some air express firms targeted remail and viewed it is a major growth area. There were numerous governmental restraints on remail because postal monopolies were still quite strong in most countries and governments wanted to protect their international market shares.

Restrictions on remail within the EC led the International Express Couriers Conference in 1988 to file a complaint with the EC alleging violations of its competition laws (de Rivery 1989). During late 1989 the Universal Postal Union, which represented the postal services of most nations, accepted a proposal of the US Postal Service to significantly raise the fees for remail (Breskin 1989c, Journal of Commerce 1989a, Journal of Commerce 1989c, Rotov 1989, Unsworth 1989a). Some believed that that ruling would mean the end of the lucrative remail operations of the air express and airline industries.

As with the domestic air express industry, there was a major problem with determining international air express market size because most firms did not provide geographical breakdowns of their revenues and profits (Davisson 1987). Not only was it difficult to come up with market size estimates, but air express firms often were measuring different markets and different services, such as overnight, deferred delivery, heavier weight shipments and remail. In 1988 conservative estimates placed the international air express market at approximately $3 billion excluding the $8 billion US domestic market (Euromoney 1988a).

A summary of the key issues in the development of the air express industry follows below. The major contributions of the above authors are listed under the five following questions, which describe the major issues of air express development.

1. **How did the US air express industry develop?**
The major players, except for Federal Express, were traditional air freight forwarders or motor carriers before entering air express. They began offering overnight air service in response to customers' demands for reliable, door-to-door service. They emphasized document and small package delivery until some of them began competing for heavier shipments in the late 1980s (Davies 1984, Helms 1989).

2. **How does air express differ from traditional air freight?**
In 1989 air express firms utilized multiple hubs with nighttime flights and sorting activities; wide geographical coverage; single vendor control of shipments from door-to-door; and extensive use of computerization for pickups and deliveries, tracking and billing (Chestler 1985, Mahoney 1985, McCarthy 1986). Traditional air freight providers did not offer most of these services in 1989.

3. **What has been the role of air express in distribution?**
Traditionally air was viewed as a means of emergency shipment. By 1990 many firms utilized air express as a competitive advantage allowing them to use speed to simplify their customers distribution needs, to lower total distribution costs and to improve levels of customer service (Bakal 1985, Davies 1988, Dumaine 1989).

4. **How have US laws restricted the air express industry?**
Early legal impediments to air express, including the Postal Service's monopoly on mail delivery and air and motor regulation, have been replaced by restrictions on aircraft and airport noise levels (Chestler 1985, Harper 1988, Kane and Vose 1982, Leeper 1989, Mahoney 1985, McCarthy 1986).

5. **What factors have affected the expansion of international air express?**
The major international restrictions on air express have been due to postal monopolies, governmental ownership of airlines, restrictive bilateral aviation agreements, outdated customs clearance procedures and limitations on airport and aircraft noise (Campbell 1986, Kane and Vose 1982, Leeper 1989, Mahoney 1985, McCarthy 1986).

With this international background in air express in mind, the next section reviews the status of services within the EC and focuses on the air express market within the EC.

AIR EXPRESS WITHIN THE EUROPEAN COMMUNITY

Services Within the European Community

In order to understand the status of air express within the EC, it is helpful to look first at the overall status of services in the EC. During the 1970s there was a trend toward growing protectionism in Europe; that trend continued through the recessionary period of the early 1980s (Page 1981). The term, Eurosclerosis, was created to describe the economic impact of inflexibility in the industrial structure and on the part of labor. Eurosclerosis was thought to have reduced economic growth in Europe by one-half between 1973 and 1980 (Lee 1988).

In the late 1980s there was a general movement to deregulate many services. The EC began moving toward the proposed single common market in 1992 as described in the White Paper, entitled Completing the Internal Market, and as legislated by the Single European Act of 1987 (Cheeseright 1985b). In the Cecchini Report, the European Commission studied the costs of the barriers between its member nations and determined that the resulting delays added between five and ten per cent to the retail cost of goods sold within the EC (Cecchini 1988).

In 1985 the European Commission produced the White Paper, which was drafted by the EC commissioner for the internal market. It contained 300 proposed reforms addressing three major areas, which included physical, technical and fiscal barriers to trade. The eventual goal was to remove the barriers to trade between EC members by 1992 (Bruce 1987, Colchester 1988, European Commission 1985a).

In 1987 the Single European Act was passed; it was the first statutory revision of the Treaty of Rome in 1957, which led to the formation of the European Community. The Act made it possible for a "weighted majority", instead of a unanimous vote, to pass directives proposed in the White Paper. It also gave the European Parliament a greater voice in the legislative process. It was projected that sixty per cent of the 300 proposed directives would be passed by 1990; the target date of 1992 was set for the passage of all 300. 1995 was the target date for the implementation of all of the directives by the member nations (Quickel 1989).

In 1985 the European Commission began promoting competition in its efforts to eliminate all barriers within the EC to the movement of goods and services, people and capital (Robinson 1986). Some economists argued that the economic problems of the EC were due to the lack of access to markets rather than to lack of market size. That may have led to the European Commission's evaluating the impact of subsidies, quotas and tariffs in its effort to open up markets (Lee 1988).

If the market integration movement continued during the 1990s, intra-EC services could be expected to grow considerably as it became easier for firms operating in any EC country to enter new service markets in other EC countries. The increasing role of services in most countries meant that deregulation could provide a huge impetus for market growth. While the EC might not meet all of its 1992 goals, some believed that the concept of a single market was symbolic and a catalyst itself; the concept was as important as the 300 or so proposed reforms included in the White Paper (Tully 1989). Many skeptics of the plan were surprised by the amount of progress that had been made as over a third of the 300 directives had been adopted by the end of 1988 (Bertrand 1989, Quickel 1989). By mid 1989, about half of the directives had been approved by the European Parliament (Work 1989).

There were still major barriers to single market integration as of early 1990. There was a large schism between the beliefs of Prime Minister Thatcher of the UK and the President of the European Commission, Jacques Delors of France. Thatcher supported the elimination of trade barriers but not the political unification of the EC. Delors argued for political unification so that the EC, rather than its twelve members, would formulate European social policy (Quelch, Buzzell, and Salama 1990). Thatcher had spent over a decade dismantling much of the social welfare state in the UK and did not want to fight that problem again in the form of EC social policies promulgated by EC bureaucrats (Hexter 1989). It was clear that political unification might not be feasible and that economic integration might be the most realistic goal as of 1990. Thatcher also fought the adoption of a single EC currency because she believed it was unnecessary for economic integration, would violate the sovereignty of the individual member states and would erode the members' distinctive characteristics (Gelb 1989).

Quickel (1989) noted the scrambling among EC firms to strengthen their competitive positions through mergers, joint ventures and other collaborative agreements with other EC-based firms. That resulted in much stronger EC competitors for non-EC based firms. He stated that the areas holding the most promise for development after unification were those in which the barriers to trade were being removed for the first time, such as financial and transportation services. Not only would EC-based firms have to adjust to a single market, but US firms would have to address unification because many of their European operations were quite fragmented in order to cater to national markets, which tended to be separate in the past. Work (1989) contended that the non-EC based multinationals, which were more entrenched in Europe than their EC-based counterparts, had a competitive advantage over many of their European competitors because of their pan-European expertise.

By 1990 many EC firms had expanded their operations not only within the EC but into other attractive markets, such as the US, through numerous acquisitions and joint ventures. Within the transportation industry the LEP Group, a U.K.-based freight forwarder bought Profit Air of Atlanta, and the Swiss forwarder Danzas acquired Northern Air Freight of Seattle. Thyssen of Germany purchased Amerford International, a New York freight forwarder. Following the example of US air express firms, EC-based firms began facing stiffer competition within the EC and turned to other markets as a means of survival (MacDonald 1989). That resulted in greater competition as foreign competitors entered US markets en masse.

While it was not clear in 1990 as to what would be the ramifications of an increasingly single, pan-European market, Vandermerwe studied the projected impact in a survey of business executives drawn both from within and outside of the EC. Those subjects expected the demand for services and JIT delivery systems to increase with market integration. They also mentioned that many firms would move toward acquisitions and cooperative alliances as a method of improving service to their customers throughout the EC (Vandermerwe 1989).

The strategic alliances created through collaboration between non-EC and EC-based firms became critical because firms that were perceived to be "European" were believed to have received the nod over those that weren't when it came to important government purchasing decisions in the EC. Forming partnerships was an excellent means of becoming more "European." In 1989 government procurement accounted for about fifteen per cent of the Gross Domestic Product of the EC and thus was a major market for many companies (Bertrand 1989). Government procurement within the EC was expected to open up as market integration and increased privatization of state-owned entities occurred. Both EC and non-EC based firms anticipated having a better chance of winning government contracts under the directives proposed in the White Paper (Stone 1989).

In order to succeed in international business, it was thought that foreign-based firms had to become insiders within the host country of operation. Ohmae stressed the fact that it took many years and a lot of effort to construct the local infrastructure and to create local demand required for success in a foreign market (Ohmae 1989). Strategic management literature began to pay more attention to the concept of insiderization as its importance became more widely recognized during the late 1980s.

After the 1985 White Paper, there was much debate over the extent to which the EC's "single market" would open to the providers of services not based in the EC. It was argued by some that the EC would become known as "Fortress Europe" and would exclude outsiders from its markets (Rau and John K. Ryans 1989). Thus, outsiders needed to enter the market and become insiders before the alleged boom fell in 1992. Others adopted the approach that the EC could not afford to exclude outsiders from its market because its members traded extensively with nonmembers and would be faced with serious retaliation abroad (Magee 1989, Stone 1989).

Some argued that there was no way in which the EC could control many services, such as communications which relied on satellite broadcasts. It was impossible for the EC to police European airwaves, which were filling up with foreign-produced (mostly US) programs as cable television swept across the EC in the late 1980s. In October of 1989 the EC approved rules which limited non-EC produced programs to less than half of the programming on EC stations. While the wording of the quota was weak, the US viewed that act as a sign of an "emerging Fortress Europe" and increased protectionism (Pedersen 1989).

Vernon raised the issue of whether outsiders would receive EC operating rights based on reciprocity or national treatment. Under reciprocity an outsider would only be allowed those rights inside the host country that were given to foreign firms in the outsider's home country. Under national treatment provisions, an outsider would be treated as if it were a host-country based firm. At times the US supported reciprocity and at other times it argued for national treatment depending on which principle was more convenient at the time. That produced more confusion and intense conflict as the EC attempted to arrive at a Community-wide policy on the rights of outside firms to do business within the EC (Vernon 1989).

As the EC moved toward 1992, it was believed that the size of that single market could significantly increase if neighboring non-members, such as the countries belonging to the European Free Trade Association (EFTA) and the Council for Mutual Economic Cooperation (COMECON) decided to join. Austria applied for EC membership in mid 1989. Its application was put on hold until 1992 because the EC was just too busy with single market integration to consider the application (Valls-Russell 1989). The movement in early 1990 toward reunification of East and West Germany, which was an EC member, illustrated the speed with which political changes could occur. An EC of fifteen or even eighteen member nations would be even more attractive as a single market. In 1990 with just twelve members, the population of this single market was about thirty per cent larger than the US and about three times as large as Japan (Vandermerwe and L'Huillier 1989).

The revolutionary changes in the governments of Eastern Europe during 1989 also raised the interesting question of whether those countries would seek EC membership. The air express companies were not taking any chances about missing out in such potentially large markets; several firms entered Eastern European countries during the period of this study as governments were changing and doors to the West were opening (Abruzzese 1989d, Axebank 1989, Hastings 1988b, Higdon 1989, Journal of Commerce 1988, Journal of Commerce 1989b, Journal of Commerce 1989d, Magnier 1989, Stove 1988). DHL provided service to eight Eastern Bloc countries by early 1987 (Polster 1988, Traffic World 1987a).

While it had been called a single market, the EC was composed of several different markets rather than one mass market. Vandermerwe and L'Huillier broke down the single market into six clusters using demographics and psychographics. While they projected that individual EC consumers would become more alike over time, they warned that the market for some services could remain local (Vandermerwe and L'Huillier 1989). Others argued that the pan-European vision melted away when it came to marketing and that a single market would not produce a "single mind-set" (Toman 1989).

In the OECD countries, such as those of the EC, the 1987 share of services (including public and private) exceeded half the value of the gross domestic product (known as the GDP) and provided almost sixty per cent of total OECD employment (Ochel and Wegner 1987). Ochel also stated that the service sector had been the subject of much more extensive government regulation than had manufacturing. That made it more likely that intra-EC services would explode once sufficient barriers were lifted.

Aronson and Cowhey studied the internationalization of services and found in 1984 that nations could no longer decide whether or not to allow internationalization to occur in the service sector. In the service sector many leading companies were dependent on foreign revenues for their success (Aronson and Cowhey 1984). As services became more international, firms faced increased global competition and pressure to innovate.

Even in early 1990 there was still much confusion as to the EC's role in regulating many services. As an example, the EC had attempted to regulate advertising during the 1970s and 1980s and made little progress. Some felt that its lack of progress was due to no one showing compelling evidence justifying the international regulation of advertising. In a study of the regulation of European advertising, it was noted that the proper role of the EC was to assure that the members' laws did not have an adverse impact on the creation of a single market and should consist only of some minimum requirements (Rijkens and Miracle 1986). The passage in late 1989 of an EC rule restricting the majority of television programming of EC stations to material produced within the EC was confusing. The wording included the language, "as practicable," which meant that it most likely would have little impact on the origin of such programming (Pedersen 1989).

Nusbaumer concluded that many activities had become more service oriented and that the service elements of transport had evolved at a rapid rate during the 1980s. He mentioned innovations in transport activities, such as routing, intermodalism, cargo distribution and load management techniques, which resulted in a tremendous diversification of services offered. He argued that knowledge was often the most important part of a service (Nusbaumer 1987). That statement could explain why the expertise of the international air express leaders was probably their most sustainable competitive advantage over other modes of transport.

While it was not clear as to what would be all of the ramifications of an increasingly pan-European market, it was believed that the demand for services and JIT delivery systems would increase with market integration. As a method of improving customer service and increasing their presence in the EC, firms were expected to move toward more acquisitions and cooperative ventures (Vandermerwe 1989). Under that view, the lowering of EC barriers to trade could only lead to increased competition among the international providers of services as the single market emerged during the 1990s. A discussion of how that affected the air express industry within the EC follows.

Air Express Within the European Community

As stated above air routes between countries historically were negotiated on a bilateral basis. While there was some effort to move that authority from the member states to the EC, that did not occur during the 1980s (Avmark Aviation Economist 1988a). Until the EC obtained that authority, multilateral air agreements could not become the norm throughout the EC. Following the trend in the US, the member nation's bilateral air agreements began to address the topic of air freight and specifically air express service during the late 1980s.

During the 1980s there were several proposals offered within the EC to provide for special treatment of air express shipments, but adoption of those proposals had not occurred by early 1990. An example of such a proposal was found in the Draft Council Directive which pertained to the "authorisation of air services for the carriage of Express Low Weight Cargo between member states" (European Community 1984).

In 1990 the twelve member nations continued to have authority over the air express services within their individual borders until the EC decided to pass legislation reserving such jurisdiction under the 1957 Treaty of Rome, which laid much of the foundation for the establishment of the EC. It was argued that the Treaty of Rome did not give the EC jurisdiction over aviation; that conflict coupled with the vested interests of member's flag carriers delayed the EC's exercise of jurisdiction over aviation (Williams 1976). As a result, air express firms were subjected to varying restrictions and laws because the EC member states had quite different approaches to aviation in general and to the air express industry. It was difficult to tell whether the operating environment facing non-EC based air express firms would be more favorable when the EC finally exercised its jurisdiction with regard to the air express industry. It was expected that there would be more uniformity in the restrictions facing the air express industry, which had to decipher twelve national sets of rules and regulations.

The heavy reliance on EC ground transport by air express services was partly due to shorter distances between major cities (than in the US) and a more rapid movement toward deregulation of trucking than of aviation in the EC (Bell 1980, Eddy 1988, European Commission 1985b, European Commission 1988). The European Commission projected a five per cent drop in trucking charges by 1992 if the trade barriers it targeted were removed (Economist 1988). As the complex system of bilateral permit quotas was scheduled to be phased out during the early 1990s, it was thought that fleet utilization and competition among truckers then would increase (Friberg 1989).

To a large extent European cargo already had been deregulated during the 1980s by the entry of integrated air express operators and the growth of trucking (Keeble 1988). Air express firms used trucking to serve EC customers (especially for distances up to 250 miles) because trucking deregulation shortened the border delays and customs clearance procedures for carriers. Users of air routes between EC members still faced various government restrictions, such as airport and aircraft noise regulations (Hastings 1989a). It was projected that the movement toward 1992 would fuel an expansion of pan-EC trucking companies due to the lessening of trade barriers (Commins 1989).

Some believed that even under EC trucking deregulation foreign (non-EC based) carriers could still have a problem in the 1990s with obtaining cabotage rights, which would allow them to move shipments between two EC countries (van der Hoop 1988). The White Paper of 1985 included several directives affecting air and trucking, and the EC's approach to cabotage was unclear as of 1989 (Gubbins and Hancox 1989, Tuninga 1989). There was also the threat of the EC adopting a rule requiring at least a fifty-one per cent ownership share in an EC-based trucking firm in order for it to receive full operating privileges within the EC. That policy was referred to as "the genuine-link" proposal. In December of 1989 the European Commission tabled that proposal until at least 1992 (DiBenedetto 1990).

Trucking companies could expect further problems with road congestion within the EC if the level of intra-EC trade increased rapidly as the single market concept took hold (Unsworth 1989b). At least the EC highway system was more universal than the rail system of the twelve member countries, which used not only incompatible rail gauges but also different overhead electrical power drive systems for trains (Plous Jr. 1989).

K.H. Neumeister of the Association of European Airlines supported Keeble's statement in agreeing that European air cargo market had long been liberalized; he stated that the newfound freedoms in air cargo would most likely be exploited by non-European air express firms, especially the Americans and Australians. Many questioned whether the European airlines would ever be capable of competing in the EC with the integrated air express firms (Hastings 1988a, Unsworth 1988).

During the 1980s several air express firms lobbied for and succeeded in getting expedited customs clearance treatment at various EC airports which sought their business. Brussels became a major international hub for air express because it provided a favorable operating environment which met the needs of the air express industry (Hastings 1985). In 1990 airport customs clearance procedures continued to present problems for air express firms in many countries, including those of the EC.

As in the US, government postal regulations remained a problem for air express firms in the EC countries, which favored their own their strong postal, telegraph and telephone offices, known as PTT's. Air express firms had to fight for the right to deliver documents in many EC countries because PTT's had a monopoly over mail delivery. In addition, most European PTT's participated in the Express Mail Service program, known as EMS, which competed directly with air express firms in the overnight delivery of documents and small packages (Journal of Commerce 1987, Traffic World 1987b).

Even with the restrictions they faced, it appears that the non-EC based air express firms made great inroads into the intra-EC market by 1990. Federal Express claimed that its European business, which amounted to about $200 million in 1989, was increasing at the rate of eighty per cent annually. It described Europe as "an incredible, exploding marketplace", and "the sleeping giant" (Tully 1989). In order to keep things in perspective, one should remember that Federal Express also stated in 1987 that there was only a worldwide market and that it was not just a transatlantic or intra-European market (Gallacher 1987).

The overall level of trade within the EC was expected to increase as trade barriers were lifted in the movement toward 1992. Mark Hawes, the cargo coordinator at IATA, stated that the level of trade was the best indicator of the demand for air freight service; the other key factors for determining the demand for air freight service included the balance between different modes, environmental issues and market access. Thus, unrestricted ownership and mergers and the limitation of doing business problems were critical to air freight expansion (Hawes 1987).

As the movement toward a single EC market picked up momentum, firms serving the intra-EC air express market expected to benefit from several market reforms. The customs delays between EC members were being reduced and in some cases eliminated. An example of this was found in the introduction of the Single Administrative Document (referred to as the SAD), which was introduced January 1, 1988. The SAD was a single customs document which replaced several of the numerous forms required in the past. The objective of customs reform was to eliminate inspections and bottlenecks at national borders and to lower transport costs through increased efficiency (Cheeseright 1985a).

While the intra-EC market did appear to hold much growth potential in late 1989, the air express industry still had to face the growing problem of the adoption of aircraft and airport noise restrictions. As in the US, there was little agreement as to which governmental body should control aircraft or airport noise. Both the European Commission and the European Civil Aviation Conference (known as ECAC) proposed differing aircraft noise regulations, and many local airport authorities passed various aircraft and airport operating restrictions (Reed 1989). The noise issue in the EC seemed to be as confusing as it was in the US; air express firms faced serious restrictions in both environments and had to carefully plan for the adoption of stricter noise controls at multiple governmental levels.

Another major problem facing all EC air carriers in 1989 was that of airport and airspace congestion. While IATA studied European air congestion and made recommendations to solve the problems created, the EC moved very slowly in addressing that matter. IATA argued that the lack of a long-term aviation plan for Europe would not help solve the immediate problems of a lack of technical standardization and traffic flow controls (Smeathers 1989). During the 1980s the air express companies tried to minimize the problem of airport and airspace congestion through their use of secondary airports and nighttime flight schedules; however, as the number of air express flights increased, the congestion problems became more serious for the air express industry throughout the EC.

A summary of the major issues pertaining to the development of air express within the EC follows. The authors supporting these answers are listed below each question.

1. What was the status of air and trucking deregulation in the EC during the late 1980s?

During the 1980s there was much discussion but little progress toward air deregulation in the EC. By 1990 many governments still owned national airlines and found it very difficult politically to support deregulation. Bilateral aviation agreements between individual countries had not yet been replaced by a multilateral system (Avmark Aviation Economist 1988a, Williams 1976). Trucking deregulation was phased in gradually starting in the late 1980s. It was expected to be complete by 1992. There was little government ownership of trucking companies and less opposition to its deregulation than that of aviation (Friberg 1989, Keeble 1988).

2. What was the impact on the air express industry of the move toward a single EC market in 1992?

It was projected that trade between EC members would increase as the barriers between them decreased (Bertrand 1989, Quickel 1989, Tully 1989). While the EC had not yet adopted special customs clearance procedures applying to the air express industry as of 1989, several airports provided expedited customs clearance for air express firms (Hastings 1985).

3. How did EC-based firms respond to the movement toward a single market?

EC-based firms acquired other EC firms and formed alliances with others in order to expand their operations into other member countries. They were trying to avoid being shut out of the intra-EC market by non-EC firms (Quickel 1989). In addition, many EC-based transportation firms were expanding abroad as their customers demanded increased international service. That raised the level of competition in markets both within and outside of the EC, such as the U S.

4. How did stricter EC aircraft and airport noise restrictions affect air express firms?
While the EC had not adopted uniform aircraft and airport noise regulations as of 1989, such legislation was expected in the early 1990s. By 1989 air express firms were already restricted by an increasing number of local limitations as to aircraft noise and operating hours (Reed 1989).

With this background on the international air express industry and services within the EC, a look at the role of entry barriers in marketing follows.

BARRIERS TO MARKET ENTRY AND ALLIANCES

Industrial Economics, Finance and Entry

The subject of this study was international market entry by a transportation service. This section reviews entry literature drawn from industrial and financial economics, marketing and strategic management. The origin of market entry theory is found in industrial economics, which initially attributed entry barriers to the structural characteristics of an industry.

Bain described the concept of industry-wide structural barriers to entry, which he defined as restrictions or limitations facing firms wishing to enter an industry. Under his theory of entry, three types of industry barriers arose from 1) absolute cost advantages, 2) advantages of product differentiation and 3) economies of scale. Thus, the existing firms within an industry derived market power from the presence of the barriers facing new competitors (Bain 1956).

Scherer described four methods of product differentiation, which could affect a firm's strategy. These ways of differentiating a product included the selection of a location (for either a plant or store), the level of service offered, physical differences in products, and the buyer's subjective images of products offered (Scherer 1970). Each of those four methods could support a successful strategy according to Scherer's view of product differentiation.

Scherer also included barriers to entry in his model of industrial organization analysis, which was directed at determining variables affecting economic performance and linking those variables to performance. His model linked the structure of a market to the conduct of its sellers and buyers, which in turn determined their performance within that market. He also noted the basic conditions of supply and demand, which helped determine the structure of a market. His model is shown in Appendix A.

Helms used Scherer's model to describe the performance of air express companies within the US (Helms 1987). Within the basic conditions described under supply and demand, several factors, such as the rapid technological innovation, substitute services, price elasticity, public policy and growth rates, stood out when applying the model to air express. Technological innovation enabled air express firms to meet their tight service deadlines with extremely high reliability and raised the amount of capital required for air express entry because the development and implementation of that technology was very expensive.

The availability of substitutes for air express affected the structure of the industry by intensifying competition for express shipments. Other parties offering express service included some passenger airlines, air freight forwarders and trucking and other ground carriers. During the 1980s air express firms differentiated their services by emphasizing their total control over the shipment at all times providing a competitive advantage which many competing services could not match.

Air express firms developed several classes of service based on time of delivery. Their more expensive level of service was for overnight delivery, for which the demand was less elastic than for deferred delivery, such as second through fifth day service, in which trucking was more competitive. During the 1980s more capacity was added in the US overnight air express market, and price competition resulted in lowered prices. That trend was expected to continue in international markets as firms added new routes and additional capacity in the late 1980s.

Public policy also affected the structure of the US and international air express industry during the 1980s. There was extensive regulation of air express by local, state and national governments, especially in the areas of customs, landing rights, postal competition, intermodal operations and noise restrictions. Government regulation of the air express industry is covered below under the discussion of regulation.

The rate of growth of the US air express industry was extraordinary during the 1980s; international air express repeated that trend a few years later as firms in many industries began to view air express service as a necessity for global success. Once their customers began to demand express services, most firms began incorporating higher and more varied levels of international customer service in their strategies, which was a real boon for air express firms. Those basic supply and demand conditions had a major impact on company performance as predicted under Scherer's model of industrial organizational analysis.

In a review of the market structure variables listed in Scherer's model, cost structures played an important role in determining the number of sellers and buyers in a market. Greer noted that absolute cost advantages could arise from incumbents paying less for scarce raw materials, shipping, superior production technologies or lower interest rates on borrowed capital. Thus, the capital requirements for entering a market could prevent many firms from entering and could limit the success of firms that enter without the financial assets of the market leaders (Greer 1984).

In order to provide the required services differentiating the air express industry from traditional air cargo services, the financial requirements for entering the industry were substantial. In 1987 Helms interviewed industry experts and examined company assets to estimate those requirements at approximately $1.5 billion for the US market. Helms identified the requirements for US air express entry to include a main sorting hub with package sorting capability of at least 400,00 shipments per night, at least sixty aircraft, 8,000 trucks, loading and unloading equipment, ground support equipment parts, drivers, mechanics, pilots, support employees, bar code scanners and computerized tracking, the ability to handle at least 10,000 calls per day, drop off boxes and customer service centers throughout the market.

Helms concluded that only Federal Express, UPS and Emery had the required US fixed base of terminals, aircraft and trucks. Federal Express was the most integrated US air express company and benefitted the most from the high entry barriers mentioned above (Helms 1987). It should also be noted that by 1990 the major air express firms increasingly relied on multiple hubs in the US in order to better serve their customers and lower their costs (Breskin 1989b, Schrodt 1989). That resulted in a further increase in the capital investment required to achieve minimum efficient scale, which occurred at a specified plant size with the production of a certain quantity of output at the lowest cost (Greer 1984).

It soon became clear that the minimum efficient scale required for international air express operation was much larger than that needed for US operation. As an example, a look at the 1988 fleet composition of the five largest international air express firms reveals that Federal Express operated a total (including charters) of 250 aircraft worldwide while UPS operated 173, Emery had 82 and DHL had 40; TNT (which was precluded from operating aircraft within the US) operated 47 within Europe (Avmark Aviation Economist 1988b). Thus, the barriers to entry resulting from higher capital investment requirements placed greater limitations on international air express entry than on domestic entry because of the larger initial investment required.

Greer also mentioned that economies of scale favored incumbents because existing firms had already built efficient plants and the added output of an entrant's efficient plant could be so large relative to industry demand that after entry, the product price would fall below the entrant's cost per unit. He found that capital cost barriers were relative because they depended on the size of the firm attempting entry. For a very large firm, enormous entry costs might not pose a serious problem (Greer 1984).

Helms also noted that there was room for just two or three large and profitable firms to lead the US air express industry and that the smaller competitors would have to locate a market niche and differentiate their services in order to survive (Helms 1987). Greer similarly stated that product differentiation barriers could entail substantial marketing costs for entrants. He described behavioral and conduct barriers which could arise from established firms greatly increasing their advertising outlays just as entry occurred, collective boycotts, collective rebates and predatory pricing (Greer 1984).

The other variables determining market structure in Scherer's model included vertical integration and "conglomerateness." Vertical integration could give a firm greater control over its economic environment and its markets (Scherer 1980). In the air express industry a major requirement for success was that a firm had to operate in an integrated manner. That meant that it had to control all aspects of its services from the incoming phone calls for pickup through delivery at the destination. For an air express firm to be competitive, it had to totally integrate its service from door-to-door in order to provide service that was not fragmented or disjointed (Helms 1989).

As used in his Scherer's model "conglomerateness" referred to the amount of diversity within a firm's product lines (Scherer 1980). Air express firms differentiated their services as price competition increased in the US and worldwide markets. Those firms moved into related areas such as deferred delivery, contract (third party) logistics, international remail, aircraft engine modification and maintenance operations in order to differentiate their services.

The above basic conditions and market structure affected the conduct and performance of air express firms under Scherer's model. Their conduct was evaluated through an analysis of their pricing behavior, pricing strategy and advertising, research and innovation, plant investment and legal tactics. Helms applied this model to the domestic air express industry in an effort to determine the future performance of air express firms (Helms 1987, Helms 1989). She concluded that product and technological innovation and research had a great impact on industry performance. She also noted that growth, entry barriers and pricing conduct were critical variables affecting industry performance.

In 1977 Caves and Porter generalized the concept of barriers to entry to that of barriers to mobility after recognizing that many of the firms entering a market were established in other markets and merely spreading their activities into new areas. They further stated that mobility barriers existed not only on an industry-wide level but also between groups of firms within an industry. New entrant firms had to overcome not only the industry-wide barriers but also the mobility barriers surrounding the specific subgroup of firms within that industry under this approach (Caves and Porter 1977).

Under this theory entrants had to deal with both levels of mobility barriers because incumbents of the industry as well as the sub-group being targeted for entry would respond similarly to outside threats of new entrants. An entrant might be able to enter the industry but not a particular sub-group because of the greater height of barriers at the sub-group level. The strategic ramifications of this structure were that an entrant had to target a particular sub-group within an industry or suffer the consequences of ignoring the group-specific barriers.

Caves and Porter contended that the mobility of entrant firms depended on how established they were in other industries and the relatedness, if any, of those industries to the one being entered. That information helped determine potential entry paths and whether entry would be direct or indirect. Indirect entry was more likely when capital requirements for entry were relatively large and entrants wished to minimize their risks. For those reasons established firms gravitated toward entry into the sub-groups composed of dominant firms surrounded by high barriers based on entry costs or product differentiation. Likewise, new firms tended to enter industry sub-groups along the "competitive fringe" where barriers were lower (Caves and Porter 1977).

Porter identified three market entry strategies based on his analysis of industries and competitors. Those included entry through a) internal development, b) acquisition and c) sequenced entry, which involved targeting one industry subgroup for entry and then moving into another sub-group after entry occurred. All three of those strategies were available to firms entering the intra-EC market (Porter 1980).

Porter applied entry theory in his analysis of industry structure and competition. He identified the factors that determined industry competition as being the threat of new entrants and substitute products, the bargaining power of suppliers and buyers, and the competition among existing firms. He stated that the objective of competitive strategy was to position a firm in an industry where it could best defend against or influence the competitive forces mentioned above.

There has long been confusion over the meaning of the term, barriers to entry, because it has been used in different contexts within business. Industrial economists have focused on a domestic perspective in their explanation of how incumbent firms keep outside firms from entering the market. A look at the literature of international business, which is not reviewed here because it is too broad, reveals that barriers to entry have been viewed as restrictions on international entry with emphasis placed on the power of the host country government to control entry by firms based in other countries.

Within international business, entry barriers continued to be confusing because they could take so many forms. The use of tariffs as barriers decreased during the 1980s because they were too visible and due to the growing vigilance of nations signing the General Agreement on Tariffs and Trade, which was directed at decreasing all restrictions on international trade. Non-tariff barriers, which are referred to as NTB's, began receiving much more attention as they became more common during the 1980s. Cao defined NTB's as "any public or private measures other than conventional tariffs that restrict imports or artificially stimulate exports". He categorized NTB's as "specific limitations on trade, customs and administrative entry procedures, standards, government participation in trade, charges on imports and others" (Cao 1980).

Within industrial economics Deardorff and Stern described methods for measuring NTB's in a study for the United Nations Conference on Trade and Development. They classified NTB's into five categories, which include the following:

1. Restrictions based on quantitative measures, such as quotas.
2. Charges not called tariffs and related policies affecting imports.
3. Government participation in trade and more general government policies.
4. Administrative practices such as customs procedures.
5. Technical barriers to trade (Deardorff and Stern 1985).

The confusion over definitions of barriers to trade presents an even bigger problem when one tries to measure such barriers. These difficulties are discussed in the research methodology in Chapter Three.

Porter was an industrial economist who crossed over into marketing; in the international arena he identified government policies as a major barrier to entry in global competition. Host governments had a number of techniques that could affect the operations of what he classified as global firms. He defined global industries as those in which member firms had to coordinate their worldwide strategies in order to successfully compete. Thus, the overall global competitive position of a firm affected the strategic positions of its competitors in major markets (Porter 1980). This theory was mentioned above in the discussion of the international air express industry in which the major players were forced to become global in order to survive in the 1990s.

Porter argued that the globalization of certain industries required those firms to focus on the global market rather than that on just one country because negotiations in one host country affected those in other host countries. Another implication of globalization was that successful firms emphasized the similarities and not the differences in the needs among different national markets (Porter 1986a). The implications of globalization were important in the international expansion of the air express industry because its customers were increasingly demanding coverage of most of the developed world.

Porter also stressed the global importance of coalitions, which were defined as long term agreements between firms that fell short of mergers. Coalitions were ideal for gaining market access and could provide many other global advantages. Most of the existing studies of coalitions focused on joint ventures and licensing and analyzed the legal form of the agreement. Only in the mid 1980s did researchers begin to take a broader view of collaborative efforts. Porter also found that the legal form of a coalition was not related to any one factor but rather to the competitive environment a firm faced, legal and tax considerations and the purpose of the coalition (Porter 1986b).

International collaboration will be discussed further below under strategic management as will the impact of being the first mover or firm to enter a market, a concept that originated in industrial economics (Williamson 1975). A review of the strategic management literature pertaining to entry follows.

Strategic Management and Entry

Both strategic management and marketing have borrowed the concepts discussed above from industrial economics. McGee related mobility barriers to strategic groups, which required cost or other disadvantages for non-member firms. Thus, non-members had to overcome those barriers before they could join the sub-groups, which were called strategic groups in management. He supported Caves and Porter's generalization of entry into mobility barriers because it more accurately portrayed the entry process and diversification motives of entrants (McGee 1985).

McGee promoted mobility barrier theory because he believed that Bain too narrowly restricted his discussion of entry barriers to new firms. McGee concluded that firms established in other industries were key players in entry through takeovers, vertical integration, additions to capacity and cross-entry and should not be ignored in entry studies.

Lambkin found that market pioneers outperformed later entrants on the average as measured by profitability (Lambkin 1988). Lieberman and Montgomery attributed the advantages of first mover firms to their technological leadership and preemption of scarce assets and to the switching costs of buyers. They also identified the disadvantages of first movers, which became the advantages of late movers. These included free rider opportunities, the solving of technological and market uncertainties, changes in technology that created new entry gateways and early entrant inertia that impeded their response to changes around them. They concluded that a first mover strategy was not appropriate in all instances for all firms and that its advantages might not provide first movers with a sustainable competitive advantage (Lieberman and Montgomery 1988).

The literature of strategic management also has addressed the role of cooperative relationships and alliances in international business. The forms of foreign involvement receiving the most attention have been direct entry through new startups (referred to as greenfield activities), acquisitions and joint ventures. Contractor and Lorange noted the increased use of numerous forms of cooperative alliances and how they were no longer viewed as a second choice after the preferred choice of going-it-alone by larger firms. They found that the new alliances tended to be global in many instances instead of being limited to a market in a single country. Cooperative alliances of varied forms between US-based firms and foreign partners outnumbered wholly-owned subsidiaries by a ratio of four to one. They also noted that many of these joint activities did not result in forming a new corporate entity, which usually occurred under a traditional joint venture. They concluded that cooperative international business alliances could be superior to wholly-owned and centrally controlled operations due to several environmental factors and other sources of risk (Contractor and Lorange 1988a).

There have been several reasons for increasing reliance on such cooperative agreements. Some of these factors have included risk reduction, economies of scale or rationalization, exchanges of technology, blocking competition, avoiding government restrictions on trade and investment, allowing inexperienced firms to expand internationally and providing linkages between partners in a value chain leading to a form of vertical integration (Contractor and Lorange 1988b). All of these reasons may have applied to air express firms trying to enter the intra-EC market during the 1980s.

The use of acquisitions to enter a market has been studied within strategic management as a method of achieving the objectives of the acquiring firm. Acquisition has been viewed as a strategy which might enable a firm to improve its market position both domestically and internationally, to acquire a synergistic product or service and to obtain a "beachhead" in a high-growth market (Allen, Oliver, and Schwallie 1981).

In a study of joint ventures, Gomes-Casseres offered a development cycle to help explain their formation and termination. He noted that a firm often used joint ventures to expand abroad, but that a multinational's global plans later on might be limited by the disadvantages of joint ownership. In the last stage of the cycle, wholly-owned subsidiaries enabled the firm to compete more successfully than did joint ventures (Gomes-Casseres 1988). He discussed the instability of international joint ventures and wholly-owned subsidiaries in an earlier study in which he concluded that joint ventures often ended after achieving their purposes (Gomes-Casseres 1987). Hergert and Morris reached a similar conclusion in their finding that as markets evolved, it became harder to create and maintain collaboration. Thus, joint ventures might not be appropriate in the advance stages of market development (Hergert and Morris 1988).

Kogut and Singh also took a broad view of collaboration in their study of firms entering the US through joint ventures. They viewed all kinds economic transactions not motivated by coercion as being forms of cooperation, which was one choice between several alternatives including "acquisition, internal development, joint ventures, licensing and nonequity contracts" (Kogut and Singh 1988). That could be interpreted to mean that cooperation and collaboration were much more common than traditionally defined and could have had a much greater impact on a firm's competitive strategy than once believed.

According to Hamel, Doz and Prahalad, firms had to develop a strategic approach to collaboration in order to benefit fully from it. A true measurement of collaborative success was not longevity but rather the shifts in the relative competitive strengths of the partners. They also emphasized that collaboration was a form of competition and that the extent to which a firm learned from its partners was more important than the legal form of its cooperative effort (Hamel, Doz, and Prahalad 1989).

Even when a broader view of coalitions has been adopted, researchers often have been limited in their access to such agreements. Ghemawat, Porter and Rawlinson studied all of the international coalitions formed between 1970 and 1982 and reported in the Wall Street Journal. While they found that there was no clear increase or decrease in the number of collaborative agreements during that period, they stated that their database had several limitations. These included the lack of coverage of many smaller companies' collaborative activities and an emphasis on those agreements with at least one US partner (Ghemawat, Porter, and Rawlinson 1986). Thus, many collaborative efforts have not been covered by the US business press nor included in the studies of alliances.

In summary, strategic management literature has emphasized the impact of strategic groups and mobility barriers upon entry. That discipline also has addressed the benefits of being a first mover and of cooperative alliances. The next section of the literature review discusses how marketers have drawn from industrial economics and strategic management in an effort to explain the impact of entry barriers on firms.

<u>Marketing and Entry</u>

Within marketing literature Root discussed entry strategies for foreign markets and noted that no market could be safe in the long run from foreign competition. Companies must eventually learn that there were only world markets and no longer just domestic markets. He viewed foreign market entry as a five step process which included the following activities: 1) assessing products and foreign markets, 2) setting objectives, 3) selecting the entry mode, 4) creating a marketing plan, and 5) controlling the system through monitoring and revisions. He emphasized the importance of planning entry strategies in claiming that firms without them were unable to think systematically about their future in international markets (Root 1982).

Root classified entry modes as either export, contractual or investment in nature. He defined contractual entry modes as "long term nonequity associations between an international company and an entity in a foreign target country." They involved such activities as technology transfer, industrial property or expertise exchanges and other arrangements. He described investment entry modes as requiring ownership of an entity in the target country by an international firm. He classified them as sole ventures or joint ventures, either of which could arise through the direct entry of a newly established firm or through an acquisition of a firm within the target country. He also offered a model in which several external factors influenced the selection of foreign entry mode; these included the environment, markets and production conditions of the target country along with factors in the home country. He added that among the target country environmental factors, the most noteworthy ones probably were the governmental regulations and policies that affected international business (Root 1982).

Toyne and Walters categorized such international barriers as either exit, entry or marketplace barriers. Exit barriers were put into place by the home government while entry barriers were erected by the host government. Under that approach marketplace barriers continued to limit operations in the host country after entry occurred (Toyne and Walters 1989).

Another marketer viewed entry as the beginning of the strategic sequence through which multibusiness corporations progress; the sequence consisted of the four stages of entry, growth, shrinkage and exit. Yip distinguished entry from diversification by viewing entry as beginning activities in a market new to the firm while diversification referred more to the newness of the products rather than the market. Yip described how a particular competitive strategy could become a "gateway" or negative barrier, which could provide the entrant with a competitive advantage (Yip 1982a).

As an example Yip offered Federal Express, which was able to avoid some entry barriers by changing accepted business practices while providing competitive services. The delivery of packages using its own planes and ground services was one of its main competitive advantages and revolutionized the structure of the air express industry. Yip classified such a response as a retaliation barrier, which erected a wall to protect an entrant (Federal Express) from competitive threats (Yip 1982b).

Yip differentiated between direct entry and acquisition entry, which allowed an entrant to minimize or avoid some of the barriers. It also helped minimize the entrant's risk. Yip used the PIMS database to study the impact of barriers on occurrence of entry and on the entrant's strategy and market success. He expanded Bain's original theory of entry barriers, which stated that industry structure was the only source of barriers to entry. His study included new and existing firms as entrants and acquisition as an entry strategy; it also differentiated between fringe and core market segments and evaluated differences between competitors and their strategies (Yip 1982a).

He further identified two types of acquisition strategies; one was made primarily for investment reasons. The second type of acquisition involved using the acquired firm to expand into a new market. He included only the second type of acquisitions in his study although the differences in acquisition strategy tended to lie along a continuum with market expansion at one end and acquisitions solely for investment purposes and without market expansion plans at the other end.

The findings of Yip's 1982 study included the following:

1. A potential entrant's characteristics such as assets and expertise could enable a firm to avoid or minimize entry barriers.

2. An entrant could also minimize a direct confrontation with entry barriers through innovative competitive strategies.
3. The traditional entry barriers based on industry structure did not have as significant of an impact on entry as was expected.
4. Acquisition entry was more likely (than direct entry) when barriers were high, the entrant had relatively low ability, the entered market had low growth, or incumbents had large parent companies.
5. The entrant's market share increased when competitors exited the industry, when the business entered was related to the parent company's business, and for entrants with diversified parent companies or with higher prices than incumbents due to relatively higher product quality (Yip 1982a).

Yip's study provides a background for analyzing air express entry within the EC market. Many of his findings may apply to and help explain the entry activities of air express firms. Air express firms have struggled to be the first to enter a market because of the belief that that would provide them with a long term advantage over later entrants because of limited facilities, such as nighttime airport flight slots (Euromoney 1988b).

In a review of how international marketing has evolved, Terpstra noted the increasing reliance on international strategic alliances formed to carry out various tasks. He stated that it was hard to find a multinational which was going it alone in international marketing because so many firms were joining competitors from different countries in collaborative efforts, especially those aimed at market entry, distribution and services. He mentioned that not only did a global firm need to enter many markets but that it had to become an insider in those markets in order to avoid protectionist barriers. He also discussed the wide variety of innovative methods of entry resulting from such collaboration (Terpstra 1987).

Within marketing literature there have been studies of the advantages of market pioneers in consumer as well as industrial goods markets, but little has been written on services and market pioneers. Marketers of consumer goods have relied on a study from industrial economics in which Schmalensee described the first entrant's advantage due to product differentiation. Once a consumer tried the market pioneer's offering, he measured subsequent brands against the standards established by the first mover's brand. Schmalensee stated that later entrants thus faced a more difficult task in persuading users to even consider a subsequently introduced brand, which would be measured against the standard established by the pioneering brand (Schmalensee 1982).

Marketing studies have suggested that the greater market shares of pioneers have been due to consumer information advantages as well as to the superior characteristics of the firm's marketing mix and its direct cost savings. The pioneer's advantage relating to consumer information was thought to occur for low priced products which were purchased infrequently and not changed frequently by the market pioneer (Robinson and Fornell 1985). In a later study of industrial goods buyers, Robinson stated that market pioneers tended to offer broader product lines and higher product quality than followers (Robinson 1988).

In a study of domestic market entry barriers Karakaya and Stahl analyzed the relative importance firms attached to six types of entry barriers (Karakaya and Stahl 1989). They used the classes of barriers described by Porter and measured the differences between the importance of those barriers for early and late entry (Porter 1980). While their study was not international in scope and did not emphasize services, they did include an excellent review of entry literature in marketing.

There was a question as to whether these market pioneer and first mover findings in consumer and industrial goods applied to services such as air express. That could not be determined until there were sufficient studies of market pioneers in services. In the interim entry theory discussions had to consider the potential competitive advantages of first movers in order to help firms determine whether or not a firm should make the tremendous effort required to become a first mover. It also was not clear whether the resulting competitive advantages could be sustained over a period of time.

As discussed above the literature of marketing, strategic management, economics and transportation has recognized that governments have been a major source of barriers to entry. The next section reviews government regulations which have affected entry within the air express industry.

Regulatory Barriers and Entry

There have been many governmental regulations affecting the air express industry both directly and indirectly. Many examples of regulations have been described above. They can been classified as pertaining to certification, ownership, noise, intermodal, postal, customs, bilateral agreements and other aspects of air express operations. The first type of certification regulations determined what requirements had to be met before a company could offer air service. In the US air cargo carriers were deregulated a year before the passenger carriers were in 1978. In 1977 a new category of "all-cargo air service carriers" was created when Congress amended the Federal Aviation Act; all-cargo carriers could operate any size of aircraft and were no longer limited to smaller planes under deregulation. After 1978 any US citizen could apply for an all-cargo certificate. The Civil Aeronautics Board (referred to as the CAB) would approve the certificate if it found the applicant to be "fit, willing and able." The able part was met if the carrier obtained a stated amount of liability insurance (Kane and Vose 1982).

The ownership requirements within the US prohibited foreign entities from controlling a US air carrier. While the wording of the law was not explicit, the DOT interpreted control as owning more than twenty-five per cent of the voting stock or equity in a US airline (Abruzzese 1989c). During 1989 there was much heated discussion of that requirement as numerous foreign airlines, including KLM and British Airways among others, sought to purchase greater than twenty-five per cent interests in US carriers. The

Department of Transportation scrutinized and restricted their acquisitions because it did not want foreign airlines to be able to enter the US market except through bilateral agreements between their home governments and the US (Abruzzese 1989b). That regulation prevented TNT, an Australian-owned transportation company, from owning its own fleet in the US. As of 1989 the EC countries did not have a similar ban on foreign ownership of an air carrier; however, there were discussions about passing such a regulation to retaliate for the restriction on foreign ownership of US air carriers (DiBenedetto 1990).

As discussed above noise regulations have had a great impact on the air express industry, both domestically and abroad. During the 1980s numerous governments began setting maximum noise levels as measured in decibels and prohibiting aircraft not meeting those requirements from operating out of certain airports (Leeper 1989). Some airports were closed at night due to noise problems in adjacent residential areas. That problem appeared to be getting worse in 1990; air express firms had to plan for increasing noise legislation by acquiring quieter planes, moving their hubs to less populated areas, utilizing ground transport to a greater extent and hush-kitting their existing aircraft where possible (Breskin 1989a, Sterne 1989).

Before air and trucking deregulation in the US, airlines were prohibited from trucking air freight its entire journey; they had to utilize air carriage for at least one leg of the journey. Under deregulation air express firms could truck as much of their freight as they desired because air carriage was no longer required. In effect air express firms began operating their own trucking companies in the US as the result of trucking deregulation; by 1990 they used more trucks than airplanes even though they emphasized the speed of air in their promotions (Mahoney 1985).

Air express firms were attracted by the lower costs of trucking. Federal Express estimated that it cost twelve cents a pound to move a shipment by truck and sixty cents a pound to move it by air (Feldman 1985b). Thus, Federal Express emphasized trucking when it opened its Indianapolis hub in 1988 (Christie 1988c). They did not need trucking route permits to operate between any two points and could serve most of the destinations required by their customers. There had been a problem with intrastate regulation of trucking in the US, and Federal Express led the movement to deregulate intrastate trucking as well because such regulations limited its flexibility in moving shipments by ground (Johnson 1987).

In most countries air express firms had to battle the national postal authority for the right to carry express shipments. In the US the postal statutes had to be changed in 1979 so that air express firms could carry express documents because the USPS had a monopoly on the carriage of documents or letters (Colvin 1981) That battle continued in the US and elsewhere as the postal monopolies remained powerful in 1990 (de Rivery 1989, International Express Carriers Conference 1989).

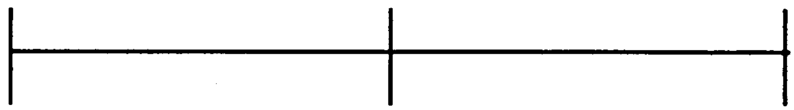
Certain aspects of government regulation, such as customs, postal and bilateral agreements, have had serious ramifications for international air express firms. While those types of regulations often were not directed at air express firms, they have had major impacts on their international operations. In some instances they have restricted the size of air express aircraft, which has made some routes uneconomical. In other cases the agreements have restricted the return or backhaul route resulting in a firm having to fly empty planes on the return trip (McCarthy 1986).

Customs clearance procedures and postal monopolies have posed major difficulties for air express firms in most countries, including the US. The IECC has been instrumental in seeking uniform customs treatment of air express shipments in all countries, a goal that had not been achieved by 1990 (Campbell 1986). The history of the IECC explains how it used local representatives to achieve these reforms by becoming insiders in sensitive countries such as France (International Express Carriers Conference 1989). Before 1988 the French government did not let DHL operate as an express courier more than twenty-five kilometers outside of Paris because it did not want competition with its nationalized postal service (Keeble 1988).

As parties to bilateral negotiations, governments have controlled international air routes as well as the ground handling and trucking rights of foreign air carriers. Within the US trucking by foreign airlines has been limited to destinations within thirty-five miles of the airport served by the foreign carrier under many bilateral agreement unless US air carriers received reciprocal ground rights in the country of the bilateral agreement partner (Mahoney 1985). Thus, US carriers were similarly limited in other countries depending on the wording of the relevant bilateral agreement. Such regulations have had a serious impact on the air express industry, which has depended on intermodal integration for meeting its service requirements.

Examples of other types of government regulations affecting air express firms have included laws pertaining to labor, unionization, advertising and illegal drugs. Those regulations have varied significantly from country to country, thus making it extremely difficult for air express firms to operate on a global basis. In addition, there has often been little agreement within a country as to which branch of the government should regulate air express. That became evident in the disagreements between the ICAO, ECAC, local and national governments in European countries and the EC in setting noise standards for the EC (Lloyd's Aviation Economist 1986). With uncertainties facing it like those above, it was surprising that international air express even existed.

An analysis of the above barriers to entry literature reveals a pattern of how firms have viewed barriers to entry. At one extreme on the continuum some entry variables have been perceived to be absolute barriers to entry. Other entry variables have been viewed as mobility barriers, which could be overcome by firms with experience in similar industries. At the other extreme were entry variables which have been perceived merely as doing business problems and not as absolute barriers to entry. A firm's international entry expertise often determined to a great extent how it has viewed a certain entry variable. This continuum is represented below.



Absolute barriers to entry **Mobility barriers** **Doing business problems**

At the extreme end on the left, some firms have taken the traditional view of entry obstacles as absolute barriers to entry and have not attempted entry because they perceived these barriers to be insurmountable given the company's resources. Under this approach industry-wide structural barriers to entry (resulting from absolute cost advantages, product differentiation and economies of scale) have restricted firms from entering a particular industry (Bain 1956, Greer 1984, Scherer 1980).

Mobility barriers are located towards the middle of the continuum. Some firms have viewed similar entry problems as being less absolute. Many firms entering a market were established in other related markets and faced mobility barriers as they moved into the new markets. Mobility barriers existed at the industry-wide level as well as within an industry sub-group forcing many firms to enter sub-groups that were not the dominant ones in an industry (Caves and Porter 1977, McGee 1985).

Doing business problems are located at the right end of the continuum. Many firms with international expertise have viewed the entry and mobility barriers discussed above as problems of doing business. Such entry problems have been minimized through acquisition and innovative competitive strategies, such as those used by Federal Express (Yip 1982a, Yip 1982b). International collaborative alliances between firms often were required to overcome entry problems in many markets (Contractor and Lorange 1988b, Terpstra 1987).

The above analysis of barriers to entry and their impact on the air express industry completes the literature review, which is summarized below.

SUMMARY OF THE LITERATURE REVIEW

The objective of this review has been to analyze published research providing a foundation for understanding international air express entry in the intra-EC market. The literature review has identified the basic entry theories derived from industrial and financial economics and those which have been utilized in marketing and strategic management. The contributions of the two latter disciplines have further expanded entry theory to describe in more detail how it has affected market entry.

The review of air express development within the US illustrated how the industry expanded during the 1970s and matured during the 1980s. The identification of the factors behind this growth revealed what was required for a successful domestic air express industry. The role of air express in distribution became more noticeable as shippers incorporated air express into their customer service standards. While some of the problems facing the industry decreased with the deregulation of US aviation, other problems continued to hamper its growth. These included postal competition, airport congestion and noise restrictions. The utilization of secondary airports as hubs, extensive reliance upon trucking and other unique characteristics of air express differentiated it from competing transportation services.

As the US market matured, air express firms were forced to address the international market as well as other promising domestic markets. Their US customers were becoming more global in orientation and demanded faster and more reliable service worldwide. Within international air express, governmental regulation was even more far reaching than at the national level. Numerous postal monopolies fought the international expansion of air express because it posed a threat to lucrative domestic and international markets for most national post offices.

The lack of standardization of and outdated customs procedures provided major obstacles for international air express. Firms resorted to many innovative methods for dealing with these barriers, obstacles, problems and whatever else they were labelled. Some firms relied on couriers using passenger flights to clear customs rapidly; that became impractical as the number and size of shipments increased during the late 1980s. Others used trucking more extensively because it was less regulated than aviation in many countries and did not face such severe nighttime restrictions because of high noise levels.

While some bilateral aviation agreements in the 1980s began to provide intermodal rights for air carriers, most did not as of 1990. The most innovative air express firms dealt with such restrictions in a manner which enabled them to operate internationally. As their expertise increased, they began to view many barriers to entry as problems of doing business.

During the late 1980s most of the research on market entry within the EC focused on the impact of market unification on EC-based firms doing business there as 1992 approached. The Cecchini Report studied the costs of not removing frontier barriers between EC countries; the European Commission had to convince the twelve members that market unification would lower the costs of goods sold in all twelve countries (Cecchini 1988). The EC in general did not support research about entry barriers facing non-EC based companies during the 1980s because its members sought to maintain existing government monopolies, which required protection from foreign entrants.

The future role of non-EC based service firms in the EC was unclear as of early 1990 because the EC had not yet decided on their status. Much depended on how EC-based service firms were treated outside of the EC, and many non-EC governments were slow to comprehend the importance of this relationship based on reciprocal treatment.

By 1989 it was evident that the movement toward 1992 would not result in a single, uniform, European market composed of "Euroconsumers." Firms would still be required to establish a local presence in each country in order to be treated favorably there under Ohmae's (1985) concept of insiderization. They still would have to modify their services in order to satisfy the many different market segments.

The lack of uniformity in governmental regulations was quite evident in the EC countries in early 1990. Air express firms were faced with a wide variety of airport noise restrictions and operating hours, which had severe impacts on their productivity levels. As in the US, there was not yet a uniform aviation noise plan. Air express firms had to plan their fleet and airport facility requirements many years in advance of actual aircraft purchase because of the limited availability of suitable aircraft, their long useful lives and the increasing level of air and airport congestion in the EC. That was very risky without knowing what type of noise regulations would be in effect even one year down the road.

The concept of mobility barriers has made an important contribution to market entry theory by describing the evolution of many absolute barriers to entry into mobility barriers, which could be overcome more easily by firms with expertise and large shares in related markets and industries. The concept of product differentiation has provided the air express industry with competitive advantages over substitute services and differing levels of service for its customers.

Many of the barriers to air express entry were derived from Bain's absolute cost advantages and economies of scale. The required amount of capital investment became so large during the 1980s that new entrants to the US market would have faced a financial investment of at least $1.5 billion according to Helm's (1987) study. The amount required for international air express entry would have been much greater. It was not possible to provide competitive air express service without such investment, and most new startups did not have that kind of funding. Thus, the entrants came from related markets and industries under the theory of mobility barriers.

Another important contribution of economics was that of non-tariff barriers as increasing sources of international restrictions on trade. Administrative practices such as outmoded customs procedures presented major problems for the industry. Another type of non-tariff barrier resulted from government participation in trade through postal monopolies and ownership of airlines. These types of barriers presented major obstacles for the industry.

The importance of international alliances and collaborative efforts were mentioned within economics, strategic management and marketing. When governments supported non-tariff barriers, such as those due to customs procedures and postal monopolies, foreign entrants often had no alternative but to enlist the aid of local partners in a collaborative effort.

In summary, the above review of the air express industry has shown that the global nature of the industry became apparent only in the late 1980s; the literature as of 1990 had yet to catch up with that international expansion. The section on air express within the EC described some of the major changes occurring as Europe approached the target date of 1992 for single market status. The changes expected as the result of the push toward 1992 added even more uncertainty in an industry experiencing upheavals in most of its markets.

With the above background in mind, the third chapter describes the methodology used to investigate the entry of the five subject air express firms into the intra-EC market during the period of 1985 through 1989.

CHAPTER THREE

RESEARCH METHODOLOGY

BACKGROUND

As stated in Chapter One, the purpose of this study was twofold. The first objective was to identify the factors restricting the entry of non-EC based air express firms into the intra-EC market for air express. The second objective was to determine how these firms have entered this market. These two objectives lent themselves to the following two research questions.

RESEARCH QUESTION ONE

What were the perceived barriers facing the subject air express firms entering the intra-EC market?

RESEARCH QUESTION TWO

What forms of entry did the selected air express firms use to enter the intra-EC market?

As discussed in the literature review in Chapter Two, there was a scarcity during the 1980s of marketing literature pertaining to international market entry. One of the greatest challenges facing service firms such as air express was determining how to enter foreign markets when the firms' customers demanded such international coverage or for the many other reasons entry was desired.

The research methodology utilized to answer the above two research questions consisted of three parts, each of which incorporated the information gathered in the previous stage. The first part was an exploratory phase designed to provide insight about barriers and market entry and to familiarize the researcher with the problem. The second phase was descriptive and consisted of an analysis of the entry histories of the subject firms. A longitudinal study of the subject firms described the forms and countries of entry using secondary data as the source of information.

The third phase also was descriptive and utilized surveys of selected management employees and ex-employees of the subject firms; it was designed to help identify the barriers as perceived by the individual firms. The study focused on the entry problems or barriers as perceived by the subject firms because the forms of entry they selected in the subject countries was partly determined by the entry problems as they perceived them. Those individuals were asked to review the entry history of their firm (as developed above in the second phase) in order to verify those findings.

There has been much support in research literature for multimethod inquiry. Van Maanen, Dabbs and Faulkner emphasized that each stage of the process entailed "a unique mode of data collection" and provided the researcher with a "different vantage point." The use of multiple methods has allowed the researcher to minimize the limitations of any one method of data collection, to adjust his perspective or focus in ways that would not occur using only one method and to validate findings under one method by using another. A three step or triad method of data collection involved a sequential process of testing and discovering "ideas, hunches and hypotheses" (Van Maanen, Dabbs Jr., and Faulkner 1982).

The primary research methodology utilized here was based on qualitative research techniques. Lofland has listed the questions typically answered by qualitative research (Lofland 1971). These included the following:

1. What is happening here?
2. What are the different forms of this phenomenon(a)?
3. How does this phenomenon(a) vary?

In strategic management Duncan stated that until these types of questions could be answered, one could not begin to ascertain the causes and relationships between the research question and any other phenomena associated with it, which were the typical ends of quantitative research (Duncan 1979).

This study was designed to identify and describe the factors restricting entry and the forms of entry selected by the subject firms. There had been much talk about barriers to entry, but a lack of published research provided limited help for interested parties. One of the reasons offered for a lack of research on market entry was that the forms of collaboration often used by entrants exhibited great variety making research quite difficult (Mariti and Smiley 1983). Another problem was that many entry restrictions were not visible or easily measured, especially non-tariff barriers, which are referred to as NTB's (Deardorff and Stern 1985).

Churchill described three basic types of research design based on the objective of the study; these included exploratory, descriptive and causal research. Exploratory research emphasized problem formulation and familiarizing the researcher with the problem. Descriptive studies analyzed the relationship between two variables or the frequency with which something occurred. The objective of causal research was to find cause and effect relationships between variables. In selecting the most appropriate type of research design, Churchill stated that the design chosen should be based on the nature of the problem studied. He viewed the above three designs as a "continuous process" with investigation becoming more detailed with each stage of the process (Churchill 1987).

While many researchers viewed qualitative and quantitative research approaches to be mutually exclusive because they were based on different views of the world, some contended that the nature of the research situation should have an impact on the research method chosen and that combinations of both methods might be the best approach in many instances

(Reichardt and Cook 1979). A discussion in greater detail of the three phases follows.

THE FIRST PHASE EXPLORATORY INTERVIEWS

The first phase of the research design was entirely exploratory in design. The purpose of this phase as stated above was to increase the researcher's familiarity with the problem and to aid in problem formulation. This phase consisted of a series of interviews with sources who were not employed by the five subject air express firms, but were knowledgeable about different aspects of the research questions.

As described by Mayer, the nature of personal interviews is such that they entail great flexibility, which allows the interviewer to ask unstructured or open-ended questions needed in exploratory research (Mayer 1974). While personal interviews can be very expensive and time-consuming, Mayer stated that a few of them may provide more information than larger surveys using other techniques. He also noted the limitations of interviewing, which often were based upon interviewer bias. These limitations could take the form of problems with validity, reliability, sensitivity, selectivity, contamination, feedback and noise. He also stated that recognizing these limitations should not discourage researchers from using personal interviews.

The interviews and questions in the first phase were unstructured allowing the researcher to follow leads into related areas, which might not have been obvious using a structured format at the outset. Patton has described the goal of qualitative interviewing as providing a framework in which the respondents could express themselves using their own terms. He also has stated that in qualitative research causal relationships and theory must be grounded in and emerge from the phenomena studied rather than being imposed on the data (Patton 1980).

The first phase interviews were conducted by telephone and/or in person depending on the subject's knowledge of the topic and convenience. Subjects were selected after numerous telephone calls and upon recommendations by knowledgeable sources. All of the subjects contacted agreed to be interviewed. A list of the people interviewed follows:

1. Steven Alterman, Exec. V.P., Air Freight Association, Reston, VA.
2. Brian M. Campbell, V.P., Leeper, Cambridge & Campbell, Alexandria, VA.
3. James I. Campbell, Jr., Secretary and General Counsel, International Express Carriers Conference, and General Counsel, Air Courier Conference of America, Washington
4. Vince Dantone, Manager for Air Express, Department of Treasury, Customs Service, Washington
5. Ingrid Kollist, International Transportation Officer for Air Cargo, Department of State, Washington
6. William Kutzke, President, Kutzke and Associates, Washington
7. Randy Miller, Air Cargo Manager, Department of Commerce, Washington
8. Tim Neale, Aviation Reporter, The Journal of Commerce, Washington
9. Lisa Ray, International Aviation Affairs Negotiator, Air Transport Association, Washington
10. Ed Robinson, International Aviation Affairs, Department of Transportation, Washington
11. Ted Scherck, President, The Colography Group, Atlanta
12. Dick Shreve, Assistant Director-Cargo, Air Transport Association, Washington
13. Frederik Sorensen, Chief, Air Transport, Commission of the European Community, Brussels
14. Mary Street, Desk Officer for UK and Ireland, Department of Transportation, Washington
15. Michael Styles, US Regional Director, International Air Transport Association, Miami.

A summary of the important information collected from transcripts of the interviews is provided in Chapter Four. Some of the topics that were to be covered in the interviews included the following as they pertained to air express:

1. Bilateral air treaties and intermodal authority
2. History of air express (US and international)
3. Doing business problems (international)
4. Barriers to entry (international)
5. Noise regulations (US and international)
6. Customs clearance procedures
7. Ground handling at airports (US and international)
8. Advertising restrictions (international)
9. Characteristics of air express and how it differs from traditional air cargo
10. Scheduled passenger airlines and cargo
11. Forwarders and air cargo carriers
12. Electronic data interchange (EDI)
13. Postal services (US and international)
14. Foreign flag carriers
15. Trucking
16. Intra EC market for air express
17. Data collection (domestic and international air express).

As stated above, the purpose of the first phase was to provide the background information needed for further study of the topic. The summary of the information gathered on the above topics is included in Chapter Four. This phase of the study was designed to lead into the next stage, which is discussed below.

THE SECOND PHASE ENTRY HISTORIES OF THE SUBJECT FIRMS

With the above background information collected in the first phase, the next need was for a descriptive history of entry into the subject market. This information was required for determining which air express companies had entered the intra-EC market and the forms of entry they used in that process.

For this phase of the study, five firms were selected as subjects on the basis of their international or US market shares. The companies selected due to their international market shares were Thomas Nationwide Transport (referred to as TNT) and DHL International (DHL). These two firms had small US market shares but were the two largest players in international air express during the 1980s.

In early 1989 DHL carried about forty per cent of air express shipments on the Continent and sixty per cent of all US-bound air express shipments (Foust 1989). At that time DHL estimated that it carried half of all US outbound shipments in over 100,00 international shipments on a daily basis (Davies 1989a). A closely held conglomerate based in Hong Kong and in California, DHL began as an international air express courier in 1969. As of late 1988 it had the largest market share in international air express followed by TNT, the USPS, Federal Express, UPS and Emery (Christie 1988a).

TNT, a subsidiary of Australian-based Thomas Nationwide Transport, had the second largest share of international air express in 1988 and at that time made the claim that it was the largest transportation company in the world. It began operations as a trucking company and in 1988 received most of its revenues from road haulage (Avmark Aviation Economist 1988b).

The air express firms selected on the basis of their US market shares were Federal Express, United Parcel Service (which is referred to as UPS) and Emery, which are three of the largest firms in the US air express market. As mentioned above, it was difficult to measure air express market shares for a number of reasons. The figures varied according to whether volume was measured in the number of units shipped or total revenue and whether second day, heavier freight and other modes and services, such as ground shipments and inventory management, were included. Also, the providers of such data did not always reveal which approach was being used. At the end of 1988 US air express market shares were as follows: Federal Express had 51%, Airborne Freight had 12%, UPS had 10%, DHL had 5%, and Emery had 5% (Christie 1988a). Contrasting figures were provided by Ted Scherck of the Colography Group, who stated that Federal Express had 45%, UPS had 26% and Airborne had 10% of the US air express market at that time (Lelyveld 1989). A fact sheet containing information about the five subject companies is contained in Appendix B. A map of the EC showing the hubs of the subject firms is included as Appendix C.

The intra-EC market was selected for study for several reasons. The subject companies targeted this market for heavy investment during the 1980s as the demand for trans-Atlantic and intra-EC air express services began to grow and as barriers to trade began to fall. The largest market for air express service was in the US, and it began to mature with growth rates leveling off during the late 1980s. Air express customers started demanding more international coverage as they entered foreign markets and expanded their manufacturing operations in other countries in order to cut costs, which was known as outsourcing. As mentioned above the EC movement toward market integration took off with the White Paper in 1985, and that trend made it easier for transportation companies to operate within the EC. Another reason for international air express expansion was that the fifteen largest firms controlled less than half of the international air express market while many smaller, national companies dominated the remainder of the market. That left the international air express market ripe for entry in the minds of the larger firms (Christie 1988a).

The entry histories of the subject firms were compiled on a chart similar to the one shown in Appendix D. The information was collected from secondary data drawn primarily from the sources listed in Appendix E. For each firm and each year from 1985 through 1989, a single chart described the country entered, the name of any companies used for entry, the form of the entry, the geographic coverage of that entity and the main mode utilized.

The form of entry was described as one of the following:
Direct = direct entry (opening up an office and hiring its own employees)
Acquisition = acquisition (100% ownership)
Partial Acquisition = partial acquisition (less than 100% ownership)
Joint Venture = joint venture (a new entity with some ownership interest)
Contract /Agent = contract or agent (no ownership interest).

The geographic coverage referred to the area served by the acquired entity, the joint venture partner or the agent and the mode, which described the method of transportation utilized by the named entity. The mode was classified as trucking, courier, air, ground and/or rail. In the cases where it was not clear what was the entry's form, mode or geographic coverage, it was noted that the firm entered the market and the available information was listed in the appropriate cell.

The information collected in the second phase was used to construct longitudinal entry histories of each of the five subject firms. That information helped determine each firm's entry activities during the period of 1985 through 1989. An analysis of the entry history charts discusses trends in entry form, location and mode, which should contribute to the understanding of how entry occurs in the face of barriers or restrictions on entry. The third phase provided for verification of the entry histories by employees and former employees of the five subject firms.

THE THIRD PHASE SURVEY OF FIRMS' EMPLOYEES

The third phase of the study was also descriptive in nature. It involved the identification of management employees knowledgeable about the subject firm's entry activities and the barriers faced in the selected market. The purpose of this phase was to verify the information contained in the entry histories developed during the second phase and to identify the relevant entry barriers as perceived by the subject firms' employees.

The subjects being surveyed were identified through the industry sources interviewed in the first phase above. Potentially there was the problem of obtaining the cooperation of the selected subjects at all five firms because three of the five subject firms were privately held. All of the subjects involved in the first phase agreed to discuss the matter and provided names of sources when they knew someone who was involved in the subject firm's market entry. There was also the problem of turnover among the qualified employees between 1985 and 1989. For that reason, ex-employees were included in the list of subjects to be interviewed as there were several mergers and a high employee turnover in the US air express industry during the 1980s.

The sources identified in the first phase provided much assistance in identifying and getting the cooperation of employees of all five firms. The participation of selected employees from two of the five firms would have been sufficient to verify the entry histories of all five firms if necessary because monitoring the competition was a major activity of all successful firms. A list of the air express employees and ex-employees identified for participation in the survey is attached as Appendix F.

A telephone call to the selected subjects familiarized them with the survey before the survey was mailed to them. Surveys were not sent to subjects who could not be reached by telephone during a ten day period starting on November 27, 1989; it was believed that the surveys needed to be completed within a two week period of time in order to minimize the impact of outside events on the firm's entry activities and the subjects' perception of those activities. In addition, each potential subject was asked to describe over the telephone his or her experience with the subject firm so that they could be screened according to their knowledge about the subject of study. Only those sufficiently knowledgeable about the subject firm's entry activities were asked to participate.

The selected subjects were requested to review and verify their firm's entry history and to note on the firm's entry charts any discrepancies or additions as needed. By providing the subjects with information that was publicly available, the entry histories conserved their time and effort while refreshing their memories about what did happen. There was a problem with the subjects not knowing or remembering enough about their firm's entry history to be able to confirm when and how entry occurred. For that reason multiple subjects from each of the five firms were questioned over the telephone about their qualifications before the subjects were selected to participate in the survey. It was more effective and efficient to survey a few carefully selected and agreeable subjects rather than to send the survey to a large number of people who might have known little about the topic of research.

In addition to verifying the entry histories of their firms, the subjects also were asked to list any types of barriers or problems which their firms faced in a particular county. The object of that request was to determine which barriers were problems from the perspective of each employee and firm. The last page of the survey asked the subjects to describe any changes which they noticed in entry problems between 1985 and 1989. It also asked them to describe any changes they would have made in their firm's entry activities using hindsight.

The selected participants were mailed a cover letter, a copy of their firm's entry history and a self-addressed, stamped envelope for completing and returning the survey. The cover letter described the purpose of the study, the benefits they should receive from it, why they were selected, and instructions on reviewing the entry histories and how to enter information requested. The interviewer's phone number and signature were handwritten at the end of the survey. A copy of the cover letter is attached as Appendix G.

The parties agreeing to complete the survey were told that they would receive a summary of the findings about two months later. That was the only incentive offered to the interviewees. The respondents who returned the completed surveys are noted in Appendix G.

The information gathered during the third phase is described and analyzed on a company-by-company basis in Chapter Four. For each company a summary describes the number and form of entry activities during the years studied in the subject market. It also includes a summary of the entry problems identified by the subjects. Chapter Five covers the conclusions drawn from the above three phases and a summary of the study.

CHAPTER FOUR

RESULTS AND ANALYSIS

This chapter contains the results and an analysis of the three phases of this study as described in Chapter Three. The chapter is organized using a similar format. The first phase describes the exploratory interviews. It is followed by a description of the entry histories of the subject firms; the results of the surveys of employees are discussed in the third phase.

THE FIRST PHASE EXPLORATORY INTERVIEWS

The analysis of the exploratory interviews conducted in the first phase is organized under the subject headings listed in Chapter Three. The first phase interviews were conducted during the fall of 1987 except in the case of Brian Campbell, who was interviewed during July of 1989. The names and titles of the interviewees are listed above under Chapter Three. These subjects were selected from government agencies, trade associations and consulting firms.

Bilateral Air Treaties and Intermodal Authority

Bilateral air treaties have established the rights of carriers to serve international destinations and have been strictly negotiated between countries. Those treaties sometimes have provided intermodal authority, such as ground or trucking rights, to the carriers being awarded the air routes. As an example the US:Swiss bilateral provided ground operating rights for airlines receiving routes between those two countries. US government regulations limited most foreign airlines to a geographical radius for delivery from US airports of entry. They could not go anywhere they want to on the ground in the US. US carriers face similar restrictions abroad. Cargo rights have been traditionally treated as incidental to passenger rights and included under miscellaneous clauses in many instances.

With the move toward a single EC market in 1992, there was a belief in the EC that international routes should be awarded equally viewing the US and the EC as similar groups of states when it came to bargaining. While the EC had not yet adopted multilateral aviation agreements in 1989, there was a movement toward such Community-wide negotiations as 1992 approached.

Although the restrictions on international landing rights have been significant, some have argued that they have not been the major entry problems facing air express companies. There were more serious problems with postal and customs restrictions.

Barriers to Entry and Doing Business Problems

Several sources who were interviewed stated that while there were few major barriers to entry in international air express, air express companies had faced many problems. Many regulations, such as postal ones, favored the larger companies who could afford to study and deal with those problems. Some of the sources surmised that those problems were probably as great for EC-based firms as for those from outside of the EC. In 1987 a few of the EC barriers to trade appeared to be substantial and long term; it was questionable if a small industry such as air express could do much about those barriers. The long awaited liberalization of passenger aviation in the EC could have a major impact on air freight and air express.

It was stated that barriers to entry were not necessarily the key issue because air express companies had to address the problem of how to mold the systems abroad to meet the needs of the industry. That required a modernization of the legal systems involved, and it was possible. The air express firms had to a great extent circumvented the existing situation in order to get established. The functions of the air express business had been small enough that they had been able to get around many of the barriers. The real issue was would the rules change so that the air express companies could operate as a part of the system.

Two of the interviewees emphasized that the term, barrier to entry, was unclear. Were problems such as noise, customs and postal regulations really barriers or were they just problems of doing business? If a company decided it did not like the customary way of doing business in a particular country and it tried to do business in its own way, was that really a barrier to entry situation? The four following examples of barriers also could have been viewed as problems of doing business:

1. The lack of commercial television advertising time in most EC countries might become a barrier to entry if an air express firm relied solely on television to advertise its service.
2. Customs procedures varied greatly from country to country. Were they barriers or problems?
3. Ground handling arrangements were often provided by governments, and carriers were required to use those services. Was that a barrier or a problem?
4. Air express firms had to make substantial investments entering a larger metropolitan market such as London. Was that a barrier or a problem?

Thus, there often was a fine line between barriers to entry and problems of doing business abroad.

One significant barrier facing the air express companies was obtaining adequate and comprehensive trucking rights within the EC. In many instances they had to buy existing ground carriers and trucking companies. Extending coverage under the bilaterals to ground rights and trucking could have minimized that barrier.

Noise Regulations

Noise regulations were a problem in the US because there were no uniform federal standards on airport noise. It was difficult to operate efficiently under the different airports' noise restrictions. The EC suffered from the same problem as it had not yet adopted an uniform noise policy in 1987. Some expected the EC to begin by limiting nighttime operation of Stage Two aircraft, which included the Boeing 727 and 747 and the DC-8 and DC-9. The next stage of regulation would most likely limit Stage Two aircraft operations to daytime hours. Since most air express companies relied on Stage Two aircraft, those noise restrictions would result in those planes being phased out before their useful economic lives ended.

The potentially severe impact of proposed US noise regulations on the air freight and air express firms was a major problem. Under the proposed phase out of Stage Two aircraft, the costs of fleet replacement before its useful life ended would destroy the air freight and air express industries. The EC had not yet adopted a uniform noise policy at the time of these interviews in late 1987. Most EC airport hours of operation were strictly limited at night, and many were closed down at that time.

Customs Regulations

Several emphasized the impact of customs problems on air express ground handling and their ability to destroy that industry's main competitive advantage of speed. In 1987 customs and postal problems were the biggest ones for air express within the EC. Simplifying customs formalities was a major regulatory impediment within the EC.

In 1986 The International Courier Conference proposed that the air express industry receive expedited customs treatment by the Customs Cooperation Council, which promoted uniform international customs and formally recognized the air express industry in 1987. Customs regulations had been based on the mode of transportation while air express was not mode-oriented. Air express firms needed to avoid both movement certificates for each piece of freight or letter and collecting duties from each addressee. In 1987 customs treated information differently based on what form it took, such as floppy disks, tapes, computer printouts, phone transmission of data, etc. Air express firms viewed information as being information regardless of its form.

It was noted that air express had been treated as air cargo and not as mail because it was not covered by the postal laws. New customs regulations required the mandatory use of the Custom Service's automated programs for pre-approval of shipments. While the US had pre-clearance procedures for passengers arriving from the Bahamas, Bermuda and Canada, nothing like that existed for air express shipments in 1987. US customs had had a problem with air express companies bypassing customs altogether. It fined carriers for any such acts at three times the value of the contents for skipping customs. Most air express firms had faced these types of fines in the US.

It was emphasized that air express was primarily a ground handling business with major problems of moving shipments around on the ground and rapidly clearing customs. That was why customs reform was so critical for air express. The bilateral negotiations had begun to focus on increased flexibility in routing and hub selection as well as the often neglected rights such as facilitating ground handling, efficiency and carrier ownership of its own facilities. Most air express companies argued that they had to have control of the shipments from door to door, which required providing their own ground handling services.

Characteristics of Air Express

The increasing competition between air express and air freight obscured some of the differences between them as traditional air freight carriers began to offer door to door service and air express firms moved into heavier freight with deferred delivery options. Nevertheless, the bundle of services provided by air express did differ significantly from that offered by air cargo firms. Tracking and tracing were critical air express features along with reliable and rapid delivery. The total control of each shipment by air express firms was another key difference because traditional air freight services rarely maintained such control.

It was difficult to define what rapid delivery meant, especially in the international air express market. The US air express firms gathered data from shippers as to how they defined the difference between air cargo and air express, but such information generally was proprietary. Some argued that shippers didn't really think much about differences between air express and air freight. They looked primarily at the most efficient method for getting a certain shipment to its destination. Timing was the key, and the weight or size of the shipment usually dictated which carrier would be used. The carriers were still behind in providing the kind of services shippers wanted, such as offering only overnight service when shippers needed a two-hour or a four-day delivery period.

Electronic Data Interchange

One of the major competitive advantages of the air express firms was their ability to track and trace shipments, which never left their control, through the use of computerized systems. The transport chief of the European Commission saw the communications problems as an obstacle for air express in the EC because those firms were so dependent on instantaneous communications. If air express firms lost that advantage, their offerings would not be much different from those of air freight or trucking companies. The inertia of the established government structures, including the postal, telegraph and telephone monopolies and flag carriers, created some of the communications problems for the air express industry in the EC.

Postal Regulations

While postal regulations were not created with air express in mind, they had a major impact on air express. Some of the more serious postal regulations had affected remail operations, which involved consolidating letters and magazines, transporting them to another country, and placing them in the mail system there for delivery domestically and to nearby countries. The remailing of letters and magazines was a big and growing part of air express; the US Postal Service was forced to legalize remail during 1986. In 1987 the Postal Service handled much of the remail letter business itself and competed seriously with the air express firms for that business.

The European postal monopolies had been a problem for air express in the past. The monopoly power of the government owned postal systems made it difficult for air express companies to deliver letters within many EC countries. The postal authorities within the EC and elsewhere developed a joint venture to handle international express mail because they viewed it as an expanding market, which they did not want to lose.

Trucking

It was mentioned that air express had a difficult time competing with trucking at distance up to 600 miles, which included most shipments within the EC. Obtaining trucking rights would continue to be a problem for non-EC firms even after the common transport policy came into being in the early 1990s. It was not certain that foreign owned (non-EC) trucking companies would not receive the same privileges as EC-owned firms after 1992. In many instances air express firms had to buy existing ground carriers in order to compete within the EC.

Intra-European Community Market

One source, an attorney with air express and association experience, stressed the fact that no one market existed in international air express. It was not a point to point business, but rather a network business. Europe was only one battleground in a much larger air express war. Any problems air express faced in the EC became worldwide problems because those firms sorted for destinations worldwide wherever they collected shipments. An air express firm had to view the world as a global market in order to succeed on an international basis.

Summary of the First Phase Interviews

A summary of the first phase interviews reveals that by 1987 most of the sources believed that the intra-EC market held much potential for growth. They identified two major entry problems, which resulted from postal and customs regulations. They noted that progress had been made with respect to customs problems, but that the government postal monopolies still posed a threat to the industry. Those monopolies offered domestic express mail services similar to those of the air express companies. The postal offices also established numerous joint ventures with foreign postal services to provide international express mail service. By 1989 aviation noise regulation and airport congestion had emerged as serious problems for the industry.

THE SECOND PHASE ENTRY HISTORIES OF THE SUBJECT FIRMS

All of the five subject firms had some degree of market presence in the EC at the start of this study in 1985. DHL and TNT had the largest market shares in international air express in 1985. Federal Express acquired an European courier service in 1984, and UPS began domestic ground operations within West Germany in 1976. Emery was an air freight forwarder in EC as the study began.

All five companies expanded their operations within the EC during the five years of this study. The entry histories of each of the five firms are discussed below. The corrections noted in the surveys returned by each firm's employees (as described in the third phase above) have been incorporated in order to present a more accurate picture of each firm's entry. The activity of each firm is listed in chronological order from 1985 through 1989.

DHL

DHL began operating in the UK through London's Heathrow Airport in 1974 and in Europe in 1977 using a small hub in Frankfurt. It opened a full service EC hub in Brussels during 1985 utilizing eighteen dedicated aircraft and a fleet of ground vehicles. It chose Brussels because the Belgian government agreed to provide twenty-four hour customs service at DHL's hub building and there was no nighttime curfew on flights. Belgium also allowed DHL to use its own ground handlers instead of those provided by the government. The company expanded its US hub at Cincinnati and continued using scheduled passenger flights for its trans-Atlantic lift to its Brussels hub in 1986. DHL served most of the EC using ten leased aircraft, which replaced many of the charters and scheduled flights it had relied on in the past.

DHL acquired a Belgian commuter airline, European Air Transport, in 1986 after deciding that it needed to control its own aircraft within Europe and that it needed increased airlift in order to shift from carrying mostly documents to handling more larger and heavier shipments. That subsidiary, which was still operated separately in late 1989, provided airlift for DHL throughout Europe as its fleet expanded from one small commuter aircraft to fourteen airplanes by late 1987.

In order to expand into the UK, DHL acquired in 1986 the international business of Securicor, a ground and air parcels delivery firm based in the

UK. Securicor continued its domestic operations under its own name within the UK. In 1987 DHL opened a new satellite hub at Heathrow Airport, which was designed to automatically sort heavier, dutiable parcels as well as documents.

During 1987 DHL acquired Rindt Service, a trucking firm in West Germany. DHL continued to operate Rindt under its own name in West Germany. By 1988 DHL was operating its own direct flights into Brussels from its Newark hub.

It should be noted that in 1981 DHL formed a separate, totally-owned subsidiary, ELAN (European Land and Air Network) to handle heavier weight express shipments under the ELAN name on its own trucks and aircraft. DHL operated that subsidiary under the ELAN until early 1989, when it was incorporated into DHL. At the end of 1989 DHL had no partners in the EC, and it used the ELAN name only with some of DHL's domestic UK traffic.

Emery

Emery entered the international air freight market in 1956. The company made the transition in the US from an air freight forwarder to a cargo airline in 1981 when it acquired its own airplanes and opened its Dayton sorting hub. It introduced overnight delivery within Europe in 1983. Emery operated as an air forwarder in Europe until it started direct service through its Amsterdam hub using its own aircraft in May of 1985. Its planes flew from its US hub in Dayton to Amsterdam with stops in New York and the UK, where it introduced direct air service. Emery was known as a heavy freight carrier and designed its hubs to handle documents and heavier shipments.

In July of 1985 Emery moved its European hub to Maastricht in the Netherlands because of congestion and noise restraints at the main airport serving Amsterdam. Maastricht was located near the Dutch border with

Belgium and Germany and had excellent trucking facilities. Emery then utilized KLM's XP Express Parcels Service (which was headquartered at Maastricht) for deliveries of more than four hours driving distance from the Netherlands. Even at its new hub location at Maastricht, Emery continued to have problems with noise restrictions and limited runway capacity.

As a side note, by July of 1985 Emery was transmitting its customs information by computer to customs authorities in the US and several European countries while the shipment was in the air. That allowed Emery to get preclearance for many international shipments and to meet its overnight delivery deadlines.

Emery did not acquire any European firms during 1985 through 1989. Emery instead utilized its own employees in the EC and relied on common carriers for air and trucking service to serve outlying countries such as Spain, Portugal and Greece before it expanded its own coverage.

In early 1989 Emery was acquired by another US firm, Consolidated Freightways, known as CF, which was an intermodal transportation company that also operated as an air freight forwarder until it began flying its own planes in 1987. CF AirFreight began offering international air express service shortly before it acquired Emery. Both CF and its new Emery Worldwide subsidiary emphasized heavier, dutiable express shipments over documents.

Federal Express

Federal Express began operations in the EC through its January of 1984 acquisition of a small air freight forwarder with an established ground service network. Gelco International offered courier service between Belgium, France, the Netherlands, the UK and West Germany. As a part of its plan to target the international market, Federal Express then introduced direct air service from New York to its Brussels hub via Stansted in the UK in 1985.

Brussels was selected because of its central location, suitable weather, excellent road and rail connections and its facilities.

In 1985 it acquired J.D. Transports, a Belgian trucking company and began contractual relationships with its agents, which included Aeroship A/S in Denmark, Skyway Courier in Ireland, L'Aereo Stazione Merci in Italy, and Aerpons Courier in Spain. Thus, it entered much of the EC very rapidly in 1985 through direct entry, acquisitions and the use of agents.

The following year Federal Express acquired one of its contract carriers, Lex Wilkinson Ltd., an air and ground operator in the UK. It also initiated contractual relationships with Global Courier Ltd. in Ireland and Lassen Transport in Portugal during 1986.

During 1987 Federal Express acquired its UK agent, Williames Transport, a ground operator in the UK and Ireland. In 1987 it also formed a contractual relationship with G.A. Callitsis Succsrs. in Greece. By early 1987 Federal Express had hoped to get restrictions lifted on single engine aircraft, such as the Cessna 208, so that it could begin operating its own fleet within Europe, but it was unable to do that as of that date. By June of 1987 Federal Express planned to handle ninety per cent of its international pickups and deliveries using its own personnel in order to increase its control over its operations.

In 1988 Federal Express acquired Saimex (an Italian ground operator and international courier) as well as two ground operators in the UK. Winchmore Developments Ltd. was a small package and document delivery company operating in the London area under the name of Concorde Despatch. Home Delivery Services delivered mail order shipments throughout England using 31 stations, 1,000 vehicles and two parcel sorting centers. In West Germany it acquired a shipping, trucking, freight forwarding and contract distribution service, Elbe Transport, from Unilever.

During 1989 Federal Express acquired the world's largest air cargo carrier, Tiger International, Inc., the parent company of the Flying Tiger Line, which provided direct air service into Belgium, France, Ireland, Italy, the UK and West Germany. In addition, Federal Express acquired the Flying Tiger fleet of thirty-nine aircraft and its employees in the Netherlands. That year it also purchased TGA B.V., a trucking company in the Netherlands.

After its rapid entry into the EC, Federal Express favored the acquisition of air and ground operators over partnerships and agents. It moved heavily into trucking because of its greater flexibility, lower cost and decreased regulation relative to aviation. Its international expansion strategy within Europe seemed to favor the acquisition of small companies, which required substantial effort, time and money. Many noted that the company had a difficult time integrating the independent operations of its many European acquisitions into a single delivery system. Its acquisition of Tiger International was a major change in that strategy as that heavy freight airline was a major operator throughout most of the world. Federal Express acquired access to its many airport facilities and international air routes in one step.

In late 1989 Federal Express announced that it was planning to operate additional direct freight flights between other American cities (besides Indianapolis and New York) and its European hub. This move was directed at improving its service within the EC.

TNT

TNT started acquiring major European air and ground operators before most of the other firms in this study. It already had much of its system in place by 1985, which was the first year of this study. TNT offered integrated trucking and air service in Europe through TNT IPEC and TNT SKYPAK, both of which it acquired in 1983. IPEC was a pan-European parcel express trucking firm. SKYPAK, which was formed in 1971, was the dominant

European courier. TNT used agents in Greece, Portugal and Spain in 1985. In the other EC countries it utilized its own employees.

In 1986 TNT acquired air and ground operators Traco in Italy and Overnite Tristar Dispatch Post in the UK. In 1987 TNT formed a new subsidiary, Expressair, which operated worldwide as a heavy weight air freight forwarder providing door-to-door service. It was designed to accept packages weighing up to 250 pounds and used TNT's SKYPAK subsidiary for pickup and delivery services. That moved TNT into competition with the heavy weight air cargo carriers, such as Flying Tiger and Emery.

During 1988 TNT acquired Unitransa, which was the largest domestic air freight carrier in Spain, and Air de Cologne from Scandinavian Airlines System (SAS). Air de Cologne started operations in 1985 providing overnight service for SAS express shipments using air freighters, trucks and vans out of a Cologne hub.

KLM sold its XP Express Parcels System to TNT in 1989 after strict noise regulations at XP's Maastricht hub limited its operations and KLM was unable to move XP's hub to the Amsterdam airport because of opposition from Dutch environmentalists. TNT rapidly expanded the road transport activities of XP Express within the EC in order to provide two to three day delivery of heavier shipments because the document part of the express business was not very profitable due to increased competition. In 1989 TNT acquired its agent in Greece and continued its only contractual relationship in the EC with its Portuguese agent. Thus, by late 1989 TNT relied on agents only in Portugal.

In mid 1988 TNT announced that it could deliver anything, anywhere in the world, at anytime under the control of a single organization and using a single consignment note. Thus, it had become an integrated transportation company. However, TNT still relied on couriers using scheduled flights except within Europe, where it began using its own aircraft in 1988.

UPS

UPS introduced overnight air service in the US in 1982. Prior to 1985 UPS was very active in West Germany, where it began operations under its own name as a ground delivery service in 1976. In 1985 UPS formed joint ventures in which UPS was the majority owner with several established European air freight forwarders on an exclusive basis. These companies were called service partners and included one of Europe's largest air freight forwarders, Road Air, (which served France, Denmark, the UK, Belgium, the Netherlands, and Luxembourg) and Atlasair Parcels, an air and ground forwarder in the UK.

During 1986 UPS established joint ventures with air forwarders Danish Express in Denmark, Tous Transport Aeriens in France, Walsh Western in Ireland, and Alimondo in Italy. It also introduced direct flights from its Louisville hub to its new air hub in Cologne, which was selected because of UPS' experience in West Germany.

In 1987 UPS began direct air service to sixteen European countries from its Cologne hub. In 1988 UPS acquired its former Italian joint venture partner, Alimondo, which was one of Italy's leading domestic and international package carriers. As a side note, during that year UPS expanded its customs preclearance system to forty countries; it used a bar code containing important customs information to gain clearance for shipments while they were in the air.

During 1989 UPS acquired several of its European joint venture partners, including Road Air Parcel Service in Belgium and the Netherlands, Danish Express in Denmark, Tous Transport Aeriens in France, and Atlasair in the UK. It also acquired IML Air Service Group, a British air freight forwarder and document and parcel delivery company with a ground network in thirty-seven countries.

All of the above acquisitions together made a big difference in the firm's EC market presence as well as in other countries where UPS was weak. UPS preferred to use its local employees or local agents to deliver parcels in all countries, which resulted in the firm usually acquiring local delivery businesses. UPS strived to offer delivery to any address in most countries where it operated. It appeared that UPS was building up a pan-European ground service in order to compete with TNT IPEC and other regional ground carriers as it sought additional acquisitions in the UK, France and Spain. The firm also planned to move into deferred freight as of November 1989 when it introduced deferred freight ground service between West Germany and Italy.

Summary of the Second Phase Entry Histories

A review of the entry histories of the five subject firms reveals that the most common forms of entry used during the five-year period of this study were acquisitions, which were followed by joint ventures, contract/agents and direct entry. This information was compiled from the entry history charts created for each of the five subject firms in each of the five years of the study. Trade publications covering the air express industry and the Journal of Commerce were the main sources of information used to compile these charts. It was difficult finding information on the form of the agreement when there was partial ownership, which the press tended to label as a joint venture in most instances.

The incidence of each form of entry in the twelve countries is shown below in Table One. Many of the acquisitions represent subsequent purchases of joint venture partners or agents. Thus, one cannot compare the total number of acquisitions with that for joint ventures and contract/agents.

TABLE ONE: FORM OF ENTRY BY COUNTRY

FORM OF ENTRY	DIRECT ENTRY	ACQUISITION	PARTIAL ACQUISITION	JOINT VENTURE	CONTRACT/ AGENT
BELGIUM	1	5	0	1	0
DENMARK	0	1	0	1	1
FRANCE	0	1	0	1	0
GREECE	0	0	0	0	2
IRELAND	0	0	0	1	2
ITALY	0	2	0	1	0
LUXEMBOURG	0	0	0	0	0
NETHERLANDS	1	2	0	1	1
SPAIN	0	0	0	0	1
PORTUGAL	0	0	0	0	1
UNITED KINGDOM	2	7	0	1	0
WEST GERMANY	1	1	0	0	0

From Table One it appears that acquisitions were more commonly used to gain entry into the Belgian, UK and Dutch markets. That may have been because those three countries were relatively open to foreign entry as they began to liberalize their policies on aviation and trucking regulation during this time period. It was difficult classifying the entry form as being direct because several of these firms served these markets long before the study period began. Direct entry was interpreted to mean the allowance of the subject firm's aircraft to move express shipments between two EC countries.

The form of entry selected does appear to have varied by company as shown below in Table Two. DHL and TNT utilized acquisitions to a greater extent while Federal Express relied on both acquisitions and contract/agents, whom it frequently purchased a short time later. Emery used direct entry techniques while UPS began with joint venture arrangements with established local firms and then bought out most of its partners within a two-year period.

TABLE TWO: FORM OF ENTRY BY COMPANY

FORM OF ENTRY	DIRECT ENTRY	ACQUISI-TION	PARTIAL ACQUISI-TION	JOINT VENTURE	CON-TRACT/ AGENT
DHL	1	3	0	0	0
EMERY	2	0	0	0	0
FEDERAL EXPRESS	2	8	0	0	7
TNT	0	5	0	0	0
UPS	0	6	0	5	1

As shown below in Table Three, a review of the form of entry selected reveals that the form did vary as the study period progressed. The number of acquisitions each year increased during four of the five years. By late 1989 there were few suitable companies left to be acquired. Federal Express and UPS bought out their joint venture and contract/agent partners during 1987, 1988 and 1989, which resulted in fewer joint ventures and contract/agent agreements during those years. It is helpful to remember that DHL, Emery and TNT already had service within most of the EC at the beginning of the study period; those firms did not appear to be under as much pressure to enter the market as were Federal Express and UPS. However, acquisitions were popular with all firms, except for Emery, during the five years of this study.

TABLE THREE: FORM OF ENTRY BY YEAR

FORM OF ENTRY	DIRECT ENTRY	ACQUISI-TION	PARTIAL ACQUISI-TION	JOINT VENTURE	CON-TRACT/ AGENT
1985	7	1	0	2	4
1986	0	4	0	4	1
1987	1	2	0	0	1
1988	0	6	0	1	0
1989	0	9	0	0	0

The third phase of the study provided additional information pertaining to and verification of the entry histories compiled during phase two. In addition, the third phase survey questioned the firms' employees and former employees about entry barriers or problems faced by their firms in this market. An analysis of the third phase surveys follows.

THE THIRD PHASE SURVEY OF EMPLOYEES

As described in Chapter Three, the selection of participants in the third phase survey involved an in-depth screening process. Attempts were made to contact by phone several people at each firm and to determine their qualifications and knowledge about the subject of this study before deciding whether they should participate. The list was narrowed to ten qualified participants, who agreed to complete the survey. Six of those individuals, listed in Appendix F, returned the surveys in time for inclusion in this analysis. Additional information was gathered through the phone conversations with the participants and those who did not complete the survey.

On the last page of the entry history survey, the respondents were asked the following two questions:

1. Have you noticed any changes in entry problems between 1985 and 1989? If so, please describe them.
2. How would you have changed the way that your firm entered this market knowing what you know now?

Their responses to the survey questions are provided below.

DHL

The fact that DHL had been in the EC since 1979 meant that it was the first to open a European hub. It was also the only air express firm with its global headquarters located in the EC. DHL had not faced major entry problems in the EC probably because it had been there so long. Its EC acquisitions went smoothly because DHL already had a solid network in the EC at that time.

The importance of planning and modelling for five years into the future was mentioned along with how difficult that was. Capital investment was a critical factor in the EC as was management information system (known as MIS) support. The Green (ecological) movement would most likely be important in the near future of the EC. The Austrian trucking restrictions proposed to go into effect in December of 1989 potentially could be a problem for air express because so much of their EC ground service operated through Austria even though it was not an EC member. That proposed legislation had the potential to slow down EC distribution because of its heavy reliance on trucking, which would be restricted under noise limitations on Austrian roads.

DHL believed that the intra-EC market for air express would develop (as had the US market in the 1980s) because the basic business issues, such as JIT and centralized distribution facilities, supporting the growth of the US domestic market were present in the EC.

Emery

Emery had problems with noise restrictions and runway limitations at its Maastricht hub in the Netherlands. Those factors resulted in limited payloads being flown out of Maastricht, which was a major limitation for Emery.

A respondent noted that the intra-EC air express market was dominated by five non-European firms, which included Federal Express, UPS, TNT, Emery and DHL. The capital requirements were so high that no new entrants were expected in that market. In reviewing the five-year period of the study, Emery might have entered the EC earlier and expanded more quickly if it had had access to more capital at the time.

Federal Express

Some of the entry barriers or problems Federal Express faced in the EC included the following:

1. Obtaining landing rights with fifth and sixth freedoms, which allowed carriers to pick up and discharge passengers and cargo on flights between two countries, neither of which was their home country
2. Airport noise restrictions
3. Aircraft certification, especially as to the Cessna 208 and Fokker F-27
4. Trucking licenses for both intra- and inter-country service and for differing vehicle sizes and weights
5. Labor regulations as to statutory benefits, severance provisions, and union environments
6. Electronic equipment certification for its Cosmos IIB system for tracking and billing and the handheld terminals used by its drivers
7. Postal monopoly restrictions as to taxation of letters, installations of drop boxes and overnight letter trademarks
8. Customs problems due to non-expedited procedures and the collection of duties and taxes, such as Value Added Taxes (known as VAT)
9. Competitive pressures from DHL, TNT, XP, UPS and the airlines.

Within the intra-EC market, there had been slow but sure changes in these entry problems during the years of 1985 through 1989. It was believed that that market was becoming more open and more liberal in its regulation of entry as 1992 approached.

With hindsight, Federal Express might have made several changes in its entry activities in the EC. There could have been closer scrutiny and a more rapid integration of its European acquisitions. There could have been more focus on productivity improvements as well as more caution in investment made there. More active public relations and lobbying activities could have improved the firm's European operations.

TNT

With increasing intra-EC traffic, TNT experienced improved customs handling within the EC between 1985 and 1989 as customs began to recognize the professional methods for documenting and carrying air express shipments. Using hindsight, TNT might have set up an air network earlier in the EC.

UPS

Two former employees mentioned the problems with postal surcharges in France in 1985 and with providing service coverage in entire countries such as France, Ireland and Italy. They also mentioned that customs became more aware of air express needs as the study period progressed and that using hindsight, UPS should have entered the intra-EC market earlier.

Summary of the Third Phase Surveys

A review of the comments of third phase respondents shows that their perceptions of the entry problems within the EC during the study period varied as to both their identification and severity. The more experienced firms within international air express, DHL and TNT, did not appear to perceive entry problems as being major barriers to entry because they already had systems in place for serving this market.

Federal Express attempted to duplicate within the EC the structure of its US air express system and learned that all of the parts could not be introduced in that market due to a number of restrictions. After it had gained some international experience, it modified its operating structure for Europe and began to accept the fact that what had worked in the US was not necessarily the best system abroad. It appeared that Federal Express suffered from its lack of expertise in foreign government lobbying and learned much about its importance in the EC during the study period.

As to the question of whether the entry problems changed during the five years, most of the respondents agreed that the problems did change as some were solved or minimized and then replaced by other newer problems. Thus, the firms had to remain alert to new sources of problems in a changing environment. As customs problems became manageable, postal regulations seemed to increase in importance. The aviation noise and air congestion problems were increasing at the end of the study period.

When asked how their firms could have improved their operations within the EC, most of the respondents stated that their individual firms should have entered the market earlier and with more capital investment in their networks. This was obvious with UPS, which had almost ten years of experience in the domestic West German market before it began offering intra-EC service.

The next chapter incorporates the findings of this chapter into a set of conclusions about entry into the intra-EC market. Chapter Five also describes the implications of this study for marketing and for future research.

CHAPTER FIVE

CONCLUSIONS AND SUMMARY

This chapter consists of four parts. The first section contains a discussion of the conclusions based on the results listed in Chapter Four. The second part describes the potential marketing implications of this study. The third section focuses on implications for future research. The final section contains a summary of this study.

As background information, one needs to recognize the widespread changes that occurred in the EC during the period of this study. When this study was first conceived in 1986, the concept of 1992 was not widely recognized as being a major milestone because few believed that the twelve EC members could ever agree on much simpler matters than those required for the formation of a single market. In early 1990 many people were amazed by the many reforms already made and the progress toward a single market. The astounding events of late 1989 in Eastern Europe far exceeded the wildest imagination of most people as the Berlin Wall and government after government toppled. Those changes made the intra-EC market even more attractive than it was in 1985. Thus, by 1990 many firms became even more convinced that they had to succeed within the EC if they were to be successful on a global basis.

Several conclusions can be drawn based on the information contained in the literature review in Chapter Two and in the results listed in Chapter Four. The first of these conclusions pertains to the identification of the perceived barriers to entry.

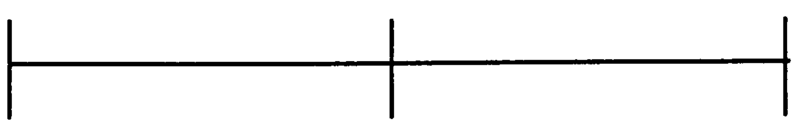
CONCLUSIONS

Identification of Perceived Barriers to Entry

As described in the literature review, Bain's industry-wide structural barriers to entry presented problems for firms seeking to enter the intra-EC market (Bain 1956). The absolute cost advantages and economies of scale of firms with large US air express market shares, such as Federal Express and UPS, appear to have been substantial in the intra-EC market. As an example, the fixed costs of developing an information system required it to be spread over the largest market possible in order for firms to recoup their investments. The importance of these cost factors in preventing other, smaller firms from entering this market was mentioned by Helms (1987) and by two of the third phase respondents.

Barriers to Entry and Mobility Barriers

The concept of mobility barriers (as opposed to absolute barriers to entry) was applicable to the subject firms as they each served other markets before moving into the EC (Caves and Porter 1977). As predicted by Porter (1980) and McGee (1985), the major entrants moved from related markets into the EC and were capable of competing with the dominant, yet smaller, local firms, which were protected by relatively high barriers to entry. As shown below on the continuum containing absolute barriers to entry, mobility barriers and doing business problems, the five subject firms did not view the entry barriers within this market as being absolute.



Absolute barriers to entry | **Mobility barriers** | **Doing business problems**

At the beginning of the study period in 1985, it appeared that the more experienced firms in international air express, which included DHL, Emery and TNT, were able to move into the intra-EC market with greater ease than those without as much international expertise, which included Federal Express and UPS. By 1989 Federal Express and UPS had acquired a significant amount of international experience and seemed to be more capable of handling the international problems of doing business. The effective actions of the IECC, which represented the major express firms on a worldwide basis, were instrumental in minimizing many of these problems within the EC (International Express Carriers Conference 1989).

Service Differentiation

The subject firms successfully differentiated their services from the offerings of many of their competitors relying to some extent on the four methods of product differentiation described by Scherer (1970). They differentiated their services by serving the door-to-door needs of customers rather than providing just the traditional air freight service on an airport-to-airport basis. The air express firms developed several levels of service based on the time of delivery, which ranged from same-day to third-day service. Air express firms utilized their own aircraft, ground vehicles and employees along with tracking, tracing and payment systems requiring extensive computerization.

During the 1980s the air express firms began to change the shipper's subjective images of the services they offered by emphasizing that they were a part of the shippers' distribution system. That differed greatly from the image of traditional transportation companies, which were production oriented. The parts warehouses operated by air express firms at their hubs provided extremely high levels of service for their customers and examples of how an air express firm could become a part of its client's distribution system. These warehousing services differed greatly from any services offered by the traditional air freight providers.

Global Marketing, Triad Power and Insiderization

The importance of the concept of triad power (Ohmae 1989) became apparent as air express firms began during the period of study to emphasize the development of a global network tying together the major markets of North America, Western Europe and Asia. It was believed that air express firms could not sort for just one market; the shipments they picked up went to various continents. Thus, they had to sort on the basis of a worldwide market. Root (1982) said that no domestic market could be safe in the long run from foreign competition, and the air express industry provided an example of that belief.

It became evident that the subject air express firms understood that they had to become insiders in the EC if they were to penetrate that market. Thus, they used many collaborative efforts such as joint ventures and partnerships to enter many of the countries. Their acquisitions provided them with employees, routes, traffic and local know how within the EC.

DHL, Emery and TNT recognized the importance of becoming insiders within the EC and entered it long before this study began. In 1976 UPS established its first European operation in Germany and gained ten years of experience in that market before it expanded into the rest of the EC. Ohmae (1989) contended that the process of insiderization required a firm to spend many years building the necessary infrastructure in order to be treated as an insider within that market.

Air Express Use of International Coalitions

Because of governmental restrictions on entry, air express firms have had to form international alliances or coalitions. Porter (1986b) stressed the importance of such coalitions. It was argued that cooperative alliances were often the preferred choice over going-it-alone because of environmental factors such as governmental restrictions. Gomes-Casseres' (1988) development cycle predicted that at the entry stage, joint ventures and collaborative ventures were often the most suitable, but that wholly-owned subsidiaries were more successful after the firm became established in a new market. That may have been because it often was harder to maintain a collaborative effort as markets evolved (Hergert and Morris 1988). The subject firms provided some proof of that development cycle as both Federal Express and UPS bought out most of their EC partners by late 1989.

In early 1990 there still remained the problem of doing research about global coalitions when many of these were not covered by the US business press, especially if there was not a US-based partner. There were many important collaborative efforts without US-based partners; those alliances added to the difficulties in documenting the importance of international coalitions (Ghemawat, Porter, and Rawlinson 1986). One often had to rely on the trade press and specialized newspapers, such as the Journal of Commerce, for information about international collaborative activities. Using such sources could be quite time-consuming because they were rarely referenced in the major business indexes.

Air Express Trucking

Keeble (1988) concluded that European air cargo to a large extent was deregulated because of the entry of the air express firms and their reliance on trucking. Several subjects mentioned the importance of trucking for delivering express shipments within the EC. While air express use of trucking in the US market increased throughout the 1980s, the industry relied even more on trucking within the EC. That was probably due to the shorter distances and the stricter regulation of European aviation relative to the US. The air express industry could not have offered the levels of service it provided during the 1980s without its extensive reliance on trucking.

By the end of 1989 it also was noted that more air freight was being moved by trucks within the EC because of the growing use of smaller aircraft serving more destinations as European aviation was increasingly liberalized. That resulted in less available airlift and pushed more air freight onto trucks. Trucking allowed intra-EC air express firms to provide better, faster, and less costly service than air. In addition to those advantages, trucks also could operate during hours when many airports were closed to all or louder aircraft (Hastings 1989c).

In December of 1989 the European Commission agreed to phase out cabotage, which would allow foreign-based trucking firms to provide service in all other EC countries (Economist 1989). It was estimated at that time that the European market for trucking was equal to $125 billion a year. That would be a most attractive market for non-EC based companies such as TNT and Federal Express.

Postal Regulations

Postal regulations continued to restrict the air express industry throughout the 1980s. Even after the postal laws were changed to allow air express firms to carry letters, the PTT's continued to present problems for air express. During the late 1980s the Express Mail Service offered by a large number of government postal services, including the US Postal Service, became a major competitor with air express for international letters as it lowered its prices and increased its service levels.

Postal competition also increased in the profitable area of remail, which involved carriers delivering bulk corporate mailings destined for another country to the post office of the destination country or a nearby country having lower international postal rates. Some predicted that private firms would be run out of the remail business as government postal services moved into that market and as the result of the Universal Postal Union's adoption in late 1989 of proposals which raised remail charges (Journal of Commerce 1989c).

Noise Regulations

The air express industry was increasingly limited by governmental restrictions on aircraft and airport noise during the period of this study. By 1990 there were still disagreements in the EC and in the US over which organization should set noise standards (Reed 1989). There was the growing threat of a phaseout of air express aircraft before their useful lives ended due to the fact that they relied on older, louder planes, which generally did not meet the noise restrictions.

Government Barriers to Global Air Express

During the 1980s host governments used a variety of methods for restricting the global operation of air express firms. Porter (1980) and Root (1982) stated that global firms had to coordinate their worldwide strategies to compete and that governments often prevented them from competing through market entry. Others contended that services were more tightly regulated by governments than were goods (Carman and Langeard 1980).

Many government regulations affecting air express firms within the EC were not created with this industry in mind, and yet, those restrictions caused many problems for the industry. One requirement for effective international market entry was the ability to foresee which regulations might affect a company or industry. That was why experience in foreign market entry was a prerequisite for planning such a strategy. Experience in dealing with governments and the domestic monopolies they protected was crucial.

The problems presented by customs and postal procedures provided examples of how governments could make foreign market entry more difficult. One way to overcome some of these problems was to hire competent locals, who could identify which regulations might cause problems during entry. They also could lobby within the system to minimize the impact of such restrictions. The air express firms used acquisitions of and various partnerships with EC-based firms in order to minimize such problems.

Any firm lobbying for simplified regulations first had to identify the wider impacts of simplifying regulations, such as customs procedures, because a country might not be ready for the political changes that such simplification could bring. As an example, customs simplification might result in fewer border inspections, which could be an important tool in stopping the flow of illegal drugs, firearms and terrorists into a country. As much as the transport ministry may have wanted to minimize border delays and disruptions due to inspections, politically it might not have been feasible to eliminate those inspections if the head of a government had been elected on anti-drug or anti-terrorism platform. One of the wiser moves by some air express companies was to carefully screen their customers and employees and to randomly inspect their shipments in order to help government agents find any illegal drugs and firearms. Until air express firms developed strong drug and firearm prevention programs, they could not expect governments to take a hands off approach to customs inspections.

Foreign Market Entry through Changing Established Business Practices

One of the most notable aspects of the air express firms' entry into the EC market was their ability to avoid some of the barriers to entry by changing the established business practices. Yip (1982b) noted how Federal Express developed its own delivery service by providing its own planes and ground services in the EC. During the 1980s the industry was characterized by innovative approaches to everyday activities, and the most innovative firms seemed to have succeeded in air express. It may have been easier to introduce innovative practices in a new industry than in one which had a long history of tradition. This may be one reason why air express firms were able to enter the intra-EC market while other services, such as passenger airlines, banking and insurance, were not as successful in intra-EC market entry as of early 1990.

Form of Market Entry

There appeared to be several successful approaches to market entry, and the most appropriate avenue for one firm might not have been the best for its competitors. TNT and DHL, which had the largest international market shares in late 1988, entered the EC prior to 1985 and made several major and minor acquisitions during the period of this study. Emery entered the EC using its own employees prior to 1985 and avoided acquisitions in the EC.

While it used some agents within the EC, Federal Express made many acquisitions during this period, and it quickly purchased several of its agents. Its acquisition of the US-based firm, Flying Tiger, provided many additional routes (including some within the EC) and added extra international capacity at a time when Federal Express was challenging DHL and TNT in global air express.

Except for its direct entry into Germany in 1976, UPS initially utilized joint ventures with established local forwarders within the EC. UPS bought out most of its EC joint venture partners during 1988 and 1989; it relied on its own employees to serve most of the EC at the end of 1989.

These firms' entry histories analyzed by country of entry revealed that they used more acquisitions in Belgium and the UK, which had relatively open entry and liberal air and trucking environments. The subject firms selected countries such as Belgium and the UK for their full service hubs because of their openness to non-EC based firms and their willingness to provide the services required by the industry. Acquisitions also played a major role in their entry activities in most other EC countries, except for Emery. As described by Hofstede (1980), the cultural differences between the EC countries appeared not to have dictated the form of entry selected in a particular country except to the extent that it may have influenced the governments of some EC countries to be more open to air and trucking deregulation.

The Importance of Understanding the External Environment

There were massive changes within the EC and its neighboring countries during the five-year period of this study. None of the five subject firms could have been expected to predict these changes as it was likely that any such forecaster would have been labelled insane and committed to an institution. In 1984 there was little warning of the momentum building up in the EC supporting single market integration. Likewise, there was almost no forewarning of the major changes in Soviet bloc governments of Eastern Europe, which began in 1989 and continued in early 1990.

In 1984 there was little reason to include the Eastern European neighbors of the EC in projections of European market size in the 1990s. The increase in the size of the potential European market became an unforeseen, additional benefit of intra-EC market entry during 1989. Just as this study ended it became clear that the potential EC market could be much larger than any other air express markets, especially if neighboring countries decided to associate more closely with or join the EC.

Both the movement toward 1992 and the opening up of the Soviet bloc countries in Eastern Europe illustrated how much the external environment could change during a short period of time. Those events also made it imperative that air express firms remain flexible in their identification of the potential markets and of problems of doing business in those markets.

The Increasing Costs of Acquisitions

As noted in the literature review pertaining to services within the EC, one impact of the movement toward a single market in 1992 was the increase in acquisitions of EC-based firms by companies based in the EC as well as non-EC owned firms. By 1989 many believed that in order to compete within the EC, a transportation firm had to operate in all twelve countries and its non-member neighbors as well. That led to greater competition in the acquisition of transportation firms of all modes. The importance of trucking in air express was discussed above. There was a growing interest in acquiring European-based trucking firms as this study progressed and firms began to understand the nature and potential of the intra-EC market. It was expected that at least two of the larger air express firms, TNT and Federal Express, would offer extensive European trucking services during the 1990s; the acquisition of national trucking companies in those twelve countries would allow them to accomplish that in a rapid manner (Economist 1989).

As the study period progressed, those firms wishing to enter the intra-EC market had no choice but to pay the increasing prices of acquiring local firms in order to operate in the intra-EC market. As Japanese firms had learned in the US market, the price of an acquisition became secondary to the strategic role of the acquisition in the acquiring firm's overall strategy.

MARKET ENTRY IMPLICATIONS

This study has broad implications for market entry. They include the determination of how a foreign firm can enter the intra-EC market, in particular, and global markets in general. Foreign market entry is the first area of discussion.

Foreign Market Entry Techniques

This study emphasizes the fact that flexibility is a key component in foreign market entry success. The subject firms used varying entry techniques in each of the twelve EC countries in part due to differences in competitive and government environments and the expertise levels of each of these firms. Companies such as DHL, TNT and Emery had a long history of international experience and were more capable of direct entry at the start of this study in 1985. UPS and Federal Express needed additional international experience in order to compete within the EC. They favored agents and joint ventures before buying out their partners and agents later in the study period.

One could conclude that the firm's level of international expertise is a critical factor and may restrict a firm's direct entry activities even if the external environment is favorable for direct entry. This means that companies lacking international expertise have to find rapid ways to gain that experience in order to compete in global markets. Acquisitions, joint ventures and agents are methods of overcoming such a deficiency. While these methods may not be as effective in the long run as direct entry efforts, they may be the only option for companies which cannot invest ten years establishing the critical relationships which are required for becoming an insider in a foreign market.

Long Range Market Planning

Another marketing implication of this study is that firms need to establish longer time frames for their international planning and implementation cycles. Recognizing that it may take five or more years to enter a foreign market directly means that a firm must plan its entry activities using at least a five-year time frame. It appeared that Federal Express began planning its expansion into the EC about two years before it introduced intra-EC service in 1985. The company lacked the international expertise to recognize that it would take longer than two years to cultivate the relationships it would need to be treated as an insider within the EC. It was amazing what Federal Express had accomplished within the EC by early 1990 considering how late it began planning for that market.

Before 1990 US firms in general focused on the domestic market because of its size and geographical distance from other markets. Although it was not surprising that they lacked international expertise, that put them at a major disadvantage in foreign market entry as many industries, such as air express, became global in scope during the late 1980s. Those companies which delayed entering foreign markets often learned that they were locked out of foreign markets because all of the local firms had already been acquired by or had become partners of foreign firms.

In European air transportation there were many limitations on the number of firms in each market because of the increasing level of congestion at airports and in the air. Even if a firm managed to acquire the authority to serve a route, there was the growing problem of congestion within the EC. There were too few available gates at key airports and peak hour slots in the air were taken by the existing carriers. Finding a suitable location for air express hub operations was a major problem within the EC, and some air express firms were forced to shift their hub locations as restrictions increased. Improved long range planning techniques could have minimized some of the problems that arose as the subject firms increased their operations within the EC.

<u>Changes in Foreign Market Size Require Contingency Planning</u>

As mentioned above, no one could have foreseen the drastic changes which occurred during 1989 in Eastern Europe and to what extent the neighboring countries began to seek association with the EC. Those market changes required entrants to spend much more than the planned amount of capital investment in their European efforts in order to benefit from the increased size of the "European market." As of early 1990 the market focus of the subject firms was much broader than the twelve EC countries; each company had introduced or planned to begin operations in the neighboring countries of Eastern Europe and the EFTA nations.

Such major changes in the subject market revealed the need for the maximum flexibility in defining the market as entry progressed. These air express firms definitely were aiming at a moving target and depended on accurate information from their European offices for direction. There was a very limited transportation infrastructure in most of Eastern Europe in late 1989; that meant that air express firms found few partners with which to form joint ventures in the Soviet bloc countries of Poland, Yugoslavia, Romania, Czechoslovakia, Bulgaria, Hungary and the Soviet Union. The first air express firms to enter those markets often tied up the sole, government-owned carrier in a joint venture. That often made it more difficult for later entrants because in many of those countries, there were not multiple carriers available to become partners with or agents of foreign firms.

Acquisitions Become More Difficult as Additional Firms Enter the Market

The problem of limited domestic firms for acquisitions and partnerships was also evident within the twelve EC countries. The first or second entrants frequently formed partnerships with the local carriers who had the most to offer a foreign firm. EC-based companies frequently allied with firms in other EC countries before non-EC based firms entered those markets, leaving few available partners and affordable acquisitions. The EC-based firms were aware of the fact that they could be shut out of other EC country markets if they did not find partners there before the non-EC firms entered those markets.

Market Entry Implications for Other Services

As of early 1990 the EC had not made many decisions on how open other service markets would be to non-EC based firms. There was still time for those firms to have some input as to how they would be treated in the EC. The issue of whether the EC would provide for national treatment or reciprocal treatment of non-EC based firms was a critical one in early 1990. Industries such as passenger aviation, insurance and financial services could still have some impact on EC legislation if they acted wisely and lobbied in their home markets for increased operating privileges for EC-based firms.

US laws which limited the activities of foreign-based firms within the US were prime targets for liberalization as US firms could not expect the EC to open its markets to foreigners unless their home markets were opened to a similar extent to EC-based firms (Fletcher 1989). Thus, much of the lobbying activities of non-EC based firms had to focus on their own home governments in order to make progress in opening up foreign markets, such as the EC, during the 1990s.

In reference to Europe's single market, Colchester (1988) stated that "1992 has become a state of mind, a set of expectations that has political force, an obsession that amounts almost to a new reality." He also noted that 1992 as billed would not be achieved before the year 2000, but that it would accomplish much in bringing together the countries of Europe. He stated that the designers of 1992 had learned from past mistakes as to what would not work and that they could not require the passage of similar legislation in all twelve member countries under the practice of harmonisation. Instead, they had to apply the principle of mutual recognition of the laws of the twelve members which were deemed to be equivalent (Hexter 1989).

That approach was borrowed from the US system of competitive rulemaking, which had enabled the American internal market to develop while individual states retained the right to pass their own laws and citizens could move to any state they wished (Colchester 1988). That approach affected the air express industry because it sometimes produced twelve sets of rules as well as a Community-wide set. In many cases these rules conflicted, as has much of the legislation passed by states in the US.

Deregulation within the European Community

Most US service firms, especially in aviation and communications, had experienced deregulation during the 1970s or 1980s. That provided US firms with a competitive advantage over most EC-based firms because deregulation had not yet spread to EC services, such as aviation, in early 1990. All firms planning intra-EC expansion during the 1990s needed to understand the potential impacts of deregulation upon their marketing efforts.

Increased Uniformity among European Consumer Demand Not Likely in the Short Run

There was a widespread, but erroneous, belief that Europeans would become more alike as the EC moved toward 1992. Colchester (1988) stated that "Europe will remain a Europe of national markets that become steadily more accessible." Thus, marketers should not expect the individual differences characterizing different markets to disappear as 1992 approached. An easy approach for marketers was to believe that single market integration would make the desires of European consumers more uniform, but that was a fallacy that few could afford.

Vandermerwe and L'Huillier (1989) pointed out the differences between "Euroconsumers" and how segmentation often was not based on national borders. It appeared that many of these differences would remain important for generations as cultures have not been known to change overnight. While the intra-EC market would be attractive to the air express industry, it would not become uniform as to the demand for services.

The Lack of a Set of "Eurorules" for Marketers

It became clear during the late 1980s that businesses would not face a uniform set of rules in the EC even if all of the proposed reforms outlined in the White Paper of 1985 were implemented. The EC had adopted the approach of mutual recognition, which allowed each country to pass its own laws and required others to recognize those laws if they did not interfere with Community-wide goals. Thus, firms would still have to determine what were the applicable laws in each of the twelve member countries after 1992 and how they could abide by those regulations.

The Continued Growth of Intermodalism in Air Express

The major air express firms relied extensively on ground transport in early 1990. Within the EC, trucking frequently enabled air express services to meet their customers needs at lower costs and in a more timely manner than air transportation. Under the marketing concept, the role of the firm was to satisfy customer needs. The marketing orientation of the air express industry during the 1980s illustrated its concern with those needs and revealed the limitations of a production orientation as adopted by the traditional air freight industry. As air express firms learned that they could best serve many of their customers' needs by using trucks, they became trucking companies as well. That reflected their adherence to the marketing concept and explained much of their success. If the customer needed a type of service, the air express industry was glad to provide it, regardless of the mode or type of activities required.

IMPLICATIONS FOR FUTURE RESEARCH

As stated above, there were several reasons why information about the international air express industry was hard to locate. Several key participants, such as UPS and DHL, were privately owned and did not release much information to the press. Obtaining accurate market share information was difficult because each firm used different methods for compiling such data, most of which was proprietary in nature. Air express reliance upon trucking blurred the line between the air and ground transportation modes so that one could no longer easily define air express.

Another factor making air express data collection difficult was the fact that the industry was relatively new during the 1980s; the business press to a large extent was slow to recognize its importance. Likewise, the US press did not cover in depth many of the foreign acquisitions and cooperative alliances that characterized international air express expansion.

There is a need for future research regarding several aspects of the air express industry. A study of the growing role of air express in a firm's distribution system could reveal to what extent the industry has enabled its customers to develop competitive advantages, which may be longer lived than many of their previous ones. A major problem of most firms has been how to develop and sustain a competitive advantage (Porter 1985).

Another area requiring attention is the identification of activities which increase a firm's status as an insider in a foreign market under Ohmae's (1989) theory. A study of the benefits of insiderization would be vital to understanding the relationship, if any exists, between a firm's market share or profitability and its degree of insiderization in a particular market.

A study of the extent to which Gomes-Casseres' (1987 and 1988) joint venture development cycle applies to service industries might reveal whether his theory encompasses services, which are more heavily restricted by foreign governments than are goods. His 1987 study used data from foreign subsidiaries and joint ventures of US multinationals between 1900 and 1975. Service firms may have to rely more on joint ventures for foreign market entry than do firms marketing goods because of more extensive government control of services.

Expansion of the US air express market occurred most rapidly during the period following the deregulation of US aviation. A study of how US air deregulation affected air express may reveal to some extent the impact of European airline "liberalization" during the 1990s upon European air express.

The expansion of the international air express industry has highlighted the need for additional research into the future demand for intermodal transportation service. As transportation companies increasingly recognized that their customers were not purchasing a specific mode of transportation, they had to become more creative in their use of more than one mode in satisfying customers.

SUMMARY

The objective of this study was a) to determine what were the perceived barriers to entry to the intra-EC market facing five major air express firms not based in the EC and b) to identify the forms of entry selected by those firms. When this topic was first considered during 1985, the importance of the international air express market was not widely recognized outside of the air express industry.

The first phase of the study involved interviews of knowledgeable sources drawn from government, associations and consulting groups. The purpose of this phase was to gather background information on the international air express industry and any problems facing these firms as they expanded abroad. The major entry problems identified in this phase were customs, postal and aviation noise regulations.

The second phase involved a compilation of each of the five subject firm's entry histories in each of the twelve EC countries. This information was gathered from secondary sources which covered the industry. A chart for each of the five years showed the firm's direct entry activities, acquisitions, joint ventures, and contract/agent relationships in each country.

The third phase utilized carefully selected subjects drawn from the five subject firms. They verified the entry history charts described above and commented on entry problems in the subject countries. Former employees also were surveyed because there was some turnover during the five years of the study period.

The major findings of this study are:

1. **How a firm views barriers to entry depends on its individual level of international expertise.**
2. **Long range planning is critically important to successful foreign market entry in tightly regulated services such as air express.**
3. **Successful foreign market entry requires a firm to become an insider in its target markets.**
4. **The appropriate form of foreign market entry requires flexibility to adapt to changes in the external environment.**
5. **As customers demand increased international service, firms in industries such as air express have no choice but to become global in scope.**
6. **The most efficient entry technique for foreign entrants may be short-term partnerships with local firms.**

The barriers and problems perceived by the air express firms were difficult to identify because their perceptions changed during the five-year period of the study and the subject firms' employees often changed as well. In addition to surveying the firms' employees, this study relied on experts, many of whom had air express experience, from outside the subject firms.

Members in this latter group often had a better overall grasp of the barriers than did some of the firms' employees. That may have been due to the fact that the government, association and consulting group employees had more international expertise than some of the subject air express firms' employees. It also could have been that some of the more knowledgeable employees of the subject firms, such as UPS, would not discuss entry barriers with an outsider.

In any event, the subjects drawn from government, associations and consulting groups all agreed to discuss the topic once contacted. Their individual insights into different aspects of foreign market entry were quite illuminating. Most of this group recognized the importance of the customs and postal problems affecting international air express. While there was difficulty in defining the unique characteristics of air express, most agreed that it was quite different from traditional air freight service from airport to airport.

The study emphasized how firms viewed entry problems from differing perspectives. This was represented on a continuum moving from absolute barriers at one end through mobility barriers to doing business problems at the other end. It showed that not all firms viewed a "barrier" in a similar manner. The most successful international air express firms approached most barriers of entry as problems of doing business and found ways to minimize or avoid those problems.

One of the most surprising findings was how the five subject firms used different methods of entry during the five-year period. That may have been due to changes in their levels of international expertise as the entry process progressed. Except for Emery, the four other firms used a mixture of acquisitions, direct entry, joint ventures and agents in the EC at some point in this five-year period. A common pattern used by UPS and Federal Express was to select established local delivery firms as partners in each country and then later acquire them after a short period as partners.

Factors in the external environment, such as the status of existing competitors in the market and the openness of local markets, had a major impact on the form of entry selected. Some countries, such as Belgium, the Netherlands and the UK, were more open to air and trucking deregulation than were the other EC members. Thus, they became the site of many of the air express hubs within the EC. In the less open countries, their were fewer options for the subject firms. If there was a suitable acquisition target available, these firms often purchased it or formed a joint venture as a temporary strategy option. If there were none available, they found agents who could provide the local presence needed to serve that market.

The extent to which the EC changed between January 1, 1985 and December 31, 1989, was surprising. The EC countries were viewed in the most part as being developed nations, and one would not expect the amount and severity of change which occurred in that market within a five- year period. In the early 1980s when the EC was in the back of the mind of several of the subject firms, few could contemplate the rapid growth of the movement toward market integration that would envelop the EC by 1988.

While the EC adopted the many directives required for single market integration during the period of this study, there were still many areas in which services such as air express faced no uniform law. That made entry difficult because outside service firms had to comply with twelve sets of regulations while trying to have some input into the evolving Community-wide rules. Those rules would control many important aspects of their operations within the EC, and no firm could afford to stand by while their competitors influenced those laws.

One of the purposes of this study was to identify problems which other service firms might encounter in their drive toward global expansion and the entry strategy options they faced. The air express industry led the way into the intra-EC market with all five of the subject firms offering coverage of the entire EC by the end of the study period. These firms had completed most of their acquisitions within the EC by early 1990, when UPS announced its tenth acquisition in the EC, that of a Spanish parcel delivery company (Journal of Commerce 1990). It became evident during the period of this study that all outside service firms needed to be active in the EC before 1992 in order to protect their future interests in that market and in other major global markets.

This study provides an excellent example of a service industry in which global success requires complete control over ones employees spread over much of the world. The subject firms have had to become insiders in the major world markets in order to receive the treatment necessary for success on a national and global basis. As services become more international, other service firms can expect to face many entry problems similar to those discussed in this study.

REFERENCES

Abruzzese, Leo (1985), "Low-Key Base Profits UPS," The Journal of Commerce, New York (July 25), 1A, 6A.

Abruzzese, Leo (1989a), "Cargo Carriers State Access and Noise Case," The Journal of Commerce, New York (May 10), 5B.

Abruzzese, Leo (1989b), "DOT Scrutinizes Growing Foreign Stake in US Airlines," The Journal of Commerce, New York (September 1), 1A/5B.

Abruzzese, Leo (1989c), "Skinner: Northwest Sale Not Precedent-Setting," The Journal of Commerce, New York (October 2), 5B.

Abruzzese, Leo (1989d), "UPS Lists Plans to Serve USSR, E. Bloc Nations," The Journal of Commerce, New York (October 11), 5B.

Air Cargo World (1986), "Forwarders and Carriers Search for Niches In the Air Cargo Forest," (September), 45-57.

Allen, Michael G., Alexander R. Oliver, and Edward H. Schwallie (1981), "The Key to Successful Acquisitions," The Journal of Business Strategy 2 (2), 14-24.

Aronson, Jonathan David, and Peter R. Cowhey (1984), Trade in Services: A Case for Open Markets. Washington: American Enterprise Institute for Public Policy Research.

Avmark Aviation Economist, The (1987), "Industry Shakeout Accompanies International Expansion," (April), 8-10.

Avmark Aviation Economist, The (1988a), "EEC Air Services Negotiations: The Sorensen Plan-Is It Realistic?" (July), 2-4.

Avmark Aviation Economist, The (1988b), "Express Freight: Scheduled Carriers Take a Back Seat," (March-April), 16-20.

Axebank, Albert (1989), "UPS Prepares to Inaugurate Soviet Venture," The Journal of Commerce, New York (November 21), 15B.

Bain, Joe S. (1956), Barriers to New Competition. Cambridge: Harvard University Press.

Bakal, Dennis A. (1985), "Second-Morning Delivery Moves Into Spotlight as Air Freight Experiences Market Changes," Traffic World (April 22), 80-82.

Ball, Donald A., and Wendell H. McCulloch (1988), International Business: Introduction and Essentials. Third ed. Plano, TX: Business Publications, Inc.

Barnard, Bruce (1989a), "EC Prepares to Push for Airline Decontrol," The Journal of Commerce, New York (July 6), 5B.

Barnard, Bruce (1989b), "KLM Discusses Sale of XP Express System," The Journal of Commerce, New York (April 10), 5B.

Bell, David (1980), "Transportation Challenge: Integrating Europe's Road, Rail and Air Systems," Europe (November-December), 18-22.

Bertrand, Kate (1989), "Scrambling for 1992," Business Marketing (February), 49-59.

Bloomberg, David J., and Kenneth C. Williamson (1986), "JIT Application in the Air Freight Forwarder Industry: A Case Study." In Proceedings of the Thirteenth International Forum for Air Cargo. Warrendale, PA: Society of Automotive Engineers, Inc., 295-301.

Boeing Company (1988), World Air Cargo Forecast. Seattle: The Boeing Company. NTIS, G0354C16975.

Boeing Company (1989), World Air Cargo Forecast. Seattle: The Boeing Company. NTIS, G0433C21333.

Bond, Richard O. (1985), International Air Courier and Related Airline Operations. Washington: Cresap, McCormick and Paget for the International Courier Conference.

Breskin, Ira (1987a), "Rising Exports Expected to Fuel Air Cargo Growth," The Journal of Commerce, New York (December 28), 5B.

Breskin, Ira (1987b), "US Postal Service Seeks To Upgrade Express Mail," The Journal of Commerce, New York (December 30), 5B.

Breskin, Ira (1988a), "Commission Rejects Postal Discount Plan," The Journal of Commerce, New York (March 29), 2B.

Breskin, Ira (1988b), "Express Carriers Challenge the Structure of Air Cargo Industry," The Journal of Commerce-Air Commerce, New York (February 29), 4T.

Breskin, Ira (1988c), "Varying Airport Noise Rules Create Industry Problems," The Journal of Commerce, New York (April 29), 5B.

Breskin, Ira (1989a), "Freighter 'Hushkits' Feasible, Engine Manufacturer Says," The Journal of Commerce, New York (November 24), 5B.

Breskin, Ira (1989b), "New UPS Air Hub to Ease Congestion, Allow New Growth," The Journal of Commerce, New York (September 21), 9B.

Breskin, Ira (1989c), "Postal Service Seeks Changes in Remail Fees," The Journal of Commerce, New York (November 10), B5.

Bruce, Leigh (1987), "The EC's Lord Cockfield: Bullying Europe towards Unity," International Management (February), 20-27.

Button, Kenneth, and Dennis Swann (1989), "European Community Airlines-Deregulation and Its Problems," Journal of Common Market Studies 27, 259-282.

Callari, James J. (1988), "It's Not Just for Small Packages Anymore," Traffic Management (February), 39-41.

Campbell, James I. (1986), Special Study on Rapid Clearance of Urgent Air Consignments Presented to the Customs Cooperation Council. Washington: International Courier Conference.

Cao, A.D. (1980), "Non-tariff Barriers to U.S. Manufactured Exports," Columbia Journal of World Business (Summer), 93-102.

Carman, James M., and Eric Langeard (1980), "Growth Strategies for Service Firms," Strategic Management Journal 1, 7-22.

Caves, R.E., and M.E. Porter (1977), "From Entry Barriers to Mobility Barriers: Conjectural Decisions and Contrived Deterrence to New Competition," Quarterly Journal of Economics 41 (2), 241-261.

Cecchini, Paolo (1988), The 'Cost of Non-Europe'. Research on the 'Cost of Non-Europe'. Brussels: Commission of the European Communities.

Chan, Yupo, and Ronny J. Ponder (1979), "The Small Package Air Freight Industry in the United States: A Review of the Federal Express Experience," Transportation Research 13A, 221-229.

Cheeseright, Paul (1985a), "The E.C. Is Removing Internal Barriers," Europe (March-April), 28-29.

Cheeseright, Paul (1985b), "Toward A Real Common Market," Europe (September-October), 22-23.

Chestler, Larry (1985), "Overnight Air Express: Spatial Pattern, Competition and the Future in Small Package Delivery Services," Transportation Quarterly 34 (1), 59-71.

Christie, Rick (1988a), "Battle Heats Up Over Global Air Delivery," The Wall Street Journal, New York (December 19), B1.

Christie, Rick (1988b), "Federal Express Corp. Agrees to Acquire Tiger International in $880 Million Deal," The Wall Street Journal, New York (December 19), A45.

Christie, Rick (1988c), "Federal Express Plans Second Hub in Indianapolis," The Wall Street Journal, New York (July 29), 9.

Churchill, Jr., Gilbert A. (1987), Marketing Research. Fourth ed. New York: The Dryden Press.

Colchester, Nicholas (1988), "Europe's Internal Market," The Economist (July 9), 5-44.

Colvin, Geoffrey (1981), "Federal Express Dives into Air Mail," Fortune (June 15), 106-108.

Commins, Kevin (1989), "Trucking Will Play a Larger Role in a Unified EC, Consultant Says," The Journal of Commerce, New York (March 2), 1A, 2B.

Contractor, F. J., and P. Lorange (1988a), "Competition vs. Cooperation: A Benefit/Cost Framework for Choosing Between Fully-Owned Investments and Cooperative Relationships," Management International Review (Special Issue), 5-18.

Contractor, Farok J., and Peter Lorange (1988b), "Why Should Firms Cooperate? The Strategy and Economics Basis for Cooperative Ventures." In Cooperative Strategies in International Business. Edited by F. J. Contractor and P. Lorange. Lexington, MA: Lexington Books, 3-28.

Davies, John (1989a), "Air Express Firms Split Over Strategies For Foreign Growth," The Journal of Commerce, New York (March 14), 5B.

Davies, John (1989b), "European Line Takes Close Look at Airborne," The Journal of Commerce, New York (August 1), 1A, 5B.

Davies, Peter (1988), "Integrated Operators in Europe," Transportation & Distribution (September), 37, 40.

Davies, R. E. G. (1984), "The History of Air Express in the United States." In Conference Proceedings of the Twelfth International Forum for Air Cargo. Warrendale, PA: Society of Automotive Engineers, Inc., 221-227.

Davisson, John F. (1987), "The Steely Standoff in European Express Air," Handling & Shipping Management (July), 34-36.

de Rivery, Eric Morgan (1989), Speech Delivered at the Annual Meeting of the Air Courier Conference of America. Geneva: The Air Courier Conference of America (May).

Deardorff, Alan V ., and Robert M. Stern (1985), Methods of Measurement of Non-tariff Barriers. New York: United Nations Conference on Trade and Development. NTIS, GE.85-50009.

DiBenedetto, William (1990), "EC Shelves 'Genuine-Link' Transport Plan," The Journal of Commerce, New York (January 2), 1B.

Drozdowski, Ted E. (1984), "Get Ready for Surprises in Small Packages," Purchasing (March 8), 60-63.

Dumaine, Brian (1989), "How Managers Can Succeed through Speed," Fortune (February 13), 54-58.

Duncan, Robert B. (1979), "Qualitative Research Methods in Strategic Management." In Strategic Management. Edited by D. E. Schendel and C. W. Hofer. New York: Little, Brown & Co., 424-447.

Economist, The (1988), "Europe's Internal Market," (July 9), 5-44.

Economist, The (1989), "Europe's Freight Market: Teasing Goliath," (December 9), 72-73.

Eddy, Art (1988), "Europe 1992: Rediscovered by Americans," Transportation & Distribution (September), 16-22.

Erickson, Stanford (1989), "More Air Carriers Depend on Trucks," The Journal of Commerce-Air Commerce, New York (June 26), 13T.

Ernst & Whinney (1987), Corporate Profitability & Logistics: Innovative Guidelines for Executives. Oak Brook, IL: The Council of Logistics Management and The National Association of Accountants.

Euromoney (1988a), "Air Express Takes Flight," (July), 1-3.

Euromoney (1988b), "Carriers Jostling for Their 1992 Positions," (July), 4-10.

European Commission (1985a), Completing the Internal Market. Brussels: Commission of the European Communities. NTIS, CB-43-85-894-EN-C.

European Commission (1985b), Intra-Community Air Freight: Report on Facilitation. Brussels: Commission of the European Communities. NTIS, COM(85)436 Final/Annex.

European Commission (1988), Completing the Internal Market: An Area without Internal Frontiers: The Progress Report Required by Article 8B of the Treaty. Brussels: Commission of the European Communities. NTIS, COM(88)650 Final.

European Community (1984), Draft Council Directive Concerning Authorisation of Air Services for the Carriage of Express Low Weight Cargo Between Member States. Brussels: Commission of the European Communities. NTIS, VII.A.2-201/84.

Feldman, Joan M. (1985a), "Contracting Replaces Coming Carriage in Air Freight," Handling & Shipping Management (April), 70-77.

Feldman, Joan M. (1985b), "Federal Express: Big, Bigger and Biggest," Air Transport World (November), 46-54.

Feldman, Joan M. (1985c), "Same-Day Delivery Makes Its Debut," Handling & Shipping Management (June), 42-46.

Feldman, Joan M. (1988a), "A GATT for Aviation," Air Transport World (July), 26, 29.

Feldman, Joan M. (1988b), "U.S. Airlines Eyeing International Cargo," Air Transport World (May), 53-54.

Feldman, Joan M. (1989), "The Coming of Age of International Air Freight," Air Transport World (June), 31-35, 316.

Field, David (1985), "Future of Air Cargo Industry Seen Increasingly Complex, Specialized," Traffic World (May 13), 42-44.

Finn, Edwin A. (1988), "21st-Century Truckers," Forbes (April 4), 80-86.

Fletcher, Meg (1989), "1992s Effects Will Be Global: Experts," Business Insurance (June 19), 29.

Fortune (1989), "The Service 500: The 50 Largest Transportation Companies," (June 5), 382-3.

Foust, Dean (1989), "Mr. Smith Goes Global," Business Week (February 13), 66-72.

Friberg, Eric G. (1989), "1992: Moves Europeans Are Making," Harvard Business Review (May-June), 85-89.

Gallacher, Jacqueline (1987), "Small Is Beautiful," Airline Business (July), 18-25.

Gelb, Norman (1989), "The Practical Problems: Europe Without Frontiers," The New Leader (January 9), 7-8.

Gelfond, Susan M. (1988), "It's A Fax, Fax, Fax, Fax World," Business Week (March 21), 136.

Ghemawat, Pankaj, Michael E. Porter, and Richard A. Rawlinson (1986), "Patterns of International Activity." In Competition in Global Industries. Edited by M. E. Porter. Boston: Harvard Business School Press, 345-365.

Goldstein, Josh (1988), "Verdict Expected Soon on Airport Noise Rules," The Journal of Commerce, New York (July 14), 5B.

Gomes-Casseres, Benjamin (1987), "Joint Venture Instability: Is It A Problem?" Columbia Journal of World Business 22 (2), 97-101.

Gomes-Casseres, Benjamin (1988), "Joint Venture Cycles: The Evolution of Ownership Strategies." In Cooperative Strategies in International Business. Edited by Farok J. Contractor and P. Lorange. Lexington, MA: Lexington Books, 111-128.

Greer, Douglas F. (1984), Industrial Organization and Public Policy. Second ed. New York: Macmillan Publishing Company.

Gubbins, Edmund J. and Peter Hancox (1989), "Cabotage in Road Haulage and the Single European Market Proposals," International Journal of Physical Distribution & Materials Management 19:6, 16-25.

Hall, Randolph W. (1989), "Configuration of an Overnight Package Air Network," Transportation Research 23A (2), 139-149.

Hamel, Gary, Yves L. Doz, and C.K. Prahalad (1989), "Collaborate with Your Competitors-and Win," Harvard Business Review (January-February), 133-139.

Harper, Donald V. (1988), "The Continuing Dilemma of Aircraft Noise," Transportation Journal 28 (2), 33-42.

Hastings, Phillip (1985), "New Air Cargo Hubs Sprout in Europe," The Journal of Commerce, New York (October 30), 1A.

Hastings, Phillip (1986), "Maastricht Expansion Threatened," The Journal of Commerce, New York (April 21), 6A.

Hastings, Phillip (1988a), "European Airlines Progress Slowly," The Journal of Commerce-Air Commerce, New York (February 29), 10.

Hastings, Phillip (1988b), "TNT May Use Hungary Base as Springboard," The Journal of Commerce, New York (November 22), 5B.

Hastings, Phillip (1989a), "Air Express Firm Plans European Truck Network," The Journal of Commerce, New York (July 17), 7B.

Hastings, Phillip (1989b), "Fedex Considers Locations for European Cargo Hub," The Journal of Commerce, New York (October 10), 5B.

Hastings, Phillip (1989c), "Liberalizing of European Airlines Leading to Greater Use of Trucks," The Journal of Commerce, New York (October 13), 5B.

Hawes, Mark (1987), EEC Transport Policy and Impact on Airfreight and Market Development Worldwide. Geneva: International Air Transport Association.

Hazen, Tim (1987), "The Postman Does Ring Twice," Air Cargo World (October), 28-38.

Heard, Joyce (1987), "Overnight Mail: Who Will Rule the Routes?" Business Week (May 25), 78.

Helms, Marilyn Michelle (1987), Strategy and the Impact of Environmental Pressures: An Analysis of the Expedited Small Package Industry. Unpublished doctoral dissertation, Memphis State University (December).

Helms, Marilyn M. (1989), "A Structure Conduct Performance Analysis of the Expedited Small Package Industry," Transportation Quarterly 43 (1), 101-122.

Hergert, Michael, and Deigan Morris (1988), "Trends in International Collaborative Agreements." In Cooperative Strategies in International Business. Edited by F. J. Contractor and P. Lorange. Lexington, MA: Lexington Books, 99-109

Hexter, David T. (1989), "Europe 1992: How Will It Affect International Competition?" Financial Executive (August), 20-24.

Higdon, Dave (1988a), "Burnley Will Support Local Noise Policies," The Journal of Commerce, New York (January 26), 5B.

Higdon, Dave (1988b), "EC Cargo Carriers May Retain Access to Older, Lounder Aircraft," The Journal of Commerce, New York (December 1), 5B.

Higdon, Dave (1989), "UPS Starts E. Bloc Service Amid Upheaval," The Journal of Commerce, New York (December 7), 2B.

Hofstede, Geert (1980), Culture's Consequences: International Differences in Work-Related Values. Beverly Hills, CA: Sage Publications.

Hofstede, Geert (1983), "National Cultures in Four Dimensions," International Studies of Man and Organization 13 (1-2), 46-74.

IATA Review (1989), "Cargo - Choking on Red Tape," (February), 10-15.

Illingworth, Montieth M. (1988), "Air Express Carriers Have Share of Problems Abroad," The Journal of Commerce-Air Commerce, New York (August 29), 11T, 34T.

International Express Carriers Conference (1989), History, Philosophy and Goals of the Conference. Geneva: International Express Carriers Conference (October).

Johnson, Gregory S. (1987), "Federal Express Wages Battle for Deregulation," The Journal of Commerce, New York (November 25), 2B.

Journal of Commerce-Air Commerce, The (1986), "42 1/4 Million Packages A Year Later," (December), 23-24.

Journal of Commerce, The (1987), "Post Offices Combine for Express Mail Plan," (December 8), 5B.

Journal of Commerce, The (1988), "DHL Inks Hungarian Venture," (June 10), 5B.

Journal of Commerce, The (1989a), "Air Courier Companies Sue US Postal Service," (October 18), 5B.

Journal of Commerce, The (1989b), "DHL Found E. Bloc Snags," (August 2), 5B.

Journal of Commerce, The (1989c), "Postal Congress Increases International Remail Fees," (December 1), 9B.

Journal of Commerce, The (1989d), "UPS Adds Yugoslavia to Express Territory," (October 5), 5B.

Journal of Commerce, The (1990), "UPS Buys Spanish Company," (February 28), 5B.

Kale, Sudhir H., and Roger P. McIntyre (1988), "Segmenting the European Market: A Cultural Perspective." In Marketing Cooperation with Europe. New Delhi: Institute of Marketing & Management, N1-14.

Kandix, Dix (1987), "The Airline-Forwarder Partnership: What Now?" The Journal of Commerce-Air Commerce, New York (June 29), 13-17.

Kane, Robert M., and Allan D. Vose (1982), Air Transportation. Eighth ed. Aviation Management Series. Dubuque, IA: Kendall/Hunt Publishing Co.

Karakaya, Fahri, and Michael J. Stahl (1989), "Barriers to Entry and Market Entry Decisions in Consumer and Industrial Goods Markets," Journal of Marketing 53 (April), 80-91.

Kaufman, Lawrence H. (1989), "Quick Merger Created New Emery Worldwide," The Journal of Commerce, New York (May 9), 5B.

Keeble, Simon (1988), "Europe Looks to Deregulation," Air Cargo World (May), 28-34.

Kogut, Bruce, and Harbir Singh (1988), "Entering the United States by Joint Venture: Competitive Rivalry and Industry Structure." In Cooperative Strategies in International Business. Edited by F. J. Contractor and P. Lorange. Lexington, MA: Lexington Books, 241-251.

La Londe, Bernard J., Martha C. Cooper, and Thomas G. Noordewier (1988), Customer Service: A Management Perspective. Oak Brook, IL.: Council of Logistics Management.

Lambkin, Mary (1988), "Order of Entry and Performance in New Markets," Strategic Management Journal 9, 127-140.

Lee, Susan (1988), "An Impossible Dream?" Forbes (July 25), 78.

Leeper, Cambridge & Campbell, Inc. (1989), The All-Cargo Air Carrier Industry: Its Economic Impact and Future Needs. Washington: Air Freight Association.

Leister, Douglas V., Stuart E. Robinson, Erwin von den Steinen, and Ingrid M. Kollist (1988), An Analysis of the United States International Air Cargo Market 1975-1986. Washington: U.S. Department of Transportation and Department of State.

Leister, Douglas V., and Joel S. Spiro (1987), Statement before the Subcommittee on Investigations and Oversight of the House Committee on Public Works and Transportation on the International Air Cargo. Washington: US Department of Transportation and Department of State.

Lelyveld, Michael S. (1989), "Shh! UPS Expands On-Demand Pickup," The Journal of Commerce, New York (September 14), 1A, 5B.

Lewis, Howard T., and James W. Culliton (1956), The Role of Air Freight in Physical Distribution. Boston: Harvard University Graduate School of Business Administration.

Lieberman, Marvin B., and David B. Montgomery (1988), "First-mover Advantages," Strategic Management Journal 9, 41-58.

Lipkin, Richard (1988), "Fax Fever Slams Business Hard," Insight (August 22), 8-12.

Lloyd's Aviation Economist (1986), "Silent Threat from Ancat and the FAA," (July), 15.

Lofland, John (1971), Analyzing Social Settings. Belmont, CA.: Wadsworth Publishing.

Lovell, Bernard (1986), "U. S. Express Carriers Race to Invade Europe," Air Cargo World (September), 19-30.

Lueck, Thomas J. (1984), "Emery's Successful Niches," The New York Times-Business Day, New York (November 13), 27, 33.

Lyon, Mark W. (1988), "Paperwork Is Slowing Cargo Shipments," Airline Executive (July), 28-32.

MacDonald, Mitchell (1989), "Will 'Foreign Invasion' Change U.S. Transport Scene?" Traffic Management (September), 51-58.

Magee, John F. (1989), "1992: Moves Americans Must Make," Harvard Business Review (May-June), 78-84.

Magnier, Mark (1988), "Export Boom Boosts Cargo Carriers," The Journal of Commerce, New York (March 1), 5B.

Magnier, Mark (1989), "UPS to Launch Direct Service to Hungarians," The Journal of Commerce, New York (August 2), 5B.

Mahoney, John H. (1985), Intermodal Freight Transportation. Westport, CT: Eno Foundation for Transportation, Inc.

Main, Jeremy (1989), "How to Go Global-and Why," Fortune (August 28), 70-76.

Malkin, Richard (1988), "Express Carriers Tend Own Knitting," The Journal of Commerce, New York (May 4), 5B.

Mariti, P., and R.H. Smiley (1983), "Co-operative Agreements and the Organization of Industry," The Journal of Industrial Economics 31 (4), 437-451.

Mayer, Charles S. (1974), "Data Collection Methods: Personal Interviews." In Handbook of Marketing Research. Edited by R. S. Ferber. New York: McGraw Hill Book Co., 2-82-9.

McCarthy, Denis M. (1986), "Airfreight Forwarders," Transportation Quarterly 40 (1), 97.

McGee, John (1985), "Strategic Groups: A Bridge Between Industry Structure and Strategic Management." In Strategic Marketing and Management. Edited by H. Thomas and D. Gardner. New York: John Wiley & Sons, 293-313.

Mecham, Michael (1987), "UPS Introduces 757 Freighters to Expand Service, Constrain Noise," Aviation Week & Space Technology (September 14), 49-52.

Melcher, Richard A. (1989), "Hot Startups Abroad: The World Is Their Market," Business Week (May 22), 110-111.

Murphy, Patrick V. (1989), Statement of U.S. International Air Cargo Policy. Washington: US Department of Transportation. NTIS, Order 89-5-29.

Nulty, Peter (1990), "How the World Will Change," Fortune (January 15), 44-54.

Nusbaumer, Jacques (1987), Services in the Global Market. Boston: Kluwer Academic Publishers.

Ochel, Wolfgang, and Manfred Wegner (1987), Service Economies in Europe. London: Pinter Publishers.

Ohmae, Kenichi (1985), Triad Power: The Coming Shape of Global Competition. New York: The Free Press.

Ohmae, Kenichi (1989), "Managing in a Borderless World," Harvard Business Review (May-June), 152-161.

Page, S. A. B. (1981), "The Revival of Protectionism and its Consequences for Europe," The Journal of Common Market Studies 20 (1), 17-40.

Patton, Michael Quinn (1980), Qualitative Evaluation Methods. Beverly Hills, CA: Sage Publications.

Pedersen, Daniel (1989), "A 'Grenade' Aimed at Hollywood," Newsweek (October 16), 58.

Plous Jr., F. K. (1989), "Europe in 1992: Tough Decisions Await," Intermodal Age (March-April), 30-32.

Polster, Sarah (1988), "DHL Ties Up East Europe Package," Advertising Age (August 29), 29.

Porter, Michael E. (1980), Competitive Strategy: Techniques for Analyzing Industries and Competitors. New York: The Free Press.

Porter, Michael E. (1985), Competitive Advantage. New York: The Free Press.

Porter, Michael E. (1986a), "Changing Patterns of International Competition," California Management Review 28 (2), 9-40.

Porter, Michael E. (1986b), "Coalitions and Global Strategy." In Competition in Global Industries. Edited by M. E. Porter. Boston: Harvard Business School Press, 315-343.

Preble, Cecilia (1987), "Courier Companies Pursue Growth To Meet Demand for Global Service," Aviation Week & Space Technology (July 6), 50-54.

Purchasing (1984), "Express Service is on the Grow," (July 19), 77-79.

Quelch, John A., Robert D. Buzzell, and Eric R. Salama (1990), The Marketing Challenge of 1992. Reading, MA: Addison-Wesley Publishing Company.

Quickel, Stephen W. (1989), "Target: Europe," Business Month (August), 24-27.

Rau, Pradeep A., and Jr. John K. Ryans (1989), "An Executive's Guide to E.C.-1992: A Glossary of Terms," Business (July-September), 48-50.

Reed, Arthur (1989), "European Airlines Decry Penalties of Chapter 2 Noise Rule," Air Transport World (March), 33-40.

Reichardt, Charles S., and Thomas D. Cook (1979), "Beyond Qualitative Versus Quantitative Methods." In Qualitative and Quantitative Methods in Evaluation Research. Edited by T. D. Cook and C. S. Reichardt. Beverly Hills, CA: Sage Publications, 7-32.

Rijkens, Rein, and Gordon E. Miracle (1986), European Regulation of Advertising. Amsterdam: North-Holland Company.

Robinson, John (1986), "The European Commission: A New-Found Friend of Business," International Management (September), 70-74.

Robinson, William T. (1988), "Sources of Market Pioneer Advantages: The Case of Industrial Goods Industries," Journal of Marketing Research 25 (February), 87-94.

Robinson, William T., and Claes Fornell (1985), "Sources of Market Pioneer Advantages in Consumer Goods Industries," Journal of Marketing Research 22 (August), 305-17.

Root, Franklin R. (1982), Foreign Market Entry Strategies. New York: AMACOM.

Ross, Richard (1987), "A Threat From America," The Journal of Commerce, New York (June 29), 18-19.

Rotov, Dimitri (1989), "Remailers Face Deadly Shake-up in November," Jet Cargo News, Houston (October), 8.

Russ, Dave (1984), "Delivery: How to Make Haste Without Waste," Handling & Shipping Management (June), 37-40.

Scherer, F. M (1970), "Product Differentiation, Market Structure, and Competition." In Industrial Market Structure and Economic Performance. Chicago: Rand McNally & Co., 324-378.

Scherer, F.M. (1980), Industrial Market Structure and Economic Performance. Second ed. Boston: Houghton Mifflin Co.

Schmalensee, Richard (1982), "Product Differentiation Advantages of Pioneering Brands," The American Economic Review 72 (3), 349-365.

Schnitzer, Martin C., Marilyn I. Liebrenz, and Konrad W. Kubin (1985), International Business. Dallas: South-Western Publishing Co.

Schrodt, Anita (1989), "FedEx Plans for Expansion of Indiana Hub," The Journal of Commerce, New York (September 21), 9B.

Selwitz, Robert (1988), "Noise Rules Prove Biggest Worry for Overnight Delivery Services," The Journal of Commerce-Air Commerce, New York (August 29), 8T.

Sletmo, Gunnar K., and Jacques Picard (1985), "International Distribution Policies and the Role of Air Freight," The Journal of Business Logistics 6 (1), 35-51.

Smeathers, Kimberley (1989), "Congestion-The Campaign Continues," IATA Review (February), 3-4, 20.

Solomon, Mark B. (1989), "As Mergers Shrink Industry Forwarders See Opportunity," Traffic World (February 27), 15-16.

Stenger, Allen J. (1986), "New Manufacturing Technologies, Techniques, and Trends Leading to More Air Freight Traffic." In Proceedings of the Thirteenth International Forum for Air Cargo. Warrendale, PA: Society of Automotive Engineers, Inc., 287-293.

Sterne, Larry (1986), "Europe's Market Debated," The Journal of Commerce, New York (September 19), 6A.

Sterne, Larry (1989), "Producer of DC-8 Hush Kits Flies High as Sales Take Off," The Journal of Commerce, New York (August 6), 1A, 6A.

Stewart, Thomas A. (1990), "How to Manage in the New Era," Fortune (January 15), 58-72.

Stock, James R., and Douglas M. Lambert (1987), Strategic Logistics Management. Second ed. Homewood, IL: Richard D. Irwin, Inc.

Stone, Nan (1989), "The Globalization of Europe: An Interview with Wisse Dekker," Harvard Business Review (May-June), 90-95.

Stoner, Leigh (1988), "Europe '93 Truck Deregulation Sets Up No-Holds-Barred Market," Traffic World (June 6), 25-26.

Stove, Vincent W. (1988), "TNT Looks to Hungary for Air Freight Expansion," The Journal of Commerce, New York (October 6), 5B.

Taneja, Nawal K. (1981), Airlines in Transition. Lexington, MA.: Lexington Books/ D. C. Heath and Co.

Taylor, Ronald A. (1985), "Can U.S. Postal Service Lick Its Troubles?" U.S. New & World Report (December 16), 54-55.

Terpstra, Vern (1987), "The Evolution of International Marketing," International Marketing Review (Summer), 47-59.

Thompson, Kevin D. (1987), "Shakeout Hits Air Freight, Package Field," The Journal of Commerce, New York (March 3), 1A, 7A.

Toh, Rex S., and Nathan S. Shubat (1985), "The Impact and Effectiveness of the International Air Transportation Competition Act of 1979," Transportation Journal 25 (2), 46-54.

Toll, Erich E. (1987), "Express Service for Europeans Seen Lagging," The Journal of Commerce, New York (October 1), 5B.

Toman, Barbara (1989), "Now Comes the Hard Part: Marketing," The Wall Street Journal, New York (September 22), R10, R12.

Toyne, Brian, and Peter G. P. Walters (1989), Global Marketing Management. Boston: Allyn and Bacon.

Traffic World (1987a), "DHL Service Expansion," (April 20), 28.

Traffic World (1987b), "USPS, European Countries Sign Pact on Express Mail," (December 8), 43.

Tully, Shawn (1989), "The Coming Boom in Europe," Fortune (April 10), 108-114.

Tuninga, Ronald (1989), "The European Community and 1992: The Implications for Transportation," International Journal of Physical Distribution & Materials Management 19:5, 10-14.

Unsworth, Edwin (1985), "New Noise Limits Start At British Airports," The Journal of Commerce, New York (December 31), 5A.

Unsworth, Edwin (1988), "Lifting of EC Trade Bars by '93 May Revolutionize Trucking Industry," The Journal of Commerce, New York (July 22), 2B.

Unsworth, Edwin (1989a), "Britain's Post Office Challenges Growth of Remail Services," The Journal of Commerce, New York (November 22), 5B.

Unsworth, Edwin (1989b), "European Anxiety Over Traffic Mounts," The Journal of Commerce, New York (May 22), 1A, 12A.

Unsworth, Edwin (1989c), "Federal Express Prepares for Growth in EC Mart," The Journal of Commerce, New York (July 5), 5B.

Unsworth, Edwin (1989d), "XP to Expand Its Trucking Wing," The Journal of Commerce, New York (October 2), 2B.

Valls-Russell, Janice (1989), "Laying the Groundwork: Europe's Bumpy Road to '92," The New Leader (February 8), 8-9.

van der Hoop, Hans (1988), "Europhobia or Europhoria?" Distribution (October), 38-46.

Van Maanen, John, James M. Dabbs Jr., and Robert R. Faulkner (1982), Varieties of Qualitative Research. Beverly Hills, CA: Sage Publications.

Vandermerwe, Sandra (1989), "Strategies for a Pan European Market," Long Range Planning 22 (3), 45-53.

Vandermerwe, Sandra, and Marc-Andre L'Huillier (1989), "Euro-Consumers in 1992," Business Horizons (January-February), 34-40.

Vernon, Raymond (1989), "Can the U.S. Negotiate for Trade Equality?" Harvard Business Review (May-June), 96-101.

Waller, Steven (1987), "Single-Vendor Shipping Emerging As Air Express Takes On Freight Responsibilities," ICAO Bulletin (August), 22-24.

White, Larry C. (1989), "Managing Ahead for 1992 Is Risky," Business Month (August), 32-34.

Wiersum, Egge, and B. V. Rutges (1987), "Role of Trucking in Air Freight," The Journal of Commerce-Air Commerce, New York (December 29), 19.

Williams, Ernest W. (1976), "US and Common Market Transport: A Comparative Study," Columbia Journal of World Business (Spring), 5-14.

Williamson, Oliver E. (1975), Market and Hierarchies: Analysis and Antitrust Implications. New York: Free Press.

Willmott, Kevin (1987), "Air Freight Under Analysis at London Shipper Meeting," Traffic World (November 2), 34.

Woolley, David (1987), "Anybody Notice the Rules Change?" Air Cargo World (November), 42-46.

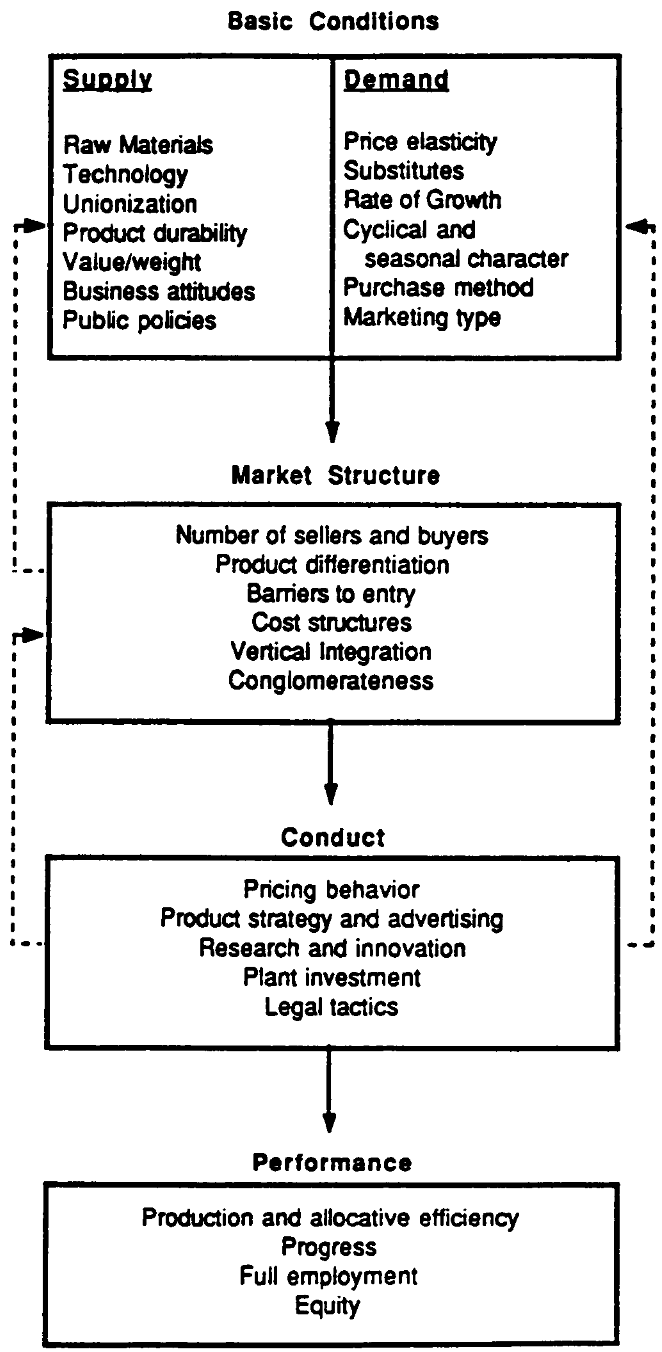
Work, Clemens P. (1989), "Jumping into the Euromarket: Is It Cheaper by the Dozen?" U.S. News & World Report (July 3), 44-18.

Yip, George S. (1982a), Barriers to Entry: A Corporate-Strategy Perspective. Lexington, MA: Lexington Books.

Yip, George S. (1982b), "Gateways to Entry," Harvard Business Review (September-October), 85-92.

APPENDIXES

APPENDIX A: MODEL OF INDUSTRIAL ORGANIZATION ANALYSIS

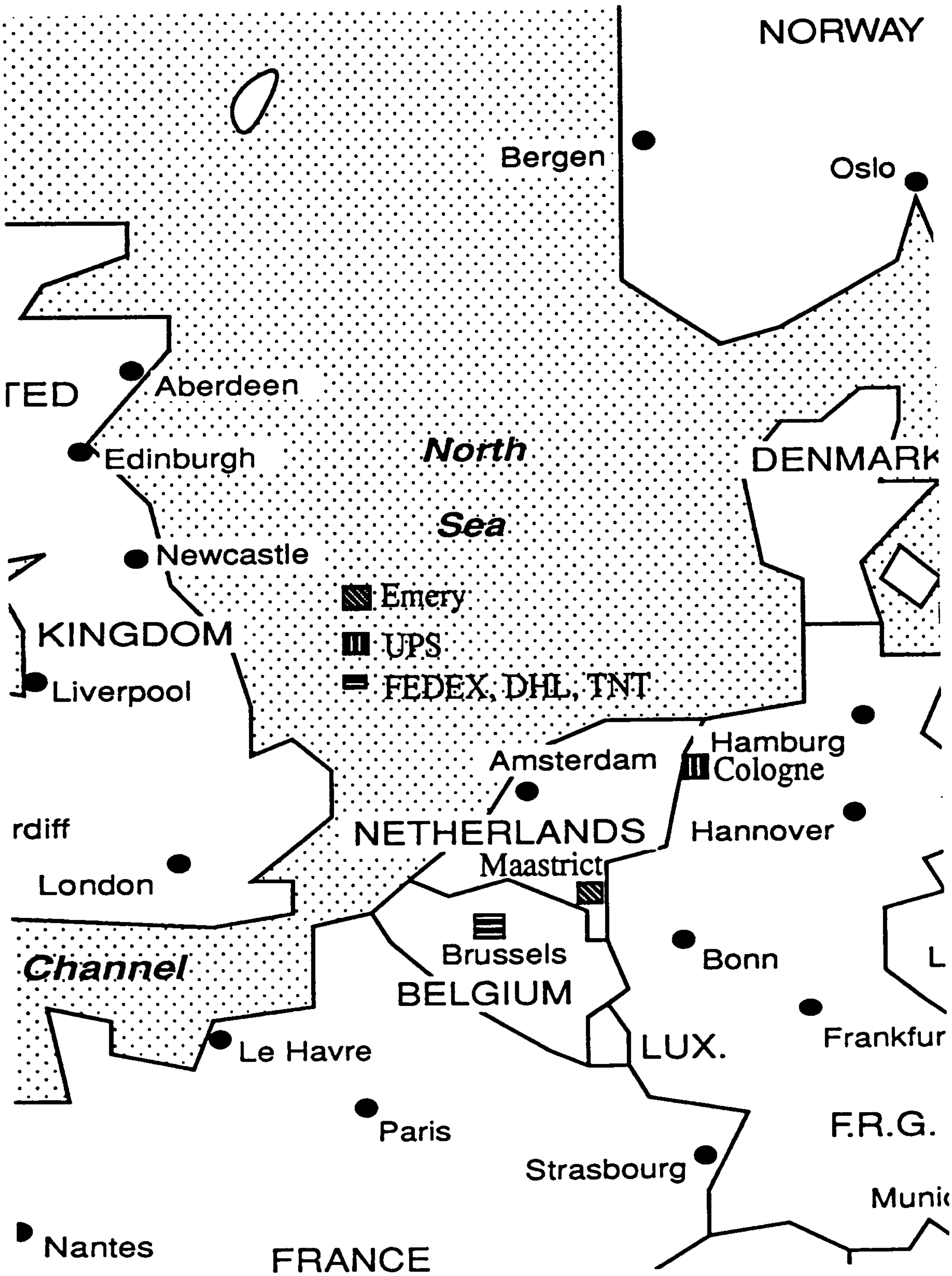


Source: Scherer (1970)

APPENDIX B: FACT SHEET ON THE SUBJECT AIR EXPRESS FIRMS

COMPANY NAME	DHL	EMERY	FEDERAL EXPRESS	TNT	UNITED PARCEL SERVICE
HEAD-QUARTERS	Hong Kong and Calif. (two cos.)	Calif. (Consol. Freight. parent)	Tenn.	Australia	Conn.
OWNER-SHIP	Private	Public	Public	Private	Private
YEAR FORMED	1969	1945	1973	1946	1907
BEGAN FLYING OWN PLANES	1983	1981	1973	1987 (in Europe- cannot operate planes in US)	1982
MAIN HUB (US)	Cincinnati	Dayton	Memphis		Louisville
MAIN HUB (EUROPE)	Brussels	Maastricht Neth..	Brussels	Brussels	Cologne
TOTAL AIRCRAFT	40	82	240	37	173
NO. OF COUNTRIES SERVED	180	88	118	182	175

APPENDIX C: MAP OF EUROPEAN COMMUNITY SHOWING FIRMS' HUBS



APPENDIX D: ENTRY HISTORY CHART

YEAR: COMPANY:

Country	NAME OF CO.	FORM	LOCA-TION	MODE	MAJOR ENTRY PROBLEMS
BELGIUM					
DENMARK					
FRANCE					
GREECE					
IRELAND					
ITALY					
LUXEMBOURG					
NETHERLANDS					
PORTUGAL					
SPAIN					
UNITED KINGDOM					
WEST GERMANY					

APPENDIX E: SECONDARY SOURCES USED IN SECOND PHASE

Air Cargo World
Air Transport World
Airline Executive
Airports International
Aviation Daily
Aviation Week & Space Technology
Avmark Aviation Economist
Business Week
Distribution
The Economist
Euromoney
Europe
European Journal of Marketing
Forbes
Fortune
Freight News Express
Global Trade
Global Trade Executive
Inbound Logistics
Interavia
ICAO Bulletin
International Forum for Air Cargo (IFAC) Proceedings
International Management
Journal of Business Logistics
Journal of Commerce (includes Air Commerce)
Mergers & Acquisitions
Purchasing
Traffic Management
Traffic World
Transportation & Distribution (H&SM)
Transportation Journal
Transportation Quarterly
The Wall Street Journal

APPENDIX F: LIST OF THIRD PHASE SUBJECTS

DHL
Jim Campbell, ex-DHL counsel, IECC, Washington
Gregory Swienton, Regional Manager DHL Europe, Brussels, completed survey

EMERY
Brian Costar, Vice President International, Palo Alto
Ton Heijmen, ex-Strategic Planning, Coopers & Lybrand, Hartford, completed survey
Jules Schneider, European Marketing Director, Zurich
Baxter Urist, ex-Vice President Marketing, Westport

FEDERAL EXPRESS
Arun Kulkarni, Manager Corporate Expansion Planning, completed survey
Dave Shoenfeld, Vice President International Marketing

TNT
John Ovens, ex- Manager TNT SKYPAK US, London, completed survey
Maria Vigliarolo, Vice President Marketing US, Garden City

UPS
Ed Bolton, ex-Vice President Marketing, Guinness Peat Aviation, Stamford, completed survey
Dale Greenwood, International Marketing, Greenwich
Marc Schiller, International Marketing Manager, Greenwich
Dallas K. (Dal) Sherman, formerly in international marketing, now with European Expedite, Brussels, completed survey

APPENDIX G: COVER LETTER SENT TO RESPONDENTS

Department of Marketing
East Carolina University
Greenville, NC 27858

Date

John Doe, Title
Subject Firm
Address
City, State Zip

Dear Mr. Doe:

Enclosed is the entry history study I mentioned to you over the phone today. As I am studying how five non-European Community air express firms have entered the intra-E.C. market since 1985, I would appreciate it if you could verify the information in these entry history charts. Could you please note any errors or omissions in the entry charts as the press may have not documented your firm's entry activities accurately or I may have missed some of their coverage.

If your firm faced any major entry problems in specific countries, could you please describe those problems in the right hand column labelled "Major Entry Problems" using the back of the page if you need more space. Examples of major entry problems might include customs, trucking or postal regulations; airport landing rights, noise and congestion; and any other types of obstacles that your firm faced in that market.

On the last page of the entry histories, there are two open ended questions. The first asks you to describe any major changes in entry barriers between 1985 and 1989. The second asks you to describe anything that you would have done differently in entering this market. Your comments could be very helpful to other service firms trying to enter this market.

Please return the entry history forms in the enclosed stamped envelope after reviewing them and adding your comments. Once I have compiled the information added to the charts, I will analyze how entry occurred and write a summary report. I shall be glad to send a copy of the summary to you after receiving the completed entry history. The five companies being studied are DHL, Emery, Federal Express, TNT and UPS.

I appreciate your cooperation in reviewing this entry history. It is hoped that these findings can help other service firms trying to enter the intra-EC market. If you have any questions about this study, please give me a call at (919) 757-6368.

Sincerely,

Gray Ligon, Assistant Professor

VITA

Gray Cargile Ligon was born in Arkadelphia, Arkansas, in 1951 and was reared in West Texas. She received a Bachelor of Science in Biology from the University of Alaska, Fairbanks, in 1973 and a Juris Doctor in Law from the University of Puget Sound in 1976. Her work experience includes residential and commercial real estate sales and management in Alaska from 1976 through 1979. She is a member of the Alaska Bar Association and practiced insurance defense law in Anchorage during 1979.

The author received a Master's in International Management from the American Graduate School of International Management in 1981 and was the Vice President of Marketing for the Anchorage Convention & Visitors Bureau during 1981 and 1982. In 1983 she began teaching in a travel industry management program in the Department of Marketing at the University of Alaska, Fairbanks. During 1983 she ran training seminars for front-line hospitality industry employees in eighteen Alaskan cities under a grant from the Alaska Visitors' Association. From 1984 through 1986 she was a doctoral student at the University of Tennessee, Knoxville, where she received a Doctor of Philosophy degree in Business Administration with a transportation major and a marketing minor in 1990.

She taught international business at George Mason University from 1986 through 1988. In 1989 she became an assistant professor of marketing at East Carolina University in Greenville, North Carolina, where she teaches international marketing. Her research interests besides the international air express industry include the use of universal design in the marketing of products to all consumers, especially to the elderly and people with disabilities.