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CHRISTOPHER JAMES SMITH

"The relationships between a developing  
regional airport and local commerce and  
industry."

Submitted for the Degree of  
Doctor of Philosophy

Department of Civil Engineering  
University of Aston  
in Birmingham

February, 1978

## Summary

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This thesis describes an investigation into a Local Authority's desire to use its airport to aid regional economic growth. Short studies on air freight, the impact of an airport on the local economy, incoming tourism, and the factors influencing airlines in their use of airports, show that this desire is valid, but only in so far as the airport enables air services to be provided. A survey of airlines, conducted to remedy some deficiencies in the documented knowledge on airline decision-making criteria, indicates that there is cause for concern about the methods used to develop air services. A comparison with the West German network suggests that Birmingham is underprovided with international scheduled flights, and reinforces the survey conclusion that an airport authority must become actively involved in the development of air services. Participation in the licence applications of two airlines to use Birmingham Airport confirms the need for involvement but without showing the extent of the influence which an airport authority may exert. The conclusion is reached that in order to fulfill its development potential, an airport must be marketed to both the general public and the air transport industry. There is also a need for a national air services plan.

Key words:

AIRPORT, AIR-SERVICES, ECONOMY, TOURISM, MARKETING.

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## CHAPTER 1

### Introduction to the Thesis

#### 1.1 Purpose of Chapter

This Chapter describes the context within which this thesis is written.

Section 1.2 concentrates on the Research Project, which is documented in the remaining chapters. It notes the origin of the work and the means by which it was performed. The scope and purpose of the investigation are also stated.

The contents of this thesis are outlined in more detail in Section 1.3. The relationship of each chapter to the others and to the general theme is clearly stated, and offers the reader an early opportunity of appreciating the structure of the work.

#### 1.2 The Research Project

##### 1.2.1 Its Origin

Two quite separate events in 1974 led to the creation of this research project.

In the first place, on 1st April, the re-organisation of Local Government in England and Wales took place, and the West Midlands County Council (W.M.C.C.) came into being. It assumed responsibility for a densely populated metropolitan area in the heart of the West Midlands, including the cities

of Birmingham, Coventry and Wolverhampton. Also, it became the owner of Birmingham Airport.

Secondly, in the House of Commons on 18th July, Mr. Peter Shore, in his capacity of Secretary of State for Trade announced that the Third London Airport Project at Maplin was to be cancelled.<sup>(1)</sup> The projected growth in air travel would be accommodated within existing resources. Although the other London Airports could be expected to bear the brunt of this increase, in the future greater emphasis was also likely to be given to the provincial airports, particularly the ones closest to the South East of the country.

The W.M.C.C. appreciated that Birmingham Airport might well have to play a more important national role in the coming years. It was also concerned that the Airport should be seen in a regional context. However, it was recognised that expertise on both these subjects was limited. The new Local Authority had no staff investigating the air transport industry, while the Airport's Management was fully occupied with its operation, and had little interest in events beyond its physical boundaries. Therefore, the W.M.C.C. decided that some research into the problems which could be seen arising, was necessary.

#### 1.2.2 The Mechanism of the Research

A research project was arranged between the W.M.C.C. and the University of Aston, and was administered by the University's Interdisciplinary Higher Degrees (I.H.D.) Scheme. This Scheme had been established in response to a recommendation of the

Swann Report<sup>(2)</sup> that postgraduate education should be more tailored to the production of individuals better equipped to meet the demands of Industry. To this end, it enables practical problems existing within companies to be approached, and hopefully solved, from a multi-disciplined academic background. The researchers are normally engaged as full-time employees of the collaborating firms, while the University provides courses and expertise in relevant subject areas.

The present project conformed with this pattern. The association with the W.M.C.C. enabled the author to be fully familiar with all aspects of airport development, an essential requirement for the work. The academic aspect of the research enabled a complete and detached consideration of the problems to be made. The project was supervised by a team drawn from the University and senior management of the County Council and Birmingham Airport.

This thesis represents the academic documentation of the research project.

### 1.2.3 Purpose and Scope of Research

The inheritance of Birmingham Airport was accompanied by several major problems, which caused the County Council to question the value of ownership. The general feeling within the Council was that the Airport stimulated the local economy. Indeed, one of the few policies of the W.M.C.C. in relation

to the Airport was to use it to aid and develop local commerce and industry. It was, however, appreciated that these ideas were mere notions with no substantive support.

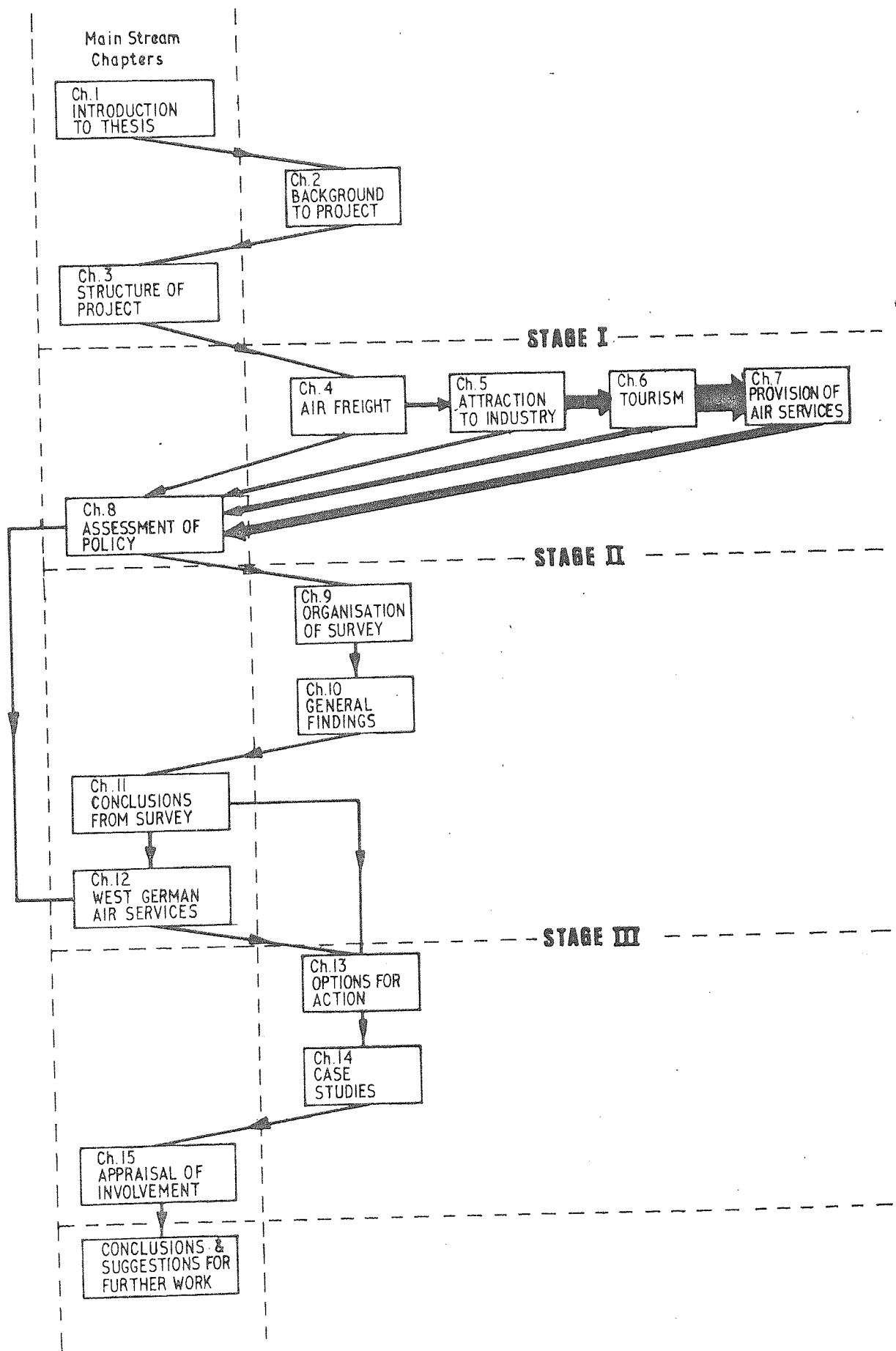
The purpose of the research project was to clarify thinking on these issues, and to assess the validity of such a policy. It was also to determine the role which the Airport should play given the validity of this policy, and establish methods by which the objective might be attained.

The project was not intended as a cost-benefit analysis along the lines of the Roskill Commission,<sup>(3)</sup> and consequently did not offer a comparative evaluation of the economic benefits of airport development, against the adverse effects of environmental intrusion. Similarly, the question of airport location, at both national and local levels, fell beyond the terms of reference of the research. Also outside the scope of the project were the physical design and operation of an airport, and formulation of strategies for direct financial viability of the Airport. It was, however, felt likely that an improved financial performance could be a by-product of the work.

### 1.3 The Thesis

The present chapter outlines the general research area covered by this thesis, while this particular section presents the topics discussed in the individual chapters. It also attempts to convey the structure of the thesis and Figure 1.1 is a schematic representation of this.

# Schematic Diagram of Thesis



Chapter 2 provides some general background information needed for an understanding of this work. It describes the growth of the present U.K. airports' system and looks at some pertinent characteristics of Birmingham Airport.

Chapter 3 discusses the structuring of the project into three distinct stages: the first is basically a clarification exercise seeking to identify the critical problem area; the second phase is an in-depth study of this area, while the third stage is an active involvement in the application of a potential solution. This is considered to be a "main-stream" chapter in the development of this thesis.

Stage I of the project is documented in five chapters, (Nos. 4 to 8 inclusive). The first four of these look in some isolation at the individual topics of:

Air Freight;

The effect of airports on industrial and commercial developments;  
Foreign tourism into the West Midlands; and

The factors influencing airlines in the provision of air services.

The findings of these chapters are examined in Chapter 8, a main-stream chapter, which assesses the most critical factor as being the provision of air services.

This subject is investigated in more detail in the next four chapters, corresponding to Stage II of the Research. Chapter 9 describes a survey which was organised to study the decision-making processes of airlines, while Chapter 10

presents some general results of this inquiry. The implications of the findings are discussed in Chapter 11, and it is concluded that the W.M.C.C. needs to become actively involved in the development of air services.

Chapter 12 relates the remainder of the work performed for Stage II. This was a study of the West German air services system, and it leads to the conclusion that Birmingham is underprovided with air services. Although Chapter 12 could follow as directly from Chapter 8 as does Chapter 9, its position has been selected to reflect the order in which the Research was conducted.

Chapters 11 and 12 both indicate a need for the active involvement of the County Council. Chapter 13 presents some options for action and marks the beginning of Stage III of the project. The participation in the licence applications of two airlines is described in Chapter 14. Chapter 15 reviews the effectiveness of these ventures and suggests specific courses of action for the development of air services at Birmingham Airport.

Finally, overall conclusions on the Research are made, and future work, felt to be necessary in the field, is described.

#### 1.4 Summary

This chapter has described the establishment of a joint research project by the W.M.C.C. and the University of Aston's I.H.D. Scheme. The purpose of this work was to define a role for Birmingham Airport. This thesis is a record of the investigations carried out in pursuance of this aim, and their method of presentation in the succeeding chapters has been outlined.

## CHAPTER 2

### Background for the Project

#### 2.1 Introduction

This chapter presents the background material needed for a complete understanding of the conception, evolution and conduct of the research project. In so doing, it provides some basic details on Birmingham Airport and the air transport industry.

When reading the chapter, it is important to appreciate the significance of the dates involved. Events prior to the commencement of the research in October 1974 shaped its creation and general direction, while since that date, the project has had to respond to the various decisions announced and the reports produced.

This point is reflected in the structuring of the chapter, with two sections devoted to the development of the U.K. Airport System. The first, Section 2.2, deals with its growth up to the cancellation of Maplin, while Section 2.3 looks at the progress since then.

A brief history of Birmingham Airport is given in Section 2.4, while Section 2.5 describes it as encountered by the Author in late 1974. The various documents relating to the development of Birmingham Airport are reviewed (Section 2.6), before the chapter is summarised (Section 2.7).

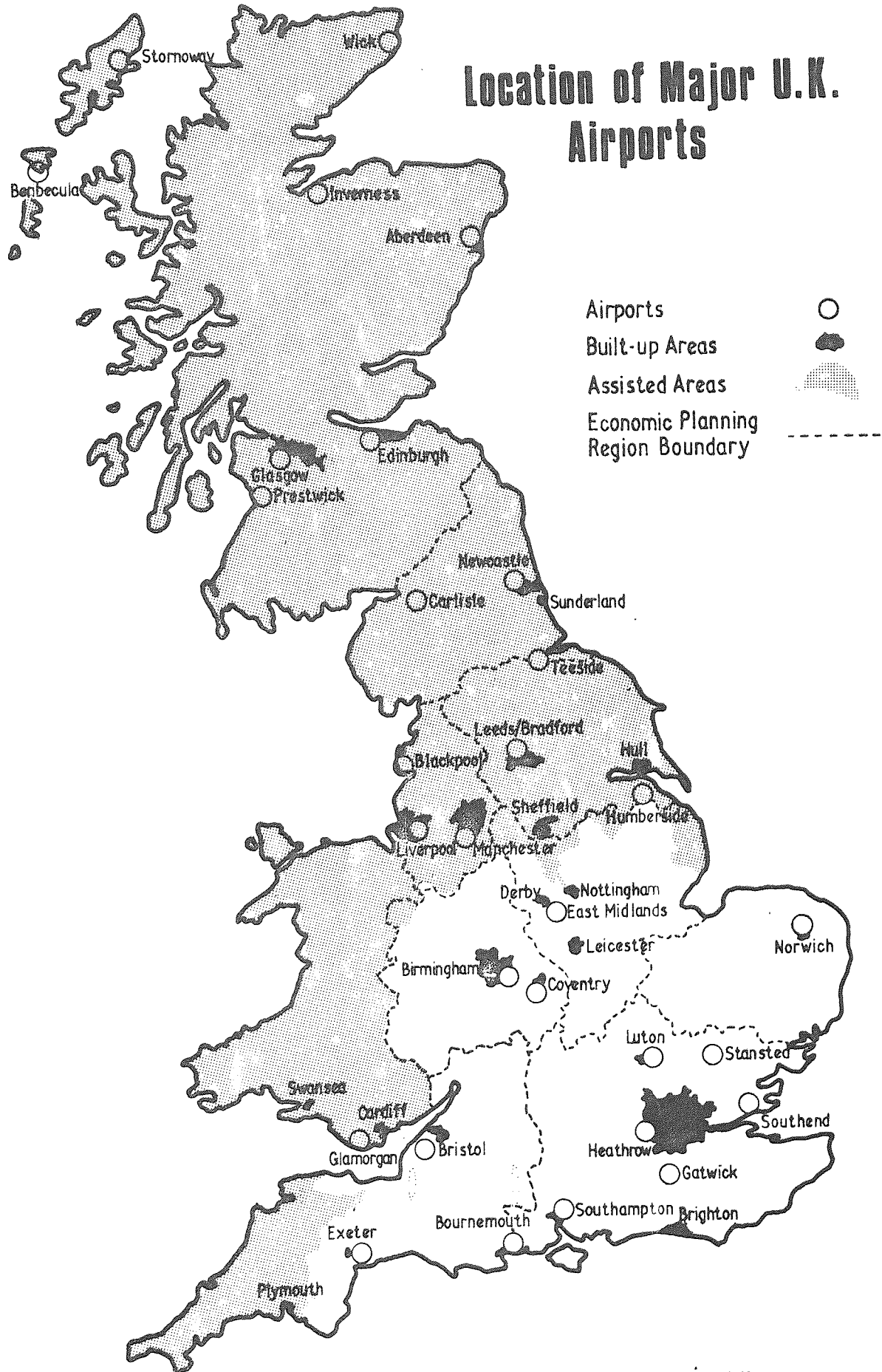


## 2.2 The U.K. Airport System

### 2.2.1 General Development

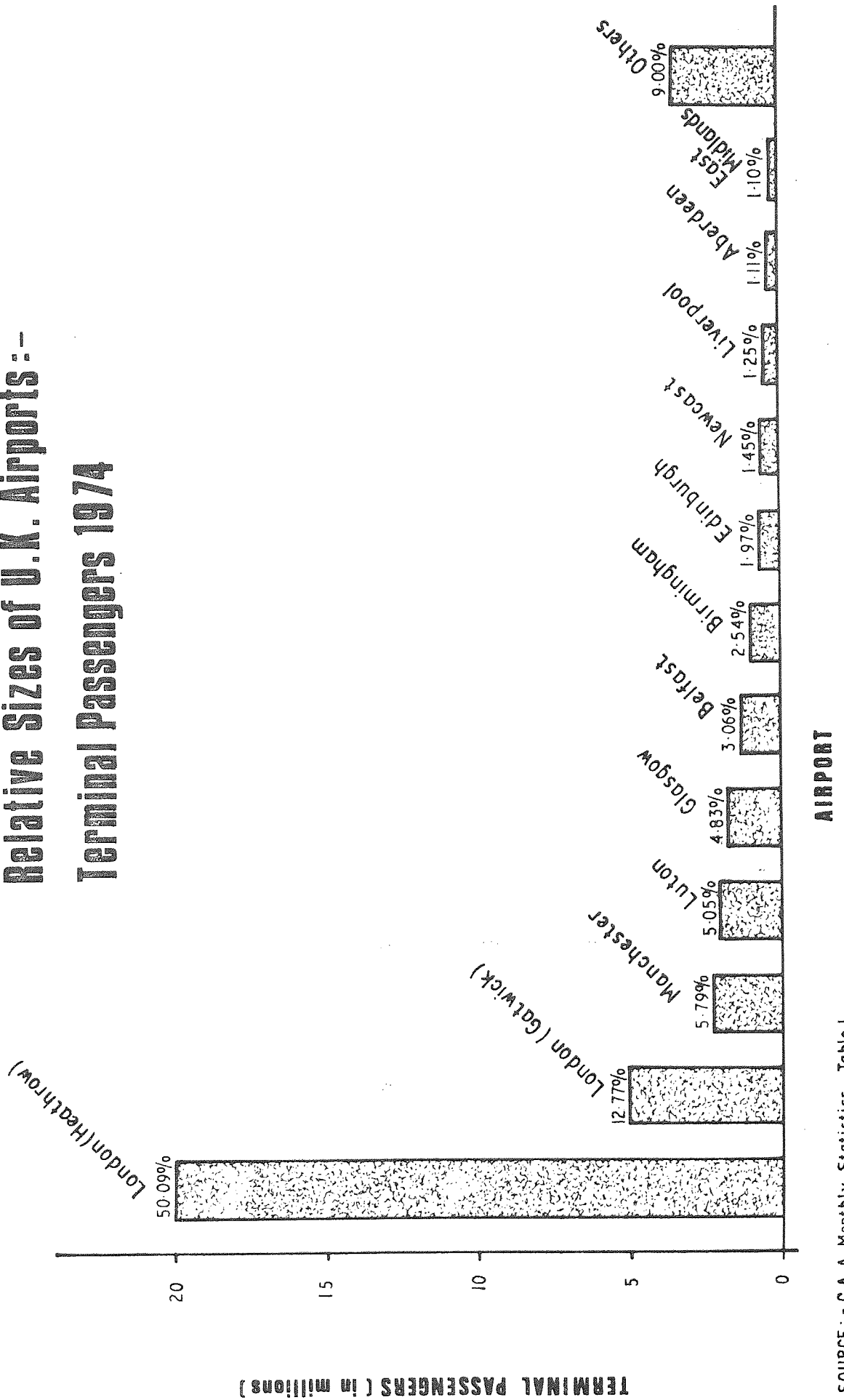
Although civil flying commenced in this country before the First World War, the story of U.K. airports does not begin until some time later. It was in October 1928, that the Air Ministry sought to create a number of airports, but without financially committing the Government. It therefore wrote to the Town Clerks of all conurbations of more than 20,000 inhabitants asking the corporations to consider establishing a civil aerodrome. By the beginning of the Second World War, no less than 42 municipalities owned such facilities.<sup>(4.1)</sup>

At the end of hostilities, there were many sites throughout the U.K. which were suitable for development as civil airports. It was stated in 1945 that the Ministry of Civil Aviation would acquire those airports that were required for public air services, in order that a logical system with sound financial support could be developed.<sup>(5)</sup> In 1947, the 44 airports that were to be controlled by the Ministry were named.<sup>(6.1)</sup> Since then, the pattern of airports used for commercial aviation has remained fairly constant, although the ownership and importance of each has altered. Figure 2.1 shows the location of the major airports, while their relative sizes in 1974, as measured by the number of terminating passengers, is depicted in Figure 2.2.



SOURCE: 'Airport Strategy for Great Britain' D.O.T.

## Relative Sizes of U.K. Airports:- Terminal Passengers 1974



SOURCE :- C.A.A. Monthly Statistics - Table 1.

## 2.2.2 Ownership

Beginning in 1950, there was a reversal of ownership policy, with control gradually being decentralised. The first airport to be owned locally was Manchester, although there was still some funding of its major development schemes by Central Government. In 1961, this became official policy.<sup>(7)</sup> However, not all local authorities desired or were able to own their airport. In the North of Scotland in 1967, for example, the Government, in the form of the Board of Trade still owned and operated ten airports.<sup>(6.2)</sup> Another suggestion in 1961,<sup>(7)</sup> led to the creation of the British Airports Authority (B.A.A.). It came into being in 1966, and was to:

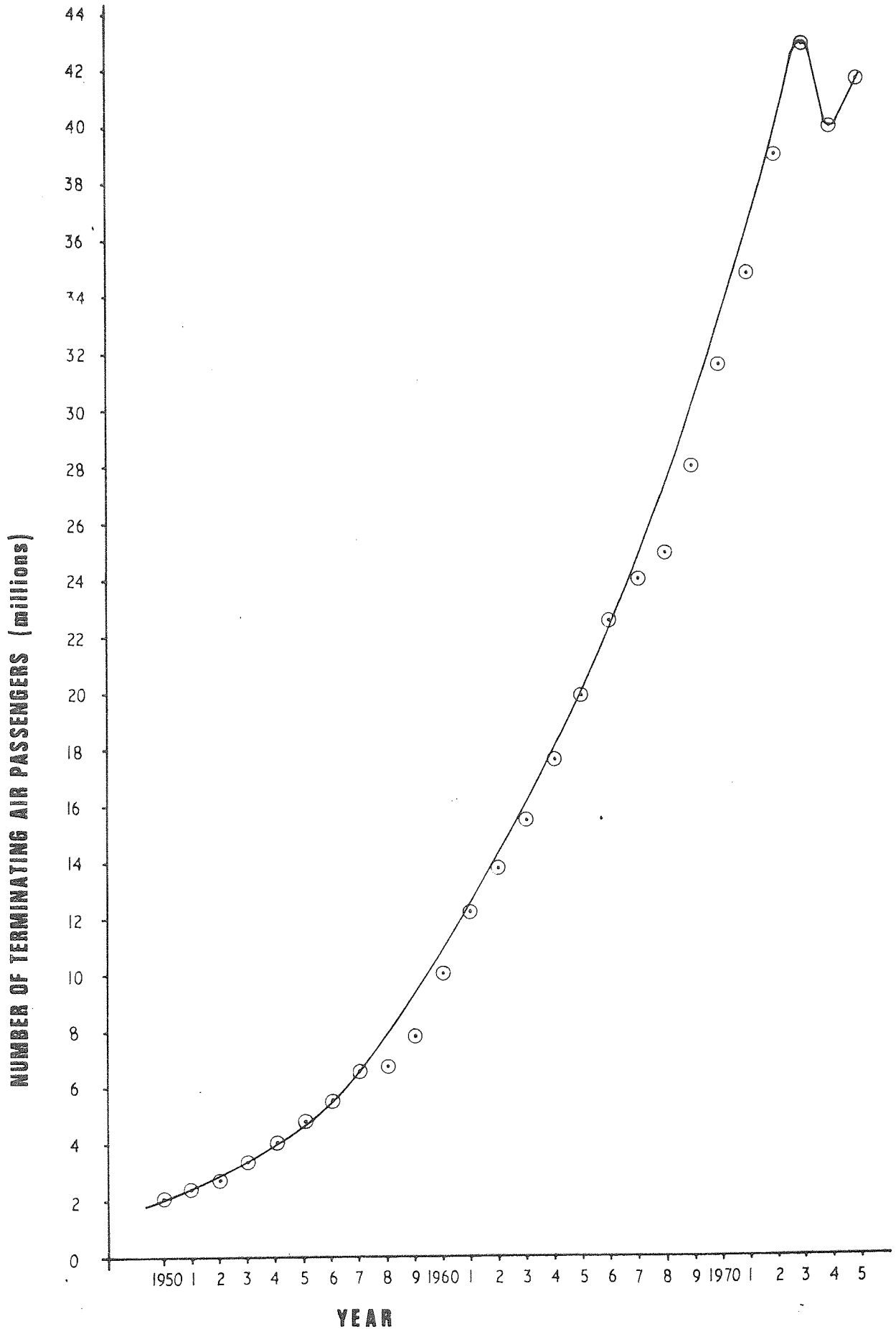
"... own and manage the main international airports now owned by the state, ... and to plan, build and manage any new airports eventually required".<sup>(7)</sup>

It immediately became responsible for Heathrow, Gatwick, Stansted and Prestwick Airports.

Several writers, including Doganis,<sup>(8)</sup> feel that the changing and mixed pattern of ownership did not lead to an airports system efficiently equipped to deal with the demands of a rapidly growing air transport industry, as exemplified by the increase in passenger traffic (Figure 2.3). The responses to the calls for a national airports plan are described in Section 2.3.

fig 2-3

# Growth of Air Passengers at U.K. Airports



SOURCE:- C.A.A. Monthly Statistics (Table 2)

### 2.2.3 The London-Area Airports

Figure 2.2 shows clearly the dominance which the London Airports of Heathrow and Gatwick exerted on the air transport industry in the U.K. As early as 1953, suggestions were being made that Stansted should be nominated as a Third London Airport, thus increasing the concentration on the South East.<sup>(4.2)</sup> More attention was focused on it at the beginning of the 1960's when the need for a third airport seemed inevitable. This culminated in a Public Inquiry into the future of Stansted in December, 1965. The Government did not submit sufficient evidence to convince the Inspector of the Inquiry that a third major airport should be sited at Stansted, and so the debate continued. To resolve the matter, the Government established in 1968 a Committee of Inquiry into the Third London Airport - the Roskill Commission.

After a formidable study of the problem lasting two and a half years, the Commission recommended that the airport should be sited at Cublington in Buckinghamshire. However, this suggestion was not unanimous, and Professor Colin Buchanan preferred, for environmental reasons, a site on the Thames Estuary at Maplin Sands on Foulness Island.<sup>(3.1)</sup> The Government agreed with this assessment and announced in April 1971 that Maplin was to be the Third London Airport.<sup>(9.1)</sup>

In the face of mounting concern as to whether a new airport was in fact needed, the Government stated on 23rd October, 1973 that it was putting in hand a comprehensive study which would consider:

- (i) the costs of Maplin, and the arguments for and against,  
and
- (ii) the provision of the capacity within the existing  
airport system. (9.2)

On 20th March, 1974, the Secretary of State for the Environment announced that no further work at Maplin would be authorised, and that the project was to be re-appraised. (9.3) The Review, published in July of the same year, revised many of the previous figures, and the principal conclusions were:

- (1) air passenger demand at the London-Area Airports had been over-estimated;
- (2) the Roskill Commission had under-estimated the runway capacity in the London-Area which, in the light of technological advances, would be sufficient to meet demand until at least 1990;
- (3) since Maplin could not be operational before 1985, some development of passenger capacity would be required at the existing London Airports;
- (4) the cost of Maplin would be substantially greater than that required for the development described immediately above; and
- (5) there was little prospect of diverting a significant volume of traffic from the South East to airports much beyond Bournemouth, Birmingham, and East Midlands. (10.1)

Shortly after the appearance of this review the Secretary of State for Trade announced the decision to abandon the Maplin Project. (9.4) Full and thorough consultations with local authorities and other interested bodies on the way in which future air

traffic was to be handled were promised, as was also a wide-ranging review of the major airports of this country.

### 2.3 The Post-Maplin Era

Under the Civil Aviation Act, one duty of the Civil Aviation Authority (C.A.A.) is to consider which aerodromes are, in its opinion, required in the U.K.<sup>(11)</sup> Such a study had been commissioned, and the consultants' report on the Central England area was available in July 1974.<sup>(12)</sup> This is reviewed in Section 2.6.3. The contents of two other reports, on the Northern Region<sup>(13)</sup> and on South Wales and the South West,<sup>(14)</sup> are not individually relevant to this thesis.

The three reports were then discussed by the C.A.A. with other interested bodies. Between April 1975 and January 1976, the C.A.A. made recommendations on the individual areas to the Secretary of State for Trade.<sup>(15, 16, 17)</sup> A general paper on the development of the U.K. Airport System as a whole was also submitted.<sup>(18)</sup> This report argued that the basic pattern of U.K. regional airports "feeding" traffic into the "hub" airport of Heathrow for onward world-wide transportation, was beginning to change. The development of direct international scheduled services, from the provinces, particularly the larger regional airports of Manchester, Birmingham and Glasgow, was creating an era of competition. It was recommended that direct international scheduled services should be concentrated at a small number of selected major airports. Furthermore, these services should be protected from competing services at neighbouring airports, until they had become well-established and profitable.



The Department of Trade (D.O.T.) had also been investigating the issue, and in November, 1975 produced the first part of a document to be used for consultations with all interested parties.<sup>(19)</sup> This was based on the Department's own work, on the Maplin Review, and on the C.A.A.'s advice. It dealt primarily with the London Area Airports of Heathrow, Gatwick, Luton and Stansted. Air traffic forecasts were again revised downwards. The possible developments at each site were discussed, and the groundside implications considered. Particular attention was paid to noise. The document also considered briefly the methods which might divert traffic from these London Airports, the costs and the benefits, and the airports which might receive the traffic. Bournemouth, Birmingham and East Midlands Airports, being on the periphery of the South East, were expected to take the bulk of the traffic.

This topic of "regional diversion" was considered in more detail in the second half of the document (June 1976).<sup>(20)</sup>

This policy of re-direction was suggested in the hope of:

- (1) relieving pressure on the London Airports; and
- (2) aiding regional development.

Ten of the more important provincial airports in England and Wales were considered\*, and at each the access, planning, employment and environmental implications in 1990 were assessed. Two levels of annual passenger throughput were used. The natural growth figure was the level which each airport would reach if no outside influences were placed on the system, while the

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\*Scottish Airports were treated in a separate chapter

higher "assessment" level would be the maximum figure that could be attained if measures were taken to stimulate the growth of that airport. In the cases of Bournemouth, Birmingham and East Midlands Airports, this would be represented in the main by a re-direction of traffic from the South East, although in other regions, such as the Northern Region (with Newcastle and Tees-side Airports), an enhanced development at one would be at the expense of the other.

The document suggested a system with three distinct types of airports:

- (A) those airports which would support an increasing range and frequency of international scheduled services, possibly including intercontinental services, and also a significant element of freight traffic, in addition to domestic and charter services;
- (B) those airports which would cater primarily for the provision of domestic services and a range of charter services, with in some cases a limited network of short-haul scheduled international services; and
- (C) those airports that would fulfil a mainly local role perhaps concentrating on general aviation with some domestic services and charter flights. (20.1)

Comments on this document were invited from all interested parties. These were to be considered before a White Paper on the Country's future airport system was published. This is now scheduled for Autumn 1977.

## 2.4 The History of Birmingham Airport

### 2.4.1 Ownership

The story of Birmingham Airport follows very closely the history of development of the national airports' system. (21)

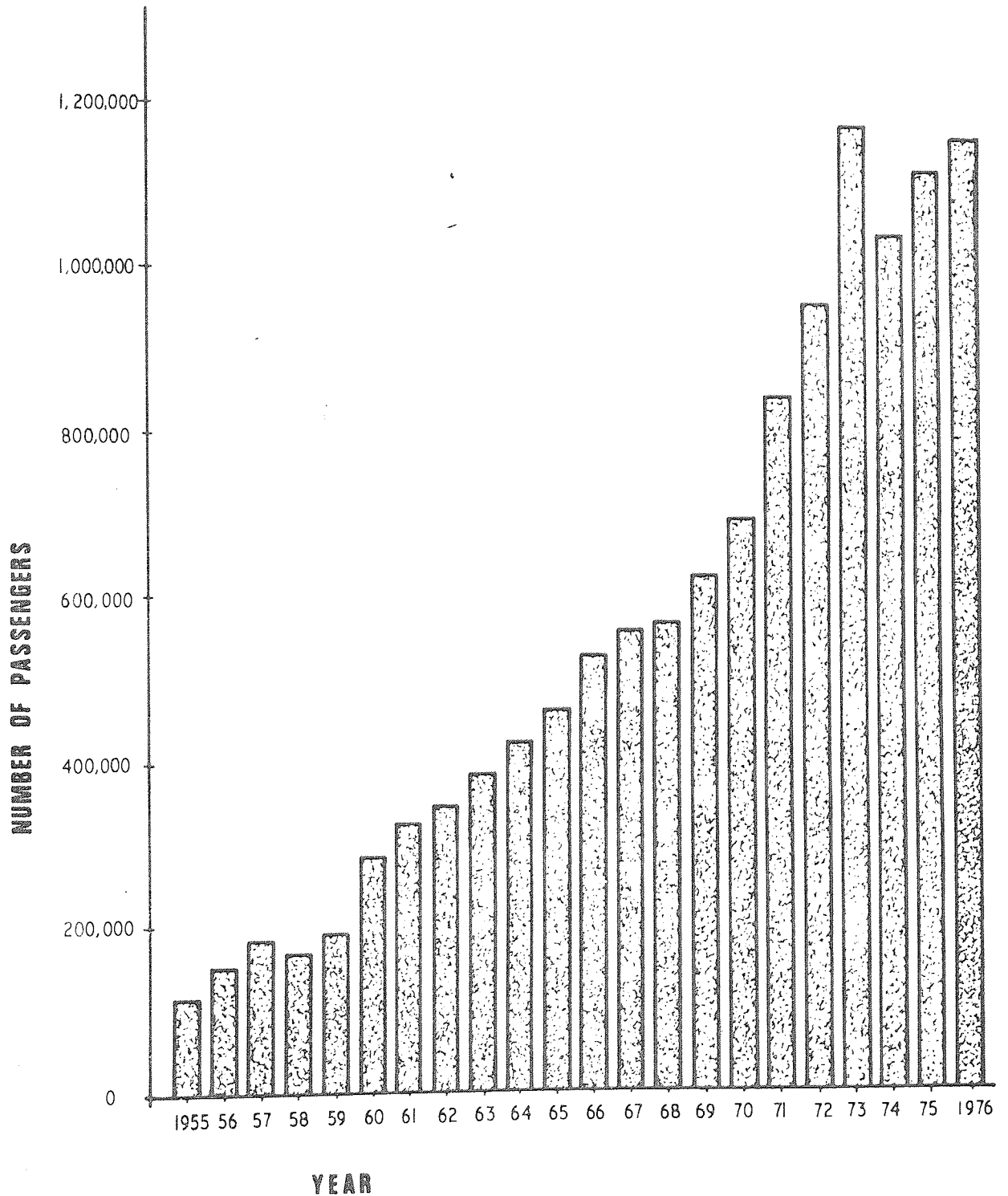
It was in 1928, that Birmingham City Council approved in principle the provision of a municipal airport. The Airport came into operation in May 1939, and the first scheduled services started a month later. The outbreak of the Second World War saw control of the Airport pass to the Royal Air Force.

Civil flying from Birmingham began again in June 1946 when the Ministry of Civil Aviation assumed power. In 1960, the ownership of the Airport returned to Birmingham City Council. The agreement reached with the Ministry of Aviation allowed for a 60% grant from Central Government funds towards all capital costs of approved development schemes in excess of £1,000. The period for which the financial assistance would be available was 21 years. With its take-over of the Airport in April 1974, the W.M.C.C. became a party to the agreement.

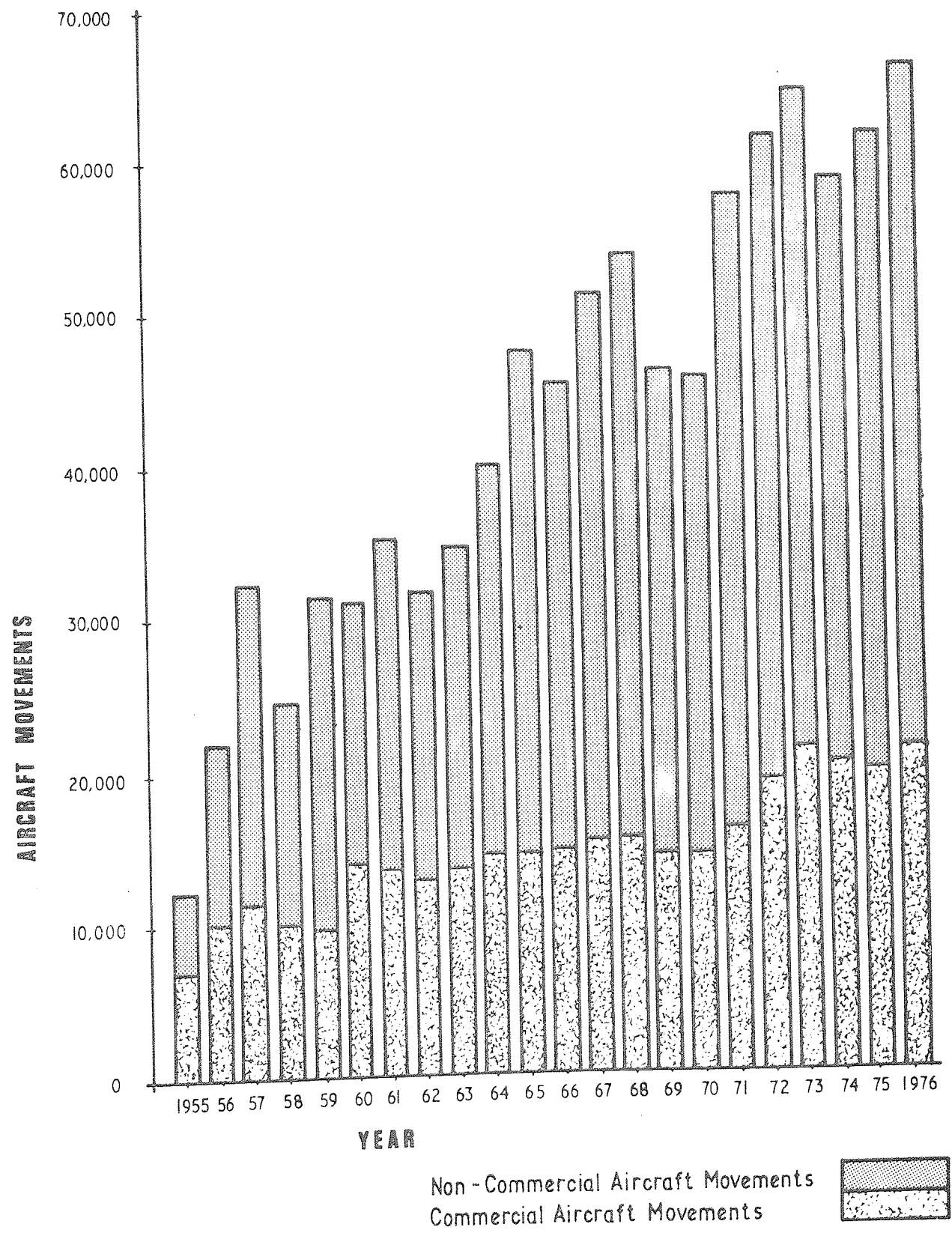
### 2.4.2 Growth

Birmingham Airport has grown steadily over the years, in terms of both traffic handled and facilities available to cope with it. The increase in passenger traffic, as depicted in Figure 2.4, has been catered for by extensions to the original pre-war building. The number of aircraft movements has also increased (Figure 2.5), although the progress of air freight has been less sure (Figure 2.6). These growths have been accompanied by a lengthening of the main runway, and expansions of the areas available for aircraft parking.

# Growth of Passenger Traffic at Birmingham Airport

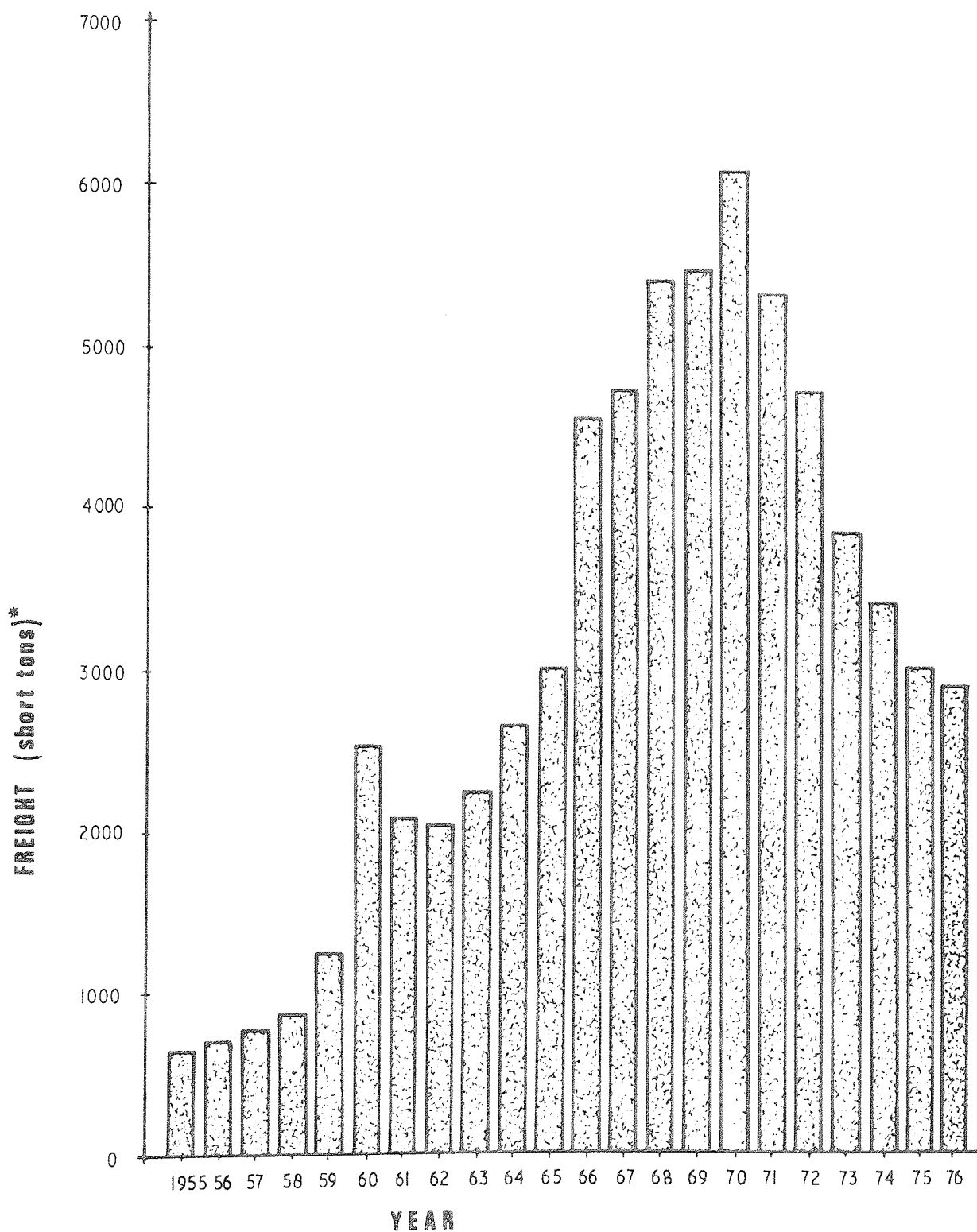


# Aircraft Movement Growth at Birmingham Aircraft



SOURCE:- Birmingham Airport Statistics

# Freight Traffic at Birmingham Airport



\* 1 Short Ton = 2000lb (= 0.907 [metric] Tonnes)

## 2.5 Birmingham Airport in 1974

### 2.5.1 The Traffic

In 1973, Birmingham Airport had seen its busiest year with over one million passengers passing through its lounges. The division of these between various categories is shown in Table 2.1. As may be seen, they were divided almost equally between scheduled and non-scheduled services. For the purposes of this thesis, the following interpretations of these terms will be used:

Scheduled:                    those flights which operate in accordance with a published time-table, and for which passengers may buy either single or return tickets which do not include accommodation or any other arranged events, at any time up to a few minutes before take-off, subject to aircraft load only;

While "non-scheduled" might be defined as "those flights that are not scheduled", it is useful at this stage to identify three categories of non-scheduled traffic:

Inclusive Tour (I.T.): those flights which are not scheduled flights, but which operate to a pre-determined programme and for which return tickets may only be purchased in conjunction with accommodation;

Table 2.1Passengers at Birmingham Airport in 1973Division by Category

Category	Number of passengers	Percentage
International Scheduled	111,740	9.5
Domestic Scheduled	244,382	20.7
Irish Republic (Scheduled)	130,693	11.0
Channel Islands (Scheduled)	91,071	7.7
Total Scheduled	577,886	48.9
International Non-scheduled	551,511	46.6
Domestic Non-scheduled	2,284	0.2
Other Non-scheduled	980	0.1
Total Non-scheduled	554,775	46.9
Transit	49,026	4.2
Total	1,181,687	100.0

Source: Birmingham Airport Statistics Office.



Non-scheduled Series: those flights which are not scheduled flights, but which operate to a pre-determined and sometimes published time-table, but for which tickets may only be purchased through membership or affinity with some group or organisation (e.g. National Union of Students, Italian Workers in Britain Organisation etc); and

Charter: those flights which are not scheduled flights and do not operate in accordance with a time-table, but which are of an "ad-hoc" nature, often occurring when an aircraft has been hired by an individual or company for its personal use.

Other revenue-earning, non-scheduled flights, such as Advanced Booking Charters, can be defined, but they are relatively unimportant for Birmingham.

It is a common practice, particularly outside the Industry, to regard all these types as "charter flights". However, this custom will not be adopted here, and when grouping the above categories, the term "non-scheduled" will be used.

At Birmingham, the majority of non-scheduled passengers were on I.T. flights to international destinations.

The transit passengers shown in Table 2.1 were those who passed through the Airport, arriving and departing on the same aircraft e.g. passengers travelling from East Midlands Airport to Brussels.

When the project commenced, it was known that total traffic for 1974 was likely to be substantially lower than the 1973 figures. This was a consequence of the fuel crisis of the winter 1973/74 and the resulting depression in the economy. However, as Figures 2.4 and 2.5 show, there was a recovery in both 1975 and 1976.

### 2.5.2 The Air Services

As Table 2.2 shows, there were scheduled services to 19 destinations from Birmingham in 1974. Several routes, including Ireland and the Channel Islands, relied heavily for their traffic on private travellers taking holidays, or visiting friends and relatives. The capacities offered on these routes therefore tended to vary with the time of year. Other routes, relying more on business traffic, normally operated at the same frequency throughout the year. However, many destinations suffered cuts in flights in 1974, compared with 1973 levels. Although this was normally achieved by cancellation of weekend flights or elimination of third daily services, in the case of Alldair's service to Copenhagen (established only in 1973) flights were ceased completely. This left Birmingham with scheduled connections to only five continental points.

In annual travel surveys conducted among its member companies, the Birmingham Chamber of Industry and Commerce (B.C.I.C.) had detected considerable dis-satisfaction with the range of scheduled services available at Birmingham.<sup>(22)</sup> The withdrawal of the link to Copenhagen increased the complaints received by both the B.C.I.C. and the Airport. Respondents to the survey

Table 2.2

Scheduled Services from  
Birmingham Airport in 1974

Destination	Frequency (Return flights per week)	Airline(s)	Notes
London (Heathrow)	7	British Airways	
Glasgow	10	British Airways	Frequency reduction from 1973 levels
Edinburgh	10	British Airways	Frequency reduction from 1973 levels
Belfast	17	British Airways	Reduced to 12 flights in early 1975
Bournemouth	2	Dan Air	
Manchester	2	Dan Air	
Newcastle	2	Dan Air	via Manchester
Jersey	12	British Airways	
		British Midland Airways	
Gurnsey	5	British Airways	
		British Midland Airways	
Aberdeen	5	British Airways	
Norwich	6	Air Anglia	via Edinburgh
Dublin	14	British Airways, Aer Lingus	New service introduced in November 1974
Cork	2	Aer Lingus	
Paris	11	British Airways	Frequency reduction from 1973 levels
Amsterdam	5	British Airways	Weekend services withdrawn
Dusseldorf	5	British Airways	Weekend services withdrawn
Brussels	11	British Midland Airways	Reduced to 5 flights in early 1975
Frankfurt	5	British Midland Airways	via Brussels
Malta	1	Air Malta	Weekend flights for holiday makers

Source: Birmingham Airport Time-table (November 1974)

were also unhappy with the timings of the flights.

Non-scheduled flights were operated in the main by Britannia Airways, Dan Air, and Monarch Airlines, although other companies visited Birmingham a few times a week. The destinations served lay mainly in the Mediterranean region, although in the summer of 1974, there was also a series of flights to Canada and The United States of America. Winter holiday flights were operated to similar areas in Europe.

### 2.5.3 General Aviation

As Figure 2.5 shows, only about a third of all aircraft movements at Birmingham was commercial. The remainder included military flights, commercial aircraft flying for crew training, aircraft testing, and aircraft positioning purposes, and general aviation. In fact, the bulk of these non-commercial movements fell in this last category. This comprises club flying, private aircraft movements, company flying, pilot training, air taxi flights, ambulance flights, and similar operations which are performed by light, single and double engined aircraft. A number of flying clubs, air taxi firms, and aircraft hire firms were located at Birmingham Airport, and several company aircraft were also based there.

### 2.5.4 Location

Birmingham Airport lies about seven miles east of the city centre, as shown in Figure 2.7. Although on the periphery of the city, with land further east being largely rural in nature, the Airport is still very close to built-up areas, represented



The Location of Birmingham Airport in the Midlands (with major towns and main roads)

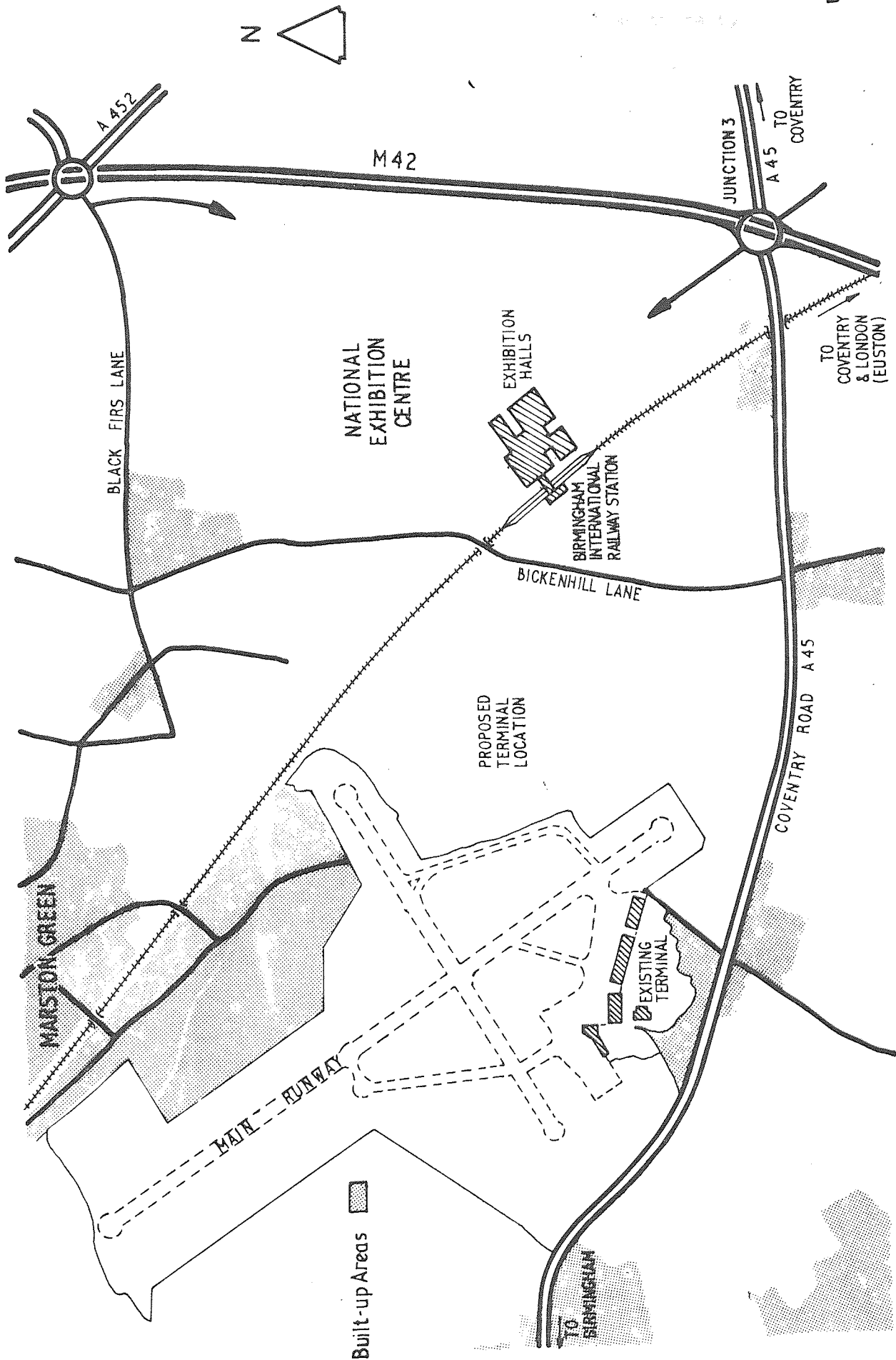
Fig 2.8

mainly by housing (Figure 2.8). This caused considerable environmental problems, particularly with regard to aircraft noise. This had been the subject of an investigation sponsored by the City of Birmingham Public Health Department,<sup>(23)</sup> and local residents' groups were becoming increasingly active in their campaigns against the Airport.

Apart from the vocal protests against expanding the Airport, physical constraints also presented problems. The main Birmingham to Coventry road was the southern boundary, while the Birmingham to London Euston railway line lay to the north. Investigation of a new terminal (as described in subsequent sections) had identified the only possible area to be to the north of the main runway, as shown on Figure 2.8. Development on this particular location also offered the opportunity of integration with Birmingham International Railway Station and the National Exhibition Centre (N.E.C.), both of which were under construction and scheduled for completion in 1976. Also due to open in 1976 was a section of the M42 which would make the M6 and the national motorway network even more accessible.

The large population of the West Midlands Economic Planning Region<sup>(20.2)</sup> (over five million) created the majority of Birmingham Airport's business. In 1972, for example, 82% of its passengers lived in or were visiting this Region.<sup>(24.1)</sup> However, these represented only half of the air trips generated in the West Midlands: the remaining passengers used other airports. Heathrow, with its wide range of international scheduled services, accounted

fig 2-8



# Birmingham Airport

for many of these passengers, who often travelled there by surface means, there being only one daily air service between Birmingham and London. Being centres for I.T. holidays, Luton and Gatwick also attracted substantial numbers of passengers. Manchester was the other major competing airport with a good range of international flights, both scheduled and non-scheduled. East Midlands Airport had a smaller effect. (24.2)

#### 2.5.5 Facilities

Basic passenger facilities were provided in the pre-war terminal building, which was the scene of frequent alterations. Piecemeal extensions had been made to an international wing, first added in 1961, but without a duty-free shop until 1975. The terminal came under severe criticism from the business community with comments reported during surveys including:

"One of the worst (airports) in Europe"(22) and  
"A joke in poor taste".(22)

The building was frequently congested and a scheduling committee had been established with the task of avoiding such occurrences. (25)

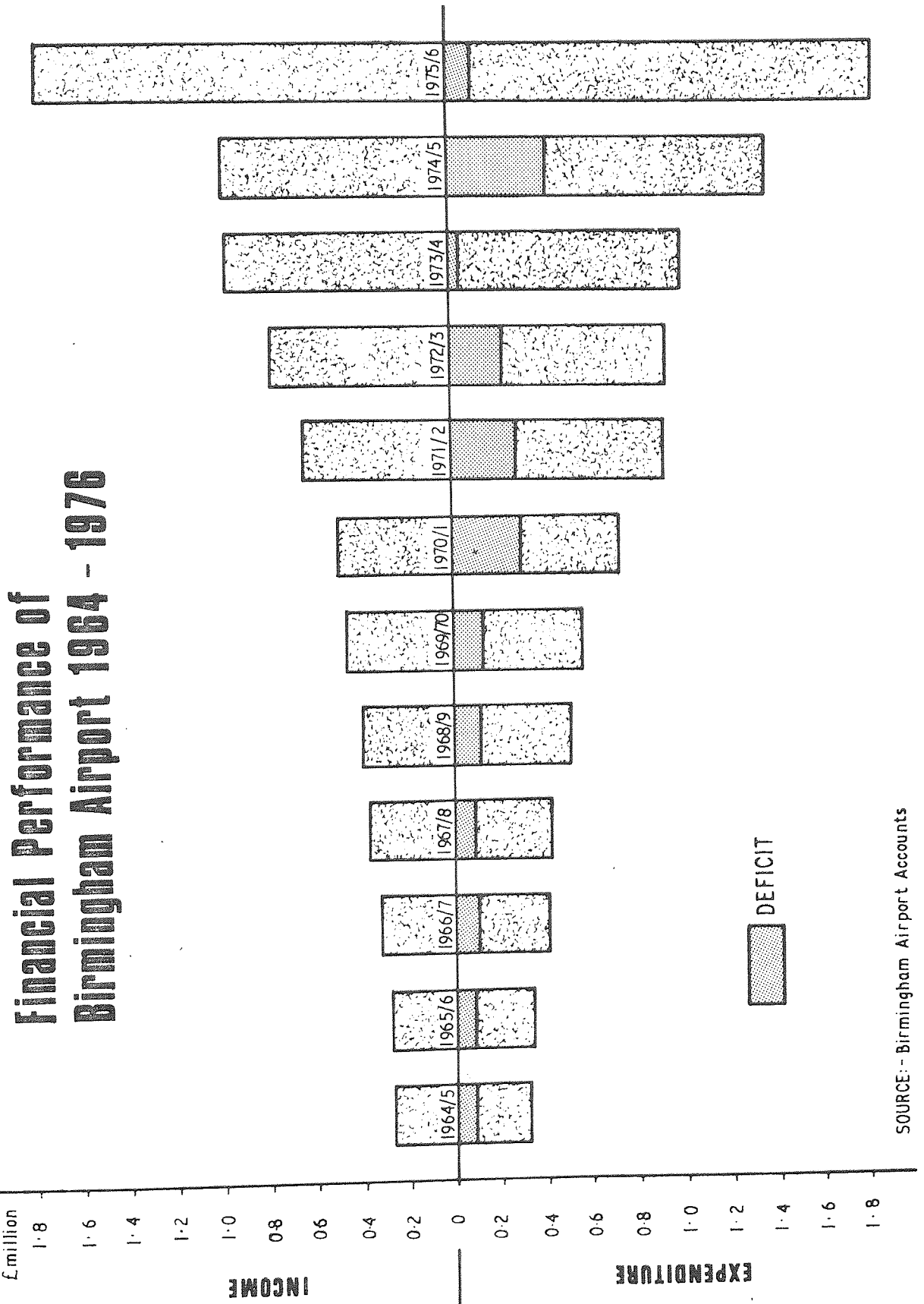
There were also problems on the "airside". As may be seen from Figure 2.8, the Airport had two runways. The shorter runway, known as 06/24 because of its orientation, was in the direction of the prevailing wind, and was often used by light aircraft. While it was strong enough to bear the weight of even the heaviest aircraft in use at that time, its length



had become inadequate for them. The existence of the A45 Trunk road and the railway line had prevented any extension of this runway. Fortunately, the advancing technology had brought with it not only demands for greater take-off lengths, but also an enhanced ability to take-off and land with high cross-wind components. This meant that the other runway, 15/33, was normally used for commercial flights, and only in exceptionally strong winds was this not possible. Consequently, 15/33 had become the main runway and had been extended to 7,400 feet. This was its maximum possible length without building across the line of the A45. It was sufficient for the majority of operations at that time, but there were difficulties with trans-Atlantic flights, most of which were forced to re-fuel on the outward journey at Prestwick or Manchester. It is generally felt that a take-off length of 10,000 feet is necessary for a modern airport to have total flexibility in its operations. (20.3)

2.5.6 The Finances

Like the majority of regional airports in this country; (26) the financial state of Birmingham Airport was very poor. It had a history of loss-making, as illustrated in Figure 2.9. It was, however, approaching profitability in the financial year 1973/74, and an operating profit had only been turned into a deficit by debt charges. The fuel crisis of the winter of 1973/74 had an adverse effect on this position. With the ever increasing spiral of inflation and a drop in traffic, a loss of over £400,000 was produced in 1974/75.



SOURCE: - Birmingham Airport Accounts

2.6 Documents relating to the Development of Birmingham Airport

2.6.1 "Birmingham Airport - 1971 to 1991"<sup>(27)</sup>

The City of Birmingham Architect's Department looked at the problem of physical airport expansion in considerable depth and published the first report on the subject. This was produced to prove the need for a new terminal to the Department of Trade and Industry (D.O.T.I.),\* in support of an application for financial aid. It forecast a passenger demand at Birmingham Airport of nearly six million by 1991. The impact of this demand on the external and internal road systems, on car parking, on the terminal building, and on the aircraft apron was assessed, and the conclusion was reached that the capacities of all these areas were inadequate for this annual throughput. The report sought to demonstrate that expansion of existing facilities was impossible, and that the only solution was to build elsewhere on the present Airport location. This represents the first recorded suggestion to locate a new terminal adjacent to the railway station and the N.E.C. A detailed study was made of the proposed area and the cost was estimated to be in the region of £10m.

In 1974, the City Architect's Department produced several detailed designs for terminals on this new site, together with layouts of taxi-ways and piers.<sup>(28)</sup>

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\* The Government Department dealing with civil aviation has progressed through the Ministry of Aviation, the Board of Trade, D.O.T.I., to the Department of Trade.

## 2.6.2 "Midlands Airports Study" (29)

While the above work was being performed, concern was being expressed that any major development at Birmingham would affect the future of East Midlands Airport, some thirty miles away at Castle Donnington. The two Airport Committees involved, together with D.O.T.I., jointly funded an investigation into this possibility, which was carried out by the Atkins Consulting Group. Their report, published in 1973, outlined the consequences for one airport of various scales and directions of development at the other.

Eight possible strategies were considered, ranging from development of both airports to the limits imposed by single main runways, to closure of both airports. Options in the middle of this range included containment of traffic to existing levels, and concentration of scheduled services at one and charter services at the other. Forecasts were made of growth in numbers of air passengers, air cargo, general aviation, and aircraft movements. The effects on air traffic control and routings, airport facilities, and the environment were assessed. The various strategies were compared by cost-benefit techniques which considered surface access cost savings and environmental disbenefits to the local communities. Capital investment and operating costs were of less significance. The consultants recommended that both airports should be expanded since this policy not only emerged favourably from the cost-benefit analysis, but also enabled the Midlands' airports' share of the total catchment area demand to be maintained. Development along these lines was expected to see an annual passenger throughput at Birmingham of six million by 1986.

### 2.6.3 "Central England Airport Study" (12)

As described in Section 2.3., the C.A.A. had been conducting a review of regional airports. The Metra Consulting Group had been engaged to consider the structure in the Central England area, which was defined as the Economic Planning Regions of West Midlands, East Midlands, North West, and Yorkshire and Humberside. Within this area were the Airports of Birmingham, East Midlands, Liverpool, Manchester, Blackpool and Leeds/Bradford. (31)

The demand for air travel in the area was estimated, and a model for allocating this demand between airports constructed. A short-list of possible airport systems to serve the area was derived, with the number of airports in the various systems ranging from one to seven. (It was assumed that new airports might be built). Each of these systems was evaluated in terms of surface access costs, airport profit, airline profit, and environmental impact.

The cost-benefit exercise showed that the best solution was a two airport system: there should be a new airport in North Cheshire to replace Manchester and Liverpool, while the second one should be either East Midlands Airport, or a new, low-noise replacement near Birmingham. The consultants advised that in the event of construction of new airports being impossible, the existing Airports of Manchester or Liverpool and East Midlands should be utilised.

The recommendations arose from considerable emphasis on environmental factors. It was generally felt within the Industry,<sup>(30)</sup> that the values placed on the impact of noise had been too high and that the cost of construction of totally new, "green-field" airports would be prohibitive. The C.A.A. confirmed these feelings when it advised the Secretary of State for Trade on the matter.<sup>(15)</sup> It did however, accept that there were advantages of concentration of air services at a small number of existing airports. The recommendation was made that Manchester and Birmingham should remain the major international Airports, with a stronger degree of protection for their scheduled services. East Midlands Airport should provide supporting capacity for international non-scheduled and domestic operations, but with international scheduled services only to those destinations viably served from Birmingham.

#### 2.6.4 "Airport Strategy for Great Britain"<sup>(19,20)</sup>

The contents of these two D.O.T. documents have been discussed in general terms earlier in this chapter (Section 2.3), and it is only necessary here to describe the effects that might be felt at Birmingham.

The two passenger levels which were proposed for this Airport in 1990 were three million (natural growth) and ten million (assessment level). The first figure represented a considerable revision of previous estimates. The assessment levels at both East Midlands and Manchester Airports were considerably larger than their natural growth figures, indicating the importance of these Airports. The documents recognised that existing

terminal facilities at Birmingham would probably be inadequate to cater for future needs, even if contained to the lower, natural growth level.

Since the County Council's reply to the D.O.T. on these consultation documents was influenced by this research, it is inappropriate to outline the response at this stage, although it is attached as Appendix A.

## 2.7 Conclusions and Summary

The history of the development of the U.K. airport network had been one of indecision. The few decisions that had been taken normally reversed existing policies. Consequently, the system which grew up was not the most efficient to cope with the increasing demand for air travel. However, at the commencement of this project in 1974, it appeared that attempts were being made to put airport planning on a national footing.

This was partly as the result of the decision to cancel the Third London Airport at Maplin, thus placing greater emphasis on the airports nearer the South East, including Birmingham. Also, the feeder/hub nature of the system was beginning to change with the growth of direct international services from the provinces. In this competitive environment the larger regional airports, notably Manchester and Birmingham, were expected to increase in stature. Subsequent documents have continued this trend of thought. Thus, Birmingham was likely to be called upon to play a different and more important role in the future national airports system.

Yet, Birmingham Airport with its new owners, the W.M.C.C., was very poorly positioned to assume this responsibility. Its air services and passenger facilities were the source of severe criticism from the travelling public. Other airports provided considerable competition, while Birmingham itself made large financial losses. With its proximity to residential areas, there were many protests about aircraft noise.

To answer the whole spectrum of questions raised by these issues, the W.M.C.C. had very little information available. Studies on a new multi-million pound terminal had been completed but had been limited to physical considerations. Other reports had investigated the relationship with other airports and had evaluated the environmental impact. They had, however, reached different conclusions, thus indicating the difficult decision facing the W.M.C.C. While investigating the reasons why Birmingham Airport should not be developed, the reports shed very little light on the beneficial aspects to the region of expansion. Consequently, this was to be the research area.



## CHAPTER 3

### Structure of the Project

#### 3.1 Introduction

A professional approach to any form of research must incorporate a plan for its execution. When there is no identifiable end-point, represented by an hypothesis to be tested or an elementary particle to be detected, this is all the more necessary. This chapter describes that plan, expanding on the two preceding chapters.

In Section 3.2, the area for research is defined in more detail with assessments of the problems facing the W.M.C.C. and the scope of the project. Section 3.3 discusses the structure which was adopted to tackle the work.

#### 3.2 The Research Area

##### 3.2.1 Assessment of Problems

Chapter 2 has described some of the difficulties of the W.M.C.C. when it became the owner of Birmingham Airport. It is now necessary to examine these points in relation to the Council's policies and attitudes.

At a level of national consideration, the various documents available both at the commencement of the project and published during its course, suggested that development of Birmingham Airport was desirable. This was important since the W.M.C.C. had many political and financial links with Central Government,

which would therefore have to be borne in mind when reaching a decision. Also, with inadequate terminal facilities at the Airport, the W.M.C.C. might well be approaching the D.O.T. for assistance to replace them.

However, there was very significant local opposition to the Airport, some quarters regarding it as a very noisy, white elephant. Several studies had already demonstrated, by their differing conclusions, that the decision on development of the Airport was not straight-forward. These investigations had paid considerable attention to the environmental dis-benefits of expansion, but the only advantages of airport location in the Midlands that had been evaluated were the savings in surface access costs that this afforded; no consideration of the impact of the Airport on the local or regional economies had been made.

It was the opinion of the W.M.C.C. that Birmingham Airport exerted a stimulative effect on the prosperity of the area, by aiding existing companies and attracting new industries to the region. This was felt to be particularly important in view of the decline of the Midlands' automobile industry. Despite the complaints of residents living around the Airport, the W.M.C.C. recognised its wider responsibilities to protect the well-being of the whole population under its government. With no information on these topics available to it, this research area was identified by the W.M.C.C. as being in need of investigation.

### 3.2.2 The Scope of the Project

When the project began, much consideration was given to the performance of a cost-benefit analysis on the value of the Airport to the region. This was, however, discounted on two grounds:

- (1) the data which would have to be collected for such an evaluation was felt to be beyond the manpower resources available. It would certainly encompass the three year time-scale envisaged for the project, and, even if successfully accomplished, would be too late to be of value in the decision-making process; and
- (2) utilisation of any available data in an 'equation' to determine a 'value' for the Airport presented many difficulties.

To quote de Neufville and Yajima:

"When substantial economic development has been observed to occur alongside a new transportation facility, it is next to impossible to interpret the significance of the correlation."(31.1)

Even if it were possible to determine a relationship in the Midlands, it would be necessary to decide if benefits accruing directly from Birmingham Airport would still be felt if this Airport did not exist (i.e. could another airport produce the same effect). Air freight, as discussed in Chapter 4, is a good example of this point.

Additionally, it was also felt that the benefits of an airport were directly related to its role. If the role was expected to change, then the benefits were also likely to alter. This was particularly true in the case of Birmingham since, as, for example, Chapter 6 on Tourism shows, the Airport was not realising its full potential for aiding the region. Consequently, an evaluation of the benefits in order to determine

the role of the Airport might well develop into a problem similar to that of "the chicken and the egg."

With the agreement of the W.M.C.C. it was decided that the project should assess the validity of the policy of using the Airport to aid the economy. If such a policy was shown to have a foundation, the project would then seek means of implementing it.

### 3.3 The Structure of the Project

#### 3.3.1 The Skeleton

It was decided to divide the project into three stages, each answering a different question. By this means it was possible to respond to changes in the fluid basis and background of the project, since decisions on detailed subject matter within each stage could be delayed for as long as possible.

Stage I was to assess the validity of the W.M.C.C.'s policy regarding Birmingham Airport. An early study of this type stood a good chance of being available, and hence of value, when decisions were being made on the Airport's future. It was intended as an exercise to clarify thinking, since the considerable interdependence of the topics involved was causing some confusion. Separate areas were to be studied in some isolation, with the aim of discovering the important considerations of each and the influence exerted on the others. It was felt that this method would reveal an underlying problem.

This critical factor was to be the subject of a detailed investigation in Stage II, which, it was thought, would identify the role that the Airport should adopt to fulfill any desired policy. Concentration on the most important subject not only would be of value in its own right, but was also likely to answer many of the questions raised in the other Stage I studies.

The methods by which any role might be adopted were to be determined in Stage III. It was envisaged that this phase would involve an active participation in the marketing of Birmingham Airport, in response to the increasingly competitive environment identified by the C.A.A.<sup>(18)</sup>\* The actual subject matter for this period of the work would follow from Stage II.

### 3.3.2 The Details

Four topics were identified as representing problem areas within the scope of the project, and hence were studied in Stage I.

The W.M.C.C. was concerned that the decline in freight traffic at Birmingham Airport, as shown in Figure 2.6, might be having an adverse effect on the region. It was interested to have an answer to this question, and to learn whether the trend could be reversed. Although this subject in the main affected commerce and industry, it also had a distinct impact on the environment and the rest of the transportation system, because of the transference of freight from air to road. For this reason, air freight was considered as a topic in its own right.

The second topic was an investigation of the impact of Birmingham Airport on the local economy and the attraction it might exert on re-locating industry and commerce. This

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\*In 1974, Manchester Airport was advertising Stratford-upon-Avon, Coventry Cathedral, Warwick Castle, Kenilworth Castle and Royal Leamington Spa as "places of interest around Manchester" (32). The lack of response of Birmingham was exemplified by the absence of any similar material.

was of particular relevance to the W.M.C.C.'s perceived Airport policy, and it was thus essential to establish the fundamental principles.

The third topic selected was foreign tourism into the West Midlands. Although this was a very important revenue-earning industry for the country as a whole, very few tourists used Birmingham Airport. Because of this, before the project began, tourism had barely been recognised as an issue.

The final subject studied was the provision of air services. This was considered to be of importance in view of the general dis-satisfaction of the business community with the air services at Birmingham. Also, as the C.A.A. has pointed out:

".... air services are provided by air carriers to meet the demand for air travel of individual passengers ..... Airports exist to enable these air services to be provided."(18.1)

Two other potential topics were felt to lie beyond the scope of the project and so were not studied. These were:

- (1) extension of the main runway; and
- (2) general aviation

Although the runway was one of the essential characteristics of Birmingham Airport and the source of some difficulties, the W.M.C.C. had made a policy decision not to extend it. In contrast with its economic policy about the Airport, the Council considered that the facts were sufficiently well understood to enable this stance to be taken. Hence, no further study was required.

With General Aviation, a somewhat pragmatic attitude was adopted: it appeared likely that Birmingham would be the only airport in the West Midlands able to handle commercial aircraft movements and consequently would have to be dedicated firstly to this sector. Any spare resources at Birmingham could be allocated to General Aviation. If these were insufficient to meet demand, new facilities, being relatively inexpensive to provide, would have to be found elsewhere, notably at the nearby Coventry Airport.

An inherent feature of division of the project into three phases was that the subject matter of each would not be selected until the commencement of that Stage. Consequently, it is appropriate to discuss the study areas of Stages II and III later, in Chapters 8 and 13 respectively.

#### 3.4 Summary

This chapter has reconsidered the problems facing the W.M.C.C. in the light of its responsibilities, in order to confirm the purpose of the project. Its scope, as stated in Chapter 1, has been discussed and a cost-benefit analysis discounted. To fulfill the aims of the project, it was divided into three stages, which were to:

1. assess the validity of the W.M.C.C.'s policy;
2. determine the role which the Airport should adopt and;
3. establish methods of playing that role and, hence, of attaining the objective.

Stage I was to study four separate topics, namely:

1. Air Freight;
2. the impact of the Airport on the economy;
3. foreign tourism into the West Midlands, and
4. the provision of air services.



## Stage I

The preceding chapters have described the problems for which the Research Project was to find a solution. The following five chapters relate to Stage I of the Project, which was designed to assess the validity of the W.M.C.C.'s Airport policy. In clarifying the issues involved, separate studies were performed on four different topics with the intention of determining their interdependence and establishing the critical factor in airport development.

Chapter 4 looks at air freight, while the fundamental principles behind the impact of an airport on the economy of its environs are assessed in Chapter 5. Foreign tourism into the Midlands is investigated in Chapter 6. The final topic on the provision of air services and the factors influencing airline interest, is considered in Chapter 7. The sequence of these chapters has been carefully selected, so that the theme of the importance of air services may begin to develop. This is brought to fruition in Chapter 8, where air services are identified as the critical factor in relation to the W.M.C.C.'s policy.

## CHAPTER 4

### The Importance of Air Freight to the West Midlands Area

#### 4.1 Introduction

##### 4.1.1 Purpose of Chapter

This chapter investigates the reasons for the decline in freight traffic flying to and from Birmingham Airport. It assesses the effect of air freight on the local economy, and the possibilities of reversing the trend. In fulfillment of the first aspect, Section 4.2 studies the extent to which the West Midlands is a generator of air freight. The increasing importance of the South East Region Airports is looked at in Section 4.3, so that possible development at Birmingham Airport may be considered (Section 4.4). Conclusions are drawn in Section 4.5.

The remainder of this introductory section provides some background information on the air freight industry, which is required for an appreciation of this chapter.

##### 4.1.2 Some Basic Statistics

Air freight is an extremely complex and rapidly growing industry. Output measured in terms of freight tonne-kilometres, for example, has increased on average by 17% worldwide in each of the last ten years<sup>(33)</sup>. Despite the decline in air freight traffic seen at Birmingham Airport since 1970 (see Figure 2.6), the U.K. airports as a whole have shared in this increase<sup>(34.1)</sup>.

By 1974, 18% by value (or £2,900m<sup>(35)</sup>) of this country's exports were being sent by air. However, this represented less than 1% by weight of total exports<sup>(36)</sup>.

The total of 3,116 tonnes\* of all air freight flown to and from Birmingham Airport in 1974 was less than 0.5% of that of the country as a whole. The airports in the South East have become more important, as shown in Figure 4.1. In particular, the market is dominated by Heathrow Airport, which took a 65% share in the same year<sup>(20.4)</sup>. This phenomenon of focusing on the hub airport is not confined to the U.K., but has also been noticed in West Germany<sup>(37)</sup>, as shown in Figure 4.2.

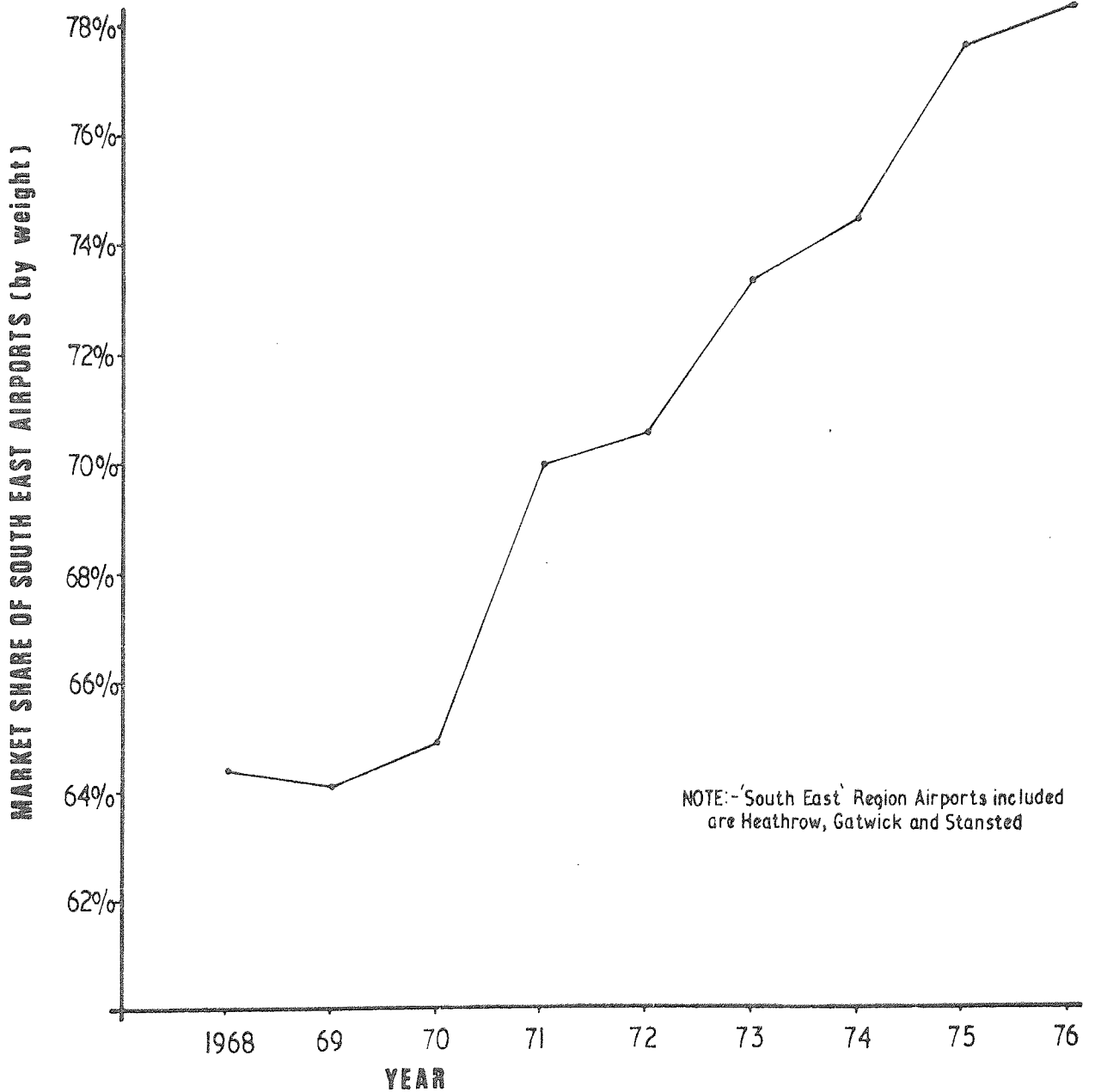
#### 4.1.3 The Structure of the Industry

The structure of the air freight industry becomes very complex when looked at closely. The shipper (the person with the goods to be moved) contacts either an airline or a freight forwarding agent to arrange for transportation. The majority of freight, 80%<sup>(38.1)</sup>, passes through the hands of a forwarder, since this agent deals not only with the selection of an airline to fly the freight, but also with the documentation required. Although there are some 150 forwarding firms in this country, over 50% of U.K. air freight is handled by just ten companies<sup>(39)</sup>.

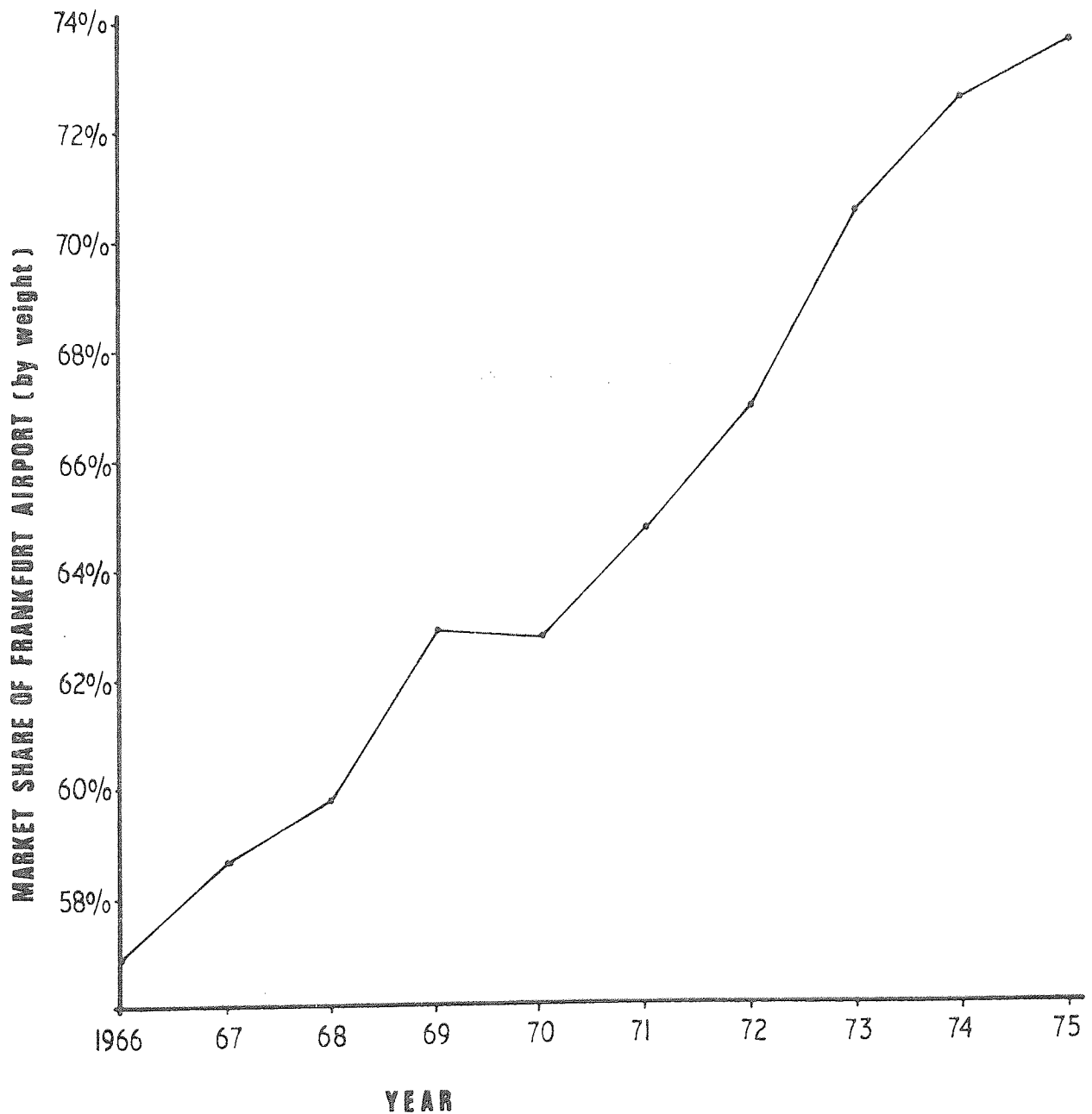
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\*Birmingham Airport Statistics

# South East Region Airports' Share of U.K. Air Freight Market



## Frankfurt Airport's Share of West German Air Freight Market



Selection of an airline to carry the freight is also an involved procedure. Whilst availability of flights is considered, other important factors are the charge for carriage and the possibility of transshipments. The charge for moving a given weight of a given commodity between two specified points should be the same for all I.A.T.A. airlines\*. However, some airlines are able to offer a larger number of rates than others if they have introduced containerisation. (In order to encourage fewer but larger consignments, the cost per unit weight decreases as the weight increases. A decrease is applied at certain weights - the "break-weights"). There are many more complexities of the existing tariff structure (see, Smith<sup>(38.2)</sup>). Shipment of freight via a European airport is also common and examples of it abound<sup>(38.3, 34.2)</sup>; the U.K. Manager of one major European airline stated to the author that 80% of his freight from the U.K. continued to destinations outside the carrier's home country. These, and other issues, when viewed in the light of the profit-orientated nature of the forwarder exercise a considerable influence on the operation of the freight industry.

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\* The International Air Transport Association (I.A.T.A.) is recognised in most countries of the world as being the main international body of the Aviation Industry. It is comprised of more than one hundred airlines, which are usually the important scheduled airlines of their countries. One of its functions is to agree tariffs which in normal events are later ratified by Governments. For further details of I.A.T.A. see Chuang [40]

## 4.2 Production Origin of U.K. Air Freight Exports

### 4.2.1 Introduction

Only a very small proportion of the U.K.'s air freight was handled at Birmingham Airport in 1974. In view of the concentration of manufacturing industry in the Midlands, it is difficult to believe that this represents the true contribution of the region to the total U.K. air freight market. Indeed, if this were true, it might be the consequence of an adverse effect on the Midlands' economy exerted by Birmingham Airport. Therefore, some investigation of the amount of air freight generated in the Midlands is needed.

It is useful to establish the origins of U.K. air exports by region for other reasons: it has been suggested by Sealey<sup>(41)</sup>, amongst others, that the Midlands might be the site of a major all-cargo airport. This and similar propositions, such as an off-airport bonded store and consolidation centre<sup>(42.1)</sup>, can only be completely appraised if this information is available.

As noted by Hoare<sup>(43.1)</sup>, information on the geographical distribution of air freight origins is very limited. Unfortunately, the earliest survey commissioned by the Port of London Authority in 1964, remains confidential. An analysis by Smith of the invoices of British European Airways' (B.E.A) short-haul cargo traffic at Heathrow in September 1966 showed the West Midlands contributed 10% of the traffic. However, as he admitted:

"Because of the consolidation activity of forwarders around London Airport, it is likely that the figure underestimated the traffic generated by regions, other than the South East, that was drawn to London in the absence of local services."(38.4)

Table 4.1 summarises the distribution as revealed by this study.

In contrast, some quarters of the air freight industry believe that two thirds of the U.K.'s air exports come from within a 40-mile radius of Birmingham. However, this statement is without supportive evidence.

The following sections describe attempts made to obtain more information about U.K. air freight origins.

#### 4.2.2 Survey of Leading Freight Forwarders

Since much of the forwarding business was concentrated in the hands of a few agents (Section 4.1.3), an analysis of the business of the largest forwarders was attempted. Thirteen of the main forwarders were contacted by telephone and asked for the proportion of their business which was handled by the branches in the West Midlands Region. In some cases, the conversations were followed up with a letter. However, only one forwarder provided the information in the form requested. The figures were detailed (given to the nearest kilogram) and indicated that, in July 1975, 30% of the company's business came from the Midlands. The poor response to the survey is attributed partly to the absence of even the most basic statistics at some forwarders' offices, and partly to the very secretive nature of the Industry.



Table 4.1

Origins of Short-Haul Air Freight at Heathrow 1966  
(Sample Survey: Weight Distribution)

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United Kingdom Standard Region	% of total traffic
South-East	62
South-West	3
East Midlands	5
West Midlands	10
Wales	1
Yorkshire and Humberside	5
North-West	3
North	2
Scotland	7
North Ireland	2
	<u>100</u>

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Source: "Air Freight: Operations, Economics and Marketing" P. S. Smith

#### 4.2.3 Analysis of Susceptibility to Air Freighting of Midlands Industry

Detailed statistics of both the weight and the value of every commodity exported by air from the U.K. are available from H.M. Customs and Excise. The commodities are grouped according to the SITC convention (Standard International Trade Classification). The relative importance of the West Midlands in the production of these potentially air freightable goods may be assessed theoretically in several ways.

The Atkins Report<sup>(29.1)</sup> used the 1968 Census of Production to determine the Midlands' share (by value) of the production of certain commodities. The commodities in the Census were grouped according to the SIC (Standard Industrial Classification) which is slightly different from SITC. However, the differences may be reconciled at a detailed level. This Midlands' share (East and West Midlands Regions together) was then related to the commodity's susceptibility to air freighting. This gave a total amount of this commodity manufactured in the Midlands and then air freighted. In this manner the level of Midlands' air freight was calculated. Table 4.2 is taken from this work and shows that 45,000 tonnes or 12% of the U.K.'s air exports, came from the Midlands (no year given). However, the text of this report contradicts this and states the figure as 20.8%, again by weight.

A slightly different approach was adopted by B.E.A. in a report prepared for the Birmingham Airport Committee<sup>(44.1)</sup>.

Table 4.2

The Midlands production of potentially air freightable commodities

Commodity Group	Census of Production 1968		Air Freight by Weight Export	
	U.K. £m	Midlands %	U.K. %	Midlands %
Food, drink, tobacco	2,002	15	3.7	2.6
Chemicals etc.	1,390	8	18.3	4.6
Metal Manufacture	1,098	32	1.4	2.0
Mechanical Engineering	2,064	22	10.0	4.2
Electrical Engineering	1,403	19	11.9	3.2
Vehicles	1,639	33	6.5	8.0
Metal Goods	999	35	16.2	57.4
Textiles	1,104	22	3.1	1.6
Leather Goods	77	19	2.0	0.4
Building Materials	610	26	0.5	0.2
Timber, Furniture	482	13	0.4	0.2
Paper, Print, Publish	1,253	8	0.6	0.4
Other manufacturing industries	901	19	20.4	10.5
			100.0	100.0
TOTALS	15,545	21	367,000 tonnes	45,000 tonnes

Source: "Midlands Airports Study" Atkins  
Planning, April, 1973

In this case, employment data was used, and the air freight potential of the Midlands (East and West Regions) was estimated to be 22% of the U.K. total. This was higher than the figure for the North West Region (15%) and only slightly lower than the South East Region (26%).

The assumption of these models is that the susceptibility to air freighting of each commodity is homogeneous throughout the whole country. If this is not true, then for companies with below average use, the model measures the potential for air freight, while for others, with above average use, the predicted traffic from the Midlands is below its true level.

#### 4.2.4 Other Sources

British Airways analyses information contained on the air-way bill, which is the basic shipping document accompanying all consignments. This document, containing information about the cargo, is normally completed by the forwarder. Consequently, the name and address of the original shipper are frequently not given because either a number of consignments from different shippers have been consolidated or the forwarder wishes his customers to remain confidential<sup>(38.5)</sup>. Apart from these doubts as to the validity of the data, the British Airways' work has a further weakness in that it only covers a part of the market, approximately 30%<sup>(29.2)</sup>. Unfortunately, this information is, in any case, confidential.

Export declarations supplied to H.M. Customs and Excise contain the required data, and analysis would give a complete picture of the market. Unfortunately, such an analysis is not performed on either a continuous or intermittent-survey basis, nor were H.M. Customs willing to release this data so that such an exercise could be undertaken.

An attempt was made to organise a survey of forwarders through the Institute of Freight Forwarders (I.F.F.). The I.F.F.'s reaction is attached as Appendix B : it typifies the attitudes encountered which handicapped this section of the research.

#### 4.2.5 Summary

No central statistics of the amount of U.K. air exports originating in the Midlands Region are available. Various estimates are that this may be between 10% and 60%. However, the most likely figure is about 20%.

In view of the uncertainty attached to the above figure, it is not possible to decide categorically if air freight from the Midlands is being suppressed, possibly by the lack of freight services at Birmingham Airport. This is unlikely, however, since the Midlands' share of U.K. exports is at least 20 times larger than the total freight flown through Birmingham Airport.

### 4.3 The Domination of the South-East Region Airports

#### 4.3.1 Introduction

The previous sections have indicated that considerably more air freight is produced in the Midlands than is flown from Birmingham Airport. Discussions with freight forwarders revealed that the bulk of air exports were taken by road to London for further shipment from there. There are two main reasons for this dominance of the South-East Region Airports, namely, the interdependence of the passenger and freight markets, and the tariff structure.

Discussion of the interdependence of passenger and freight traffic is best accomplished by consideration of the destinations of air freight exports from this country. Again only exports were considered because not only was more information available, but also there was greater U.K. control of their shipment than for imports. In view of the different characteristics of the routes and the different statistics available, it was convenient to consider European (or short-haul) freight separately from non-European (or long-haul) markets. In both cases, however, the destinations were identified by country rather than by airports.

#### 4.3.2 European Markets

Customs and Excise Statistics enable the most important countries in terms of value of British exports received, to be identified<sup>(45)</sup>. The European countries receiving exports

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\* Aer Lingus, Air France, Alitalia, Austrian Airlines, British Airways, British Caledonian, Finnair, Iberia, Icelandair, Jugoslavian Air Transport, KLM, Lufthansa, Olympic, Sabena, SAS, Swissair, Portuguese Airlines, Turkish Airlines and UTA.

of more than £10m are listed in Table 4.3. The statistics available from the European Airlines Research Bureau (EARB) give not only the weight carried by members of the Association of European Airlines\* (AEA), but also divide it between passenger and freighter aircraft.

A comparison between Columns 3 and 4 of Table 4.3, shows that AEA carriers move the majority of freight, although there is some conflict between the weights transported to Denmark, with AEA members carrying twice the total exports! Excluding this latter country, at least a quarter of freight to every other European country considered is carried on passenger aircraft, and the overall figure is 32%. There is, thus, a certain degree of interdependence of passenger and cargo operations.

This analysis has not considered the total freight capacity available on passenger flights, which airlines, in the interests of economy, must try to utilise. Since 1974, wide-bodied Tristar and Airbus aircraft, with considerable belly-hold cargo capacity, have been introduced on short-haul routes from London. This has enabled British Airways, for example, to reduce its short-haul, pure freighter fleet from ten Merchantmen in November 1974 (with no Tristars) to five Merchantmen in November 1976 (with five Tristars)<sup>(46.1)</sup>. The dependence of freight transport on passenger flights has, therefore, probably increased.

Table 4.3

Air Freight exports to Europe

Country	Value of air exports 1974 (£m)	Total air exports 1974 (tonnes)	Weight of air exports 1974 (tonnes) carried by AEA members	% of freight (exc. mail) carried on passenger services by AEA members
Austria	19.4	N/A	1,147	46
Belgium	229.6	14,000*	9,319	29
Denmark	23.6	4,000	9,113	16
Finland	13.7	N/A	1,154	31
France	183.4	25,000	18,060	37
German Fed. Rep.	191.0	26,000	17,929	27
Ireland	77.1	28,000	19,550	35
Italy	90.9	10,000	9,738	30
Netherlands	74.8	23,000	15,483	26
Norway	21.1	N/A	832	96
Portugal	19.9	4,000	3,090	37
Spain	39.0	6,000	5,765	40
Sweden	57.6	10,000	3,602	23
Switzerland	306.4	10,000**	7,568	43
Yugoslavia	10.3	N/A	676	100

N/A - not available

\* - includes Luxembourg

\*\* - includes Austria

Source: H.M. Customs and Excise, Southend  
European Airlines Research Bureau, Brussels.



An important factor in the short-haul market is the role that TIR lorries are beginning to play. Not only may they deliver freight to Continental airports<sup>(34.2)</sup>, but they are also competing with air freight in their door-to-door shipment times of European freight<sup>(34.3)</sup>. The air freight forwarders must now provide a very fast service to the shipper, in order to compete effectively. Heathrow, being the main U.K. scheduled passenger airport, offers a wide range and high frequency of passenger services, and is thus attractive to a freight forwarder. Any air services from regional airports such as Birmingham will invariably be operating at a lower frequency than from Heathrow. Consequently they have less appeal to a forwarder in this respect. The availability of a high frequency of service is particularly valuable when air freight is of the "urgent" type. Some sources within the Industry believe 60 to 75% of air freight falls into this category, but the C.A.A. considers this an exaggeration<sup>(34.4)</sup>. Other difficulties of carrying European freight from U.K. regional points are discussed in Section 4.3.4.

#### 4.3.3 Non-European Markets

Only the most important countries receiving over £10m of exports in 1974 were studied. For most of these countries (shown in Table 4.4) the weight of exports was also available. An important difference between short and long-haul routes is that wide-bodied aircraft have made a much greater penetration of the latter market than of the former. Consequently, a considerable cargo capacity is available on passenger aircraft to intercontinental

Table 4.4

Cargo Capacity to Long Haul Destinations available on Passenger Services

Country	Value of air exports 1974 (£m)	Weight of exports 1974 (tonnes)	Cargo capacity available on passenger services (tonnes)	Average number of wide-bodied services per week	Ratio of available freight capacity to weight of exports
Egypt	17.3	1,167	4,760	0	4.1
Libya	10.1	1,661	1,060	0	0.6
Nigeria	26.9	7,000	5,200	0	0.7
Kenya	16.9	4,431	12,090	7	2.7
Zambia	18.6	N/A	2,120	0	-
South Africa	55.2	12,000	13,180	14	1.1
Israel	101.5	2,000	6,630	5.5	3.3
Saudi Arabia	30.9	6,000	4,360	0	0.7
Abu Dhabi	10.3	N/A	2,860	0	-
Iran	25.8	4,000	17,280	11	4.3
India	27.7	3,000	29,060	26.5	9.7
Singapore	19.2	3,000	15,420	14	5.1
Hong Kong	20.8	2,000	15,680	16	7.8
Japan	99.3	6,000	17,030	16	2.8
Australia	63.8	7,000	19,600	20	2.8
New Zealand	12.4	2,099	1,880	2	0.9
Canada	105.8	16,000	29,190	21.5	1.8
U.S.A.	572.5	56,000	142,000	143	2.5
Brazil	26.4	3,000	3,180	1	1.1

N/A - not available

Source: H.M. Customs and Excise - Southend  
A.B.C. World Airway Guide  
"Trade and Industry" 16th July, 1976.

destinations. Using the ABC World Airways Guide<sup>(47)</sup>, the cargo capacity available on passenger services to each of the selected countries was estimated.

There are some inaccuracies in these estimates for the following reasons:-

- (1) Some long distance flights, particularly to the Far East, called at several points en-route to the final destination. Full cargo capacity was assumed to be available to each point.
- (2) The cargo capacity of a passenger aircraft depends on several factors, including the number of passengers, amount of baggage, length of flight (for fuel load), and volume and dimensions of freight. The capacity is, therefore, subject to a considerable variation. However, for the sake of simplicity, an aircraft was assumed to have the same capacity on all routes, and the capacities used are shown in Table 4.5.

In view of the overall aim of this analysis of demonstrating an interdependence of passenger and freight markets, it was felt that these assumptions were justified.

It may be seen from Table 4.4 that for all but four countries the estimate of cargo capacity available on scheduled passenger services exceeds the cargo actually flown to that destination. This capacity naturally will not all be utilised, but it is known, for example, that 50% of air freight across the North Atlantic was carried on passenger aircraft in 1974<sup>(48)</sup>.

Table 4.5

Cargo Capacities of Aircraft in Normal  
Passenger Configuration

Aircraft Type	Cargo capacity (with normal passenger configuration (tonnes))
Boeing 747	18
Boeing 707	8
Boeing 727	7
Super VC 10 ) Standard VC 10)	5
Hawker Siddeley Trident	1.5
Douglas DC 8-63	6
Douglas DC 10	15
Lockheed L 1011 Tristar	14
B.A.C. Super 1-11	0

Source: Manufacturers' Data

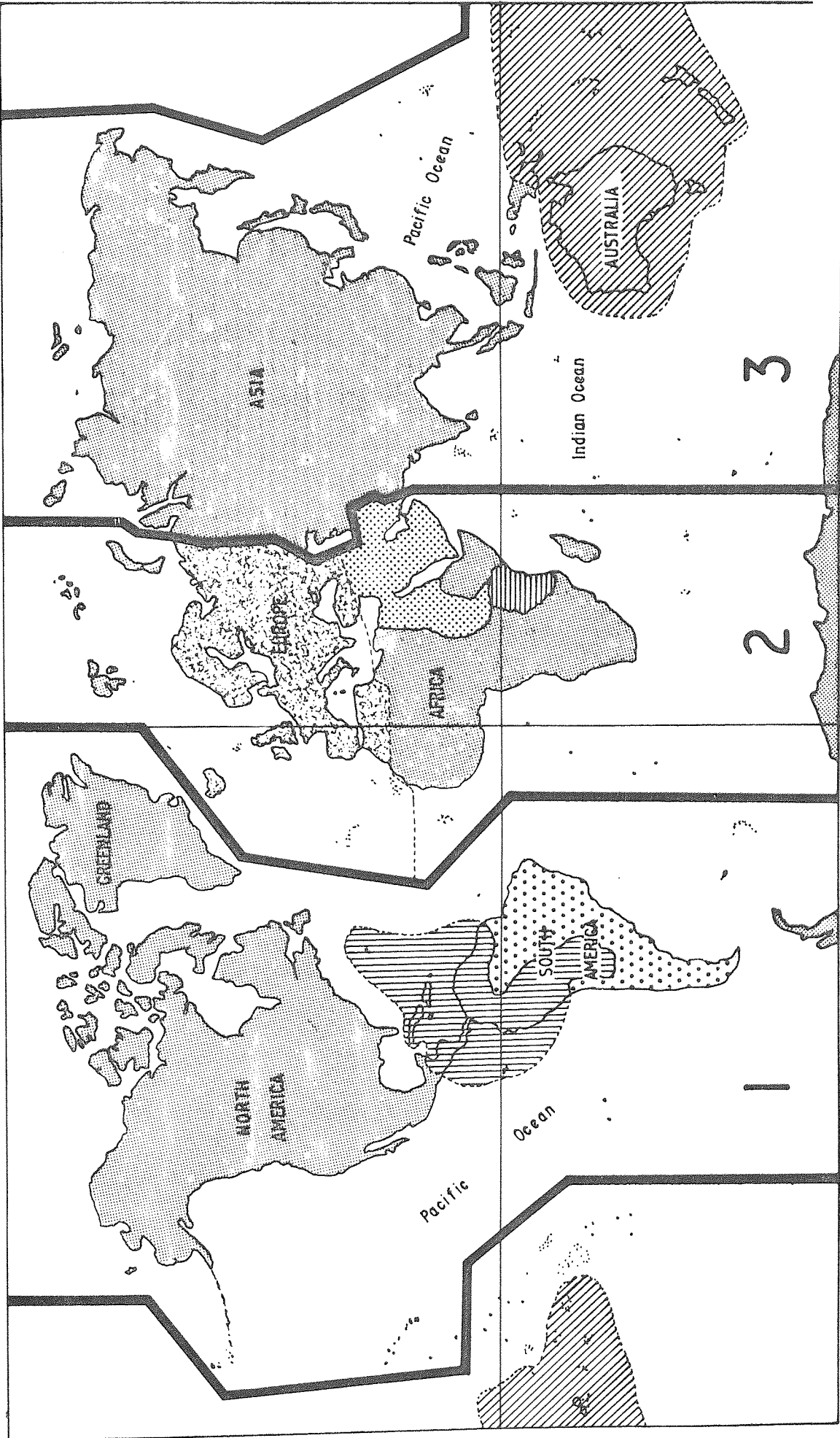
#### 4.3.4 The Effect of the Tariff Structure

I.A.T.A. divides the world into three "Conference Areas" as shown in Figure 4.3. As may be seen, the U.K. is in Area 2 together with the rest of Europe, the Middle East, and Africa. Within each Area, the rate for the carriage of cargo to a certain destination airport depends on the airport from which it is flown. Thus, the charge to fly a given consignment from Birmingham to Paris is higher than the charge to fly it from London. The "add-on" rate is typically 1 to 2 new pence per kilo (1973)<sup>(44.2)</sup>, and is meant to reflect the cost of the extra distance to be travelled. The rate differentials of Birmingham and London to various destinations are summarised in Table 4.6.

There is also a difference in the number of "break-weights" available to different areas. For example, to Europe there is only one, at 45kg (i.e. there is no reduction in the rate per kilo as the weight increases beyond 45kg). To the U.S.A., on the other hand, there are a number of additional break-weights<sup>(49)</sup>. The existence of break-weights is designed to encourage the preparation of fewer but larger consignments, so reducing airline handling costs.

The implications of the policy of reducing the unit rate as consignment weight increases will now be considered. To obtain maximum benefit from this, freight from the whole country is consolidated by forwarders in London. This is particularly advantageous for freight to more distant areas of the world because of the more numerous break-weights available. Forwarders

fig 4-3



- EUROPE
- MIDDLE EAST
- EAST AFRICA
- SOUTH WEST PACIFIC
- MID ATLANTIC
- SOUTH ATLANTIC

SOURCE :- ABC Air Cargo Guide

# IATA Traffic Conference Areas

Table 4.6

Rate Differentials between Birmingham and London  
(UK Pence)

<u>Between Birmingham and</u>	<u>General Cargo Rates</u>	
	<u>-45 kg</u>	<u>+45 kg</u>
Area 1 excluding S. America	zero	zero
S. America	0.5	0.5
Area 2 excluding Europe	2.0	1.5
Europe	2.5	2.0
Area 3 excluding S.W. Pacific	2.0	1.5
S.W. Pacific	zero	zero

Definition of Areas

- Area 1 = The Americas
- Area 2 = Europe, Middle East, Africa
- Area 3 = Far East, Australia, etc.

IMPORTANT NOTES

1. The "add-ons" shown are the general rule and there are always exceptions.
2. The amounts shown are expressed in UK Pence rounded up to the next highest half.

Source: "Birmingham - Air Freight Potential Study" BEA.

may well hold back freight for several days in order to consolidate larger loads<sup>(34.5)</sup>. The lower frequency of flights to such destinations encourages this practice.

At the present time, the majority of flights (scheduled and charter, passenger and freight), to intercontinental destinations are from the South-East Region's Airports. Hence most non-European freight being flown from the U.K. must be taken, normally by trucks, to the London area. Forwarders may thus utilise spare capacity on their truck services to take European freight to London at minimal extra cost. Not only is the forwarder able to consolidate this European freight, but also he benefits from the cheaper London rates and from the higher frequency of flights available.

#### 4.3.5 Summary

A dependence of the carriage of freight on aircraft flying scheduled passenger services has been shown. This has been demonstrated by investigating both the amount of freight actually flown to Europe and the capacity available to non-European destinations on scheduled passenger services. Indeed, a recent report reveals that nearly 40% of all air freight uplifted or set down at U.K. airports is carried in the belly-hold of aircraft on scheduled passenger services<sup>(20.5)</sup>. This is one reason for Heathrow's dominance of the air cargo market.

The existing tariff structure encourages forwarders to truck freight to London where not only may the opportunity to consolidate be taken, but also the cargo rates are cheapest.



For urgent shipments and with growing competition of surface modes to short-haul destinations, the range and frequency of services available at the London Airports are attractive to forwarders.

#### 4.4 Possible Future Development at Birmingham Airport

For the continuing trend described above and depicted in Figure 4.1 to be halted, a number of the factors responsible for dominance would have to change. This present section assesses possible courses of development at Birmingham Airport.

Birmingham Airport is unlikely in the foreseeable future to have long-haul, scheduled passenger operations; this was suggested by the C.A.A.<sup>(15.1)</sup> and is now the policy of the W.M.C.C.\* From the arguments of Sections 4.3.2 and 4.3.3 it may be realised that future attention might profitably be focused on the short-haul freight market. At this point, the tariff structure becomes of most importance.

At several meetings of the United Kingdom Air Cargo Club (U.K.A.C.C.) attended by the author, there has been much discussion of adoption of a common-rating policy for the U.K. to all international destinations, i.e. removal of the rate differential between London and the Regions.

There are two ways by which this might be achieved. The first would be to lower the Birmingham rates to the London level. It was felt, particularly by B.E.A.<sup>(44.3)</sup>, that this would not be an incentive to direct freighter operations, since additional flying costs were barely covered by the existing

differential. For freight carried on passenger services from Birmingham, the revenue per kilo earned by the airlines would decrease. Airlines would only agree to a downwards removal of the differential if it could be proved that their total revenue would be increased by growth in traffic. Forwarders might also be resistant to such a move because of certain irregularities which might exist in the Industry e.g. freight is trucked to London at minimal cost, flown at a cheaper rate, but the shipper charged the Birmingham rate.

The second method of obtaining a common rating of Birmingham and London would be to raise London rates to the Birmingham levels. This would increase the costs to air freight users in the South-East as well as in other parts of the country who must continue to rely on services from London. Therefore, there would be considerable objections to any up-grading to a common-rated position.

The foregoing discussion on tariffs applies, of course, only to I.A.T.A.-airlines. Other airlines are able to offer openly different rates on charter services<sup>(50)</sup>. Almost 50% of the pure freight charter market is in the hands of U.K. non-I.A.T.A. airlines<sup>(46.2)</sup>, but the sector itself is small, comprising only 12% of total U.K. air freight.<sup>(34.6)</sup> There would seem to be some opportunity to develop this sector, but there are some difficulties: the bulk of charter operations are to non-European destinations<sup>(34.7)</sup>, so that an extension of the runway at Birmingham might well be required. The absence of a charter airline based at Birmingham might also cause problems, particularly in regard to aircraft positioning.

The opportunities for Birmingham Airport to increase its share of the air freight market are limited. Indeed, Coopers and Lybrands forecast a continuing demise of freight at all U.K. airports other than Heathrow and Gatwick<sup>(42.2)</sup>. The predictions of a combined freight throughput of 43,000 tonnes in 1977<sup>(29.3)</sup> for Birmingham and East Midlands Airports of Atkins is unrealistic in light of their total of 10,000 tonnes<sup>(51)</sup> in 1976. The Atkins' forecast is based on the assumption of:-

"willing co-operation from airline operators, forwarding agents and local shippers"(29.4)

which is felt to be very optimistic in view of the findings of this chapter.

#### 4.5 Summary and Conclusions

Very little information on the production origins of U.K. air freight exports is available. Several different methods to obtain this data have been used, but the best estimate of the Midlands share of U.K. air exports is between 10% and 30%. In view of the wide range of this estimate, it is thought unrealistic to define the geographical area covered more accurately than the generally accepted "Midlands".

The domination of the air freight market of the airports in the South-East Region has been investigated. The interdependence of the passenger and freight markets has been demonstrated by analysis of freight carried on passenger services, and of the capacity available on such services. In the competitive (i.e. with surface transport) European market the wide range and high frequency of passenger services from Heathrow aids this interdependence.

To many destinations, the rate for a shipment is higher from Birmingham than from the London area. Forwarders take advantage of this by trucking freight at minimal cost to the South-East, where they may further decrease the rate by consolidating consignments from different areas of this country.

Existing policy precludes the operation of intercontinental, scheduled passenger services from Birmingham. Development of freight to short-haul destinations is made difficult by the rate differential with London. By lowering Birmingham rates to London levels, it is possible that freight carried on the present passenger services from Birmingham might be increased. This could be to the economic benefit of these services.

Encouragement of cargo charter operations is possible since a large part of the market lies in the hands of non-I.A.T.A. airlines. Unfortunately, the total market is small and is mostly limited to non-European operations. Enlargement of this sector would probably require extension of the main runway and could also be dependent on the attraction of a freight charter airline to base itself at Birmingham.

The conclusions of this chapter are, therefore:-

- (1) Air freight is important to the industry of the West Midlands, but is unlikely to be suppressed by the low level of activity in this sphere at Birmingham Airport;

- (2) The factors (interdependence of passenger and freight operations, and tariff structure) influencing the importance of the South East Region Airports in this area are unlikely to change in the foreseeable future, and the share of the market at Birmingham will continue to decline, and
  
- (3) Expansion of freight throughput at Birmingham Airport might be achieved by striving to lower Birmingham rates to London levels to encourage growth on the existing European passenger services, or in the freight charter sector of the market. There are difficulties, including the lack of freight airline based at Birmingham.

## CHAPTER 5

### The Impact of Birmingham Airport on the local economy

#### 5.1 Introduction

This chapter describes the second study conducted as part of Stage I of the research. This topic concerned the effects which Birmingham Airport might have on the local economy. As such, it was of particular relevance to the existing County Council policy. Having dismissed the possibility of a cost-benefit analysis (Section 3.2.2.), the extent of this work was confined to a preliminary investigation of the fundamental issues.

It is convenient to consider separately the effects on companies directly related to the air transport industry, and on firms which utilise the services provided by this industry. Section 5.2 looks at the first aspect and considers employment at both on- and off-airport locations, and also in certain specialist service industries. The multiplier effects of these sectors are then discussed. The second area, that of the so-called "secondary employment" effects, is the subject of Section 5.3. Here, previous work in the field is reviewed, and the relationships between Birmingham Airport and firms already in the region, and companies considering relocation are assessed. The possibility of artificially attracting industries to the area are then considered, before the implications of the work are discussed. Conclusions on this topic are presented in Section 5.4.

For reasons similar to those discussed in Chapter 4 (Section 4.5), and in view of the generalised nature of this short study, it is thought unrealistic at this stage to define the geographical extent of any impact exactly.

## 5.2 Employment in Air Transport related Industries

### 5.2.1 On-airport Employment

In September 1975, over 1,700 people were employed on-site at Birmingham Airport.<sup>(52)</sup> The major employers were British Airways, West Midlands County Council and British Midland Airways. It has been forecast that employment in 1990 at Birmingham will be 4,000 with a passenger throughput per annum of three million, or 8,000 with ten million passengers.<sup>(20.6)</sup> These calculations have taken into account the non-linear relationships between annual passenger throughput and some employment categories.<sup>(20.7)</sup> Thus, employment at the Airport will increase to an extent determined partly by the policy of the W.M.C.C.

### 5.2.2 Off-airport Employment

Employment in the air transport industry does not need to be located at an airport, and this present section considers that element.

One sector which may be located off-airport is the freight forwarding industry, although some agents may choose an airport site for commercial (i.e. attractive rents) or psychological reasons. However, it is clear from the examination of Chapter 4, that this latter location is not essential. That Chapter

also leads to the conclusion that growth in employment in the air freight sector is more likely to be in line with national growth rather than with any development at Birmingham Airport.

Also dependent on national and regional prosperity is the business of travel agents. Evidence is presented in Chapter 12 which supports the suggestion that provision of air services stimulates traffic, so that some employment in travel agencies may derive from the growth of Birmingham Airport. Again, this business is not localised at the Airport, but is dispersed across the region.

The Hotel Industry also benefits from the existence of an airport. For example, there are several hotels in the Luton area which cater for early morning departures of tourists on package holidays\*. The position of Birmingham Airport is, however, different: it serves a local market (90% of passengers coming from the East and West Midlands Regions<sup>(24.3)</sup>, compared with Luton's 56% from the South East<sup>(24.4)</sup>), only half of its flights are non-scheduled, and it has good surface access. Birmingham's effect on the Hotel Industry is therefore liable to be smaller than Luton's\*\*.

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\*These hotels are listed by Thomsons, for example, in booking material sent with tickets for holidays.

\*\*With the decision of the W.M.C.C. in December 1976 not to accept a diversion of I.T. passengers from the South East, and to limit growth to a total of three million passengers per annum by 1990 (see Appendix A), the position appears unlikely to change in the foreseeable future.



Another sector of off-airport employment which benefits directly from proximity to an airport is the surface transport sector, particularly taxi and coach-hire firms.

It is estimated that the total employment in ancillary industries such as these, amounts to 150-200 per million passenger annual throughput.<sup>(20.8)</sup> The total effect of this sector is consequently some 300-400 extra jobs by 1990 in Birmingham with a passenger level of three million per annum.

### 5.2.3 Specialist Service Industries

There is another sector of the air transport industry which has yet to be mentioned, namely, firms providing additional services. Typical examples of such companies are those involved in aircraft maintenance or re-furbishing. These functions are essential to the airline industry and are dependent on its growth. On the other hand, the location of these activities is less closely related to the traffic characteristics of a particular airport. Glamorgan (Rhoose) Airport, for example, is an important maintenance base for British Airways, although its traffic level is low.

There have been suggestions that such functions might be transferred from the London-Area Airports to some of the regional ones.<sup>(20.9)</sup> Consequently it is felt that location of this type of activity is open to some degree of external influence. The opportunity exists for the W.M.C.C. to attempt to attract such industry to Birmingham. This would need a careful analysis

of the firms to be approached. Besides those areas already mentioned, other activities which might be susceptible to transfer are airline training and head-office functions.

#### 5.2.4 Multiplier Effects

The three previous sections have discussed employment that might be generated in air transport related industries, either by an increase in traffic or by a campaign to attract certain companies to the area. The former factor could create some 2,600 new jobs by 1990. This direct employment also affects local service industries because of salaries spent in one way or another. The effect is normally quantified in terms of jobs created in the service industries. The employment multiplier in this case is the ratio of total number of created jobs (in both air transport and local service industries) to the jobs created at the airport. Suggestions that this multiplier is two or more have been made in the U.S.A. (see, for example, de Neufville<sup>(31.2)</sup>), but the average for the U.K. has been put at 1.6.<sup>(20.10)</sup> Using this figure, the number of jobs created may be put at approximately 4,000 in 1990, excluding the effects of specialised service industries.

### 5.3 Industry and Commerce utilising Air Transport Facilities

#### 5.3.1 Previous Work in the field

There is a widespread belief that local airports are

"... essential to the successful promotion of industrial and commercial development."(20.11)

Indeed, it was the existence of such a philosophy which largely prompted this Research Project. Hoare<sup>(43.2)</sup> cites several examples of this attitude being held by both official bodies and individual writers, but emphasises that

"... the quantity of opinions expressed on the impact of Airports on Secondary Employment far exceeds the quantity of available evidence." (43.3)

One of the more extensive pieces of work in this area of the impact of an airport on its surroundings was performed by Smith.<sup>(53)</sup> Taking Heathrow Airport as an example, he investigated the effects on Land Use, employment and income, and industry and commerce, as well as on several other sectors. He conducted a small survey of seven manufacturing firms and ten offices, located in a limited area where most airport-oriented activity was to be found. No evidence was obtained to suggest that companies had opened premises in the area in order to be near the Airport. He concluded that

"Heathrow Airport may be considered as an additional benefit in a region well endowed with facilities for industry"

but continued

"This does not assume that the present position will be maintained in perpetuity and it may well be that, if planning policy permits, Heathrow Airport will become an increasingly attractive location to manufacturers prepared to gear output to an air freight distribution pipeline"(53.1)

The reasoning behind this statement is not clear.

Smith later states in the same chapter:

"... the presence of Heathrow has had little effect upon the location of manufacturing industry and since sites exist near the Airport, it is unlikely that this lack of attraction is due to planning restrictions."(53.2)

By the end of the thesis, however, the thinking has become confused:

"The possibility of the Airport attracting manufacturing industry should not be overlooked. The existing attraction of Heathrow Airport to other industrial entities indicates the strength of an airport as a development node. Access to good communications is often a vital business requirement and it is suggested that planning authorities should make the most of the general growth opportunities offered by the presence of a major airport."(53.3)

It is possible that in view of his small survey sample, Smith was influenced by the weight of opinion supporting the attraction of an airport to commerce and industry.

Five other studies on the impact of U.K. airports on their surroundings were reviewed by Hoare<sup>(43.4)</sup>, who concluded that a relatively minor role in the growth of local business activity was played by the airports examined\*. The surveys all had various limitations in terms of either sample size and location, or analysis. Hoare identified four fundamental questions which were in need of answers, namely:

1. What was the magnitude of the generated employment?
2. What were the spatial distributions of the affected firms?
3. In which ways was the impact exerted? and
4. Which types of firm were affected?

Hoare designed a survey to provide greater knowledge in these areas. Heathrow was chosen as the study airport in view of its size and its position in the South East of England, an area with a high growth rate. Interviews were conducted with nearly 200 companies in three different areas around Heathrow. Four impacts were identified:

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\*Three studies were on Heathrow, one on Edinburgh, and one

- (1) Initial attraction of firms to the area;
- (2) Locational benefits of use of airport services, and attainment of work contracts there;
- (3) Locational problems such as recruitment of labour and disturbance of aircraft noise; and
- (4) Encouragement of relocation because of these problems.

The first two of these are 'positive', the others 'negative'. While the second and third effects are very much concerned with individual firms, the first and last have greater implications for the area as a whole. There is also a certain cause-and-effect relationship between the two positive impacts, and between the two negative impacts.

Hoare discovered that several offices interviewed had been attracted to areas because of their proximity to Heathrow. These firms were "characterised by above-average proportions of male and graduate labour" and often had overseas head offices. In contrast, Heathrow was an insignificant location factor for manufacturing firms.

Additional conclusions on Impacts (2) and (3) are of less importance here, in view of the regional nature of the present study. Impact (4) was most felt by manufacturing firms experiencing difficulties in the recruitment of suitable labour. The scale of this effect was hard to access since firms relocating would no longer be in the survey area.

Hoare attempted to compare the relative magnitudes of these impacts, using the number of jobs affected\* as a scale. The difficulties of comparisons based on this type of quantification were, however, stressed. The positive impact of attraction of firms affected 6,500 jobs, and the most comparable negative impact of relocation affected some 12,000 jobs. A positive benefit of location (Impact 2) was felt by 35,000 jobs, but the negative effect (Impact 3) acted on 48,000 jobs.

Hoare's eventual conclusion was:

"... little evidence exists for its (Heathrow) exerting a marked stimulative effect on the local employment categories analysed."(54)

Work in the U.S.A. has been discussed by de Neufville and Yajima.<sup>(31)</sup> They too encountered a widespread conviction that airports have a large economic impact. This has often been used to justify airport development. They examined the suggestion that communications are a necessary and powerful stimulant to economic growth, by considering theoretical supply and demand models. They concluded that:

"If national policy desires to subsidize the development of a particular area, it may be more effective to provide help directly to the intended recipients rather than sink it into some construction project."(31.3)

De Neufville and Yajima then reviewed the magnitude of multiplier effects, and suggested that they were of the second order rather than being a multiple (i.e. the ancillary jobs created are fewer than the jobs in the original activity).

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\*The proportions of the survey responses in the various categories were related to the total number of firms in the area.

Examination was made of the local impact around three major U.S. Airports. The conclusion was reached that:

"... the economic benefits of airport development are not overwhelming, there is no clear-cut dominant effect that can be attributed to the airport"(31.4)

and that:

"... it would appear that the beneficial economic side-effects of airports have been overrated."(31.5)

Thus, no research to date has provided evidence to support the suggestions of a major economic impact of an airport. Indeed, the little work available indicates that the effect is quite modest.

#### 5.3.2 Birmingham Airport and existing firms

In Chapter 4, the position of air freight in the West Midlands has been considered. There it was concluded that there will be little growth in freight throughput at Birmingham Airport in the foreseeable future, but that the absence of freight services is unlikely to suppress the demands of Midlands' industry. For the present purposes of discussion of the impact of Birmingham Airport on companies already located in the Midlands, attention may therefore be confined to its use by passengers.

The annual air travel survey conducted by the Birmingham Chamber of Industry and Commerce is a convenient source of opinions on Birmingham Airport from companies in the region. Postal questionnaires are sent to all member companies in the Overseas Trade Section requesting information on travel to Europe in the previous year. The questions vary slightly from year to year, but in general investigate the use, and reasons for non-use, of the scheduled air services provided at Birmingham.

In recent years, the main reasons for sometimes using airports other than Birmingham to fly to European cities already served directly, have been inconvenient timing and inadequate frequency of flights. In 1975, for example, these two reasons accounted for 65% of the responses, far greater than the number of businessmen deterred by poor facilities at the Airport (11%).<sup>(55)</sup> The respondents were also given the opportunity of listing the European points they would like to see served by direct flights. There was an interesting reaction to the final open-ended question which, in view of plans to provide new terminal facilities, sought to ascertain the needs of the business users. Over 25% of respondents emphasised their earlier answers, by requesting direct flights to more major European cities.

These surveys provide clear evidence that although business travellers are far from satisfied with the standard of facilities at Birmingham Airport, they are much more concerned with the provision of direct, scheduled air services, particularly to Europe.

### 5.5.3 Birmingham Airport and Relocating Firms

One of the more conclusive findings of Hoare's research was that offices are more influenced in their relocation decisions by the proximity of airports than are manufacturing industries. For the purposes of this present study, it is convenient to concentrate on this first sector of relocating firms.



The Location of Offices Bureau (L.O.B.), established in 1963 to aid decentralisation by companies, provides additional information on this topic.<sup>(56)</sup> The major reasons for moving are economy (in terms of rents) and expansion. These two categories have accounted for over 60% of the reasons since 1963, but in 1974/75, economy was the dominant category at over 50%. Despite Hoare's findings, not one firm in 12 years gave the need for proximity to an airport as a reason for moving. This may have been for one of several reasons, including:

- (1) Motivation not given;
- (2) Motivation hidden in other reasons;
- (3) Firms, who were attracted to airports, considered contact with L.O.B. unnecessary.

Over 12 years, 84% of moves recorded by L.O.B. have been within the South East Region. The West Midlands has done particularly badly with only 1.3% of moves, and 0.4% of jobs relocating there, giving it eighth position out of the 11 regions, as shown in Table 5.1. This is surprising, since in 1975, for example, the West Midlands had the largest amount of available office space of any Region (excluding the South East as a whole, but including Greater London without the Central Area). Also the rental cost was reasonable when compared with national rates.

In 1974/75, the West Midlands did gain in popularity, in line with a growing trend to move away from the South East. The areas for expansion have benefited from the introduction of regional incentives to service industries in 1973. The

Table 5.1

Regions to which firms have moved or are moving

Standard Region	No. of moves	% of moves	No. of jobs	% of jobs
South East	1,476	84	104,898	75
East Anglia	39	2	5,970	4
East Midlands	39	2	4,470	3
West Midlands	24	1	604	1
South West	75	4	12,935	9
Yorkshire & Humberside	23	1	4,702	3
North West	43	3	4,724	4
Northern	17	1	1,724	1
Wales	9	1	215	-
Scotland	14	1	324	-
Northern Ireland	2	-	21	-
TOTAL	1,761	100	140,605	100

Source: Location of Offices Bureau  
"Annual Report 1974/75"

performance of the West Midlands in relation to Expansion Areas such as Yorkshire and Humberside, indicates that firms place greater emphasis on Government grants than on air services. Firms who value good air communications are unlikely to move from the South East Region, where Heathrow offers unrivalled facilities.

The dominance of moves within the South East demonstrates that firms have a great preference for proximity to London. With increasing rents in London, and the growing tendency to locate outside the South East, the West Midlands is well placed, both geographically and in terms of accommodation available. The North West Region, however, might be in an even better position. Not only is the motorway network as impressive, but also development grants are available. At this point, companies wishing to relocate may consider air communications, and on these grounds Manchester is superior. With secondary and tertiary consideration of proximity to airports in mind, lack of good air services could place a region at a disadvantage.

Few, if any, offices will relocate themselves in the West Midlands simply because of the existence of Birmingham Airport. Indeed, the part played in a relocation decision by Birmingham Airport will be very small. In view of Hoare's work, the impact on attraction of manufacturing industry may be discounted at this stage.

#### 5.3.4 Artificial attraction of Industry

Much publicity has been given to the Shannon Free Airport Scheme<sup>(57)</sup> as a example of how an airport may artifically attract industry.

With the introduction of long range jet aircraft on passenger services in 1958, Shannon became of decreasing importance as a re-fueling point for trans-Atlantic flights. To offset the decline in the local economy the Irish Government created an industrial estate within the Customs Free Zone of the Airport. Several foreign companies were attracted by this to the estate to the good of the local community.

A similar scheme at Birmingham Airport would require the approval of H.M. Government. This would amount to a virtual subsidy of the West Midlands by the British taxpayer, and, since the region is not accorded even Intermediate Area status, is unlikely to occur.

#### 5.3.5 Implications

Previous work on the relationship between secondary employment and airport development suggests that the latter has very little impact on creation of jobs in the former category. These conclusions have been based on studies of large airports, and the position at a smaller regional airport may be different. Such an airport may exert a relatively greater impact on its region, than does, say, Heathrow on the prosperous South East. In absolute terms,

however, the benefits are likely to be in proportion with the airport's size. On this basis, the impact of Birmingham Airport is likely to be small. The discussion of attraction of offices is in line with this statement.

The effect on firms already located in the West Midlands is more difficult to assess. There is certainly some disquiet about the standard of facilities offered by Birmingham Airport, but of greater worry is the availability of scheduled air services to Europe. Indeed, it is clear that it is air services and not airports that are of most concern to Commerce and Industry, and consequently these are more attractive to them. This is in agreement with de Neufville and Yajima's conclusion:

"To the extent that a region already is or can be served by regular air service, the differential economic effect of airport expansion or of the construction of a new airport on a region or metropolitan area would appear to be small."(31.6)

Hoare did not detect any decisions to relocate because of inadequacies of air services. This is hardly surprising since he studied the country's main airport. It is conceivable that such a negative impact could be felt in the West Midlands. When this is considered in conjunction with the competition between regions to attract industry (by every possible means), it may be seen that while possession of good air services is not one of the positive assets, lack of air communications may be a distinct disadvantage.

If the analyses of the magnitude of attraction of air services to Commerce and Industry are incorrect, and if in fact there is a significant consideration of proximity to

air services in relocation decisions, then Birmingham Airport is poorly positioned to take advantage of this. In order to attract companies to the West Midlands, the range of international scheduled air services would have to be considerably increased.

#### 5.4 Summary and Conclusions

The impact of Birmingham Airport on the economy of the West Midlands area may be divided into two categories.

Employment opportunities in aviation related activities, together with their multiplying effects, will increase by approximately 4,000 by 1990 with an annual passenger level of three million. This increase will depend largely on traffic growth, but can be influenced by the effort made by the W.M.C.C. to attract specialist industries to the airport.

It has been suggested that airports act as stimulants to the creation of secondary employment in non-aviation activities. However, evidence in support of this is rare. Indeed, the small amount of work performed on this subject strongly suggests that this is a myth, and airports have little attraction for economic growth.

Existing Industry and Commerce in the area seems most concerned with the provision of international air services, and distinction between this and airport facilities is important. It is possible that lack of good air services may place a region at a disadvantage in terms of both retention of existing companies, and attraction of new ones against the competition of other Regions.

Investigation of the relocation of offices from the South East indicates that Birmingham Airport will play at most a minor role in decision making. Its attraction to manufacturing firms is likely to be even smaller. Artificial attraction of development by creation of a Customs Free Zone is extremely unlikely.

Development of the Airport is unlikely to attract secondary employment companies to the region. Indeed, provision of scheduled air services to European destinations is of much greater significance to companies already in the area. Whilst possession of good air services is not a positive advantage, an inadequacy could have a detrimental effect. Even if the analysis is incorrect and airports do have an attraction for Industry and Commerce, Birmingham Airport, with its present limited range of air services, is unfavourably positioned to take advantage of this.

## CHAPTER 6

### The Importance of Birmingham Airport to the Development of Foreign Tourism in the West Midlands

#### 6.1 Introduction

##### 6.1.1 Purpose of Chapter

The aim of this Chapter is to examine the structure and size of tourism into the U.K., and to investigate the importance of Birmingham Airport in bringing the benefits of this industry to the West Midlands. It is not concerned, with increasing the traffic volume at Birmingham Airport for its own sake.

This introductory section discusses the types of tourist considered here, and gives some basic facts on the tourist industry in the U.K.. Section 6.2 analyses the most relevant aspects of tourism in more detail. In particular, the benefits of tourism to an area are assessed, the merits of the West Midlands as a tourist area are discussed, the importance of air travel to tourism are investigated, and the position of Birmingham Airport and the implications are considered. The reasons behind the low level of activity discovered are discussed in Section 6.3, with particular attention being paid to marketing and the roles of scheduled and non-scheduled air services. Section 6.4 indicates that it is possible to escape from this situation and suggests a course of action to bring increased benefits to the region.



The man-in-the-street's image of a "tourist" is probably of someone wandering around at a leisurely pace in casual clothes and carrying a camera. The official definition of a tourist adopted by the League of Nations in 1937 was, in fact, much wider:-

"A tourist is any person visiting a country other than that in which he resides for a period of at least 24 hours, for any of the following purposes:-

- a) pleasure, domestic reasons, health, etc.;
- b) to attend meetings, conferences and in any kind of representative capacity;
- c) sea-cruises, even for less than 24 hours."(58)

This broader interpretation has been employed with little change since then.

In this chapter, attention will be primarily focused on leisure tourists, and conference and exhibition visitors. The number of other businessmen travelling to the West Midlands will be most dependent on economic conditions (stimulation of traffic by provision of services is considered in Chapter 12). People visiting friends and relatives (known as VFR traffic) in the U.K. have their destination firmly fixed, so that there is little that can be done to attract them to the West Midlands. (Also, the impact of this category on the local economy will be lower than other tourists since they will often be accommodated in the homes of their families. The major ethnic groups in the West Midlands come from the less developed countries (e.g. India, Pakistan) so that the volume of incoming VFR tourist traffic is probably at a lower level than for more developed countries). Hence, the term "tourist" will be used in the "camera-carrying" sense throughout this chapter.

### 6.1.3

#### Size of the existing U.K. Market

Tourism is an important foreign currency earner for the U.K.. At £1,000m in 1974, it represented 10.7% of British invisible receipts and 4.1% of total exports.<sup>(59)</sup> To this amount spent in the U.K., must be added the fares paid to U.K. carriers. In the same year, there were 7.9 million foreign visitors, and this increased in 1976 to 10.1 million with the decline of sterling on foreign exchange markets.<sup>(60)</sup>

The main origins of visitors to the U.K. are the U.S.A., West Germany, France, Canada and the Netherlands. Together, these five countries account for over half of the visitors, as shown in Table 6.1. The nationality of a visitor has a reflection on the length of time he stays in the U.K., with travellers from more distant countries such as Australia and South Africa remaining longer than Europeans. The average length of stay was 12.5 days in 1976.<sup>(61)</sup> The most popular period of the year is during the summer months of June, July and August.<sup>(62)</sup>

There are many sources of statistics on tourism. The information available has been summarised by Middleton as:-

"who - what sort of tourist (young/old/single/married etc.)  
what purpose - holiday, business, conference  
where from - in terms of main countries (and perhaps regions)  
where to - nights within Britain  
when - by quarters."<sup>(63)</sup>

Table 6.1 Country of Residence of Foreign Visitors to the U.K.

Country of Residence	Number of Visits in 1975	
	(000's)	%
Austria	88	1.0
Belgium, Luxembourg	522	5.9
Denmark	128	1.4
Finland	40	0.5
France	1,025	11.5
Germany (F.R.)	1,069	12.0
Greece	58	0.7
Ireland	739	8.3
Italy	291	3.3
Netherlands	564	6.4
Norway	149	1.7
Portugal	45	0.5
Spain	214	2.4
Sweden	209	2.4
Switzerland	228	2.6
Turkey	24	0.3
Other European Countries	121	1.4
Australia	310	3.5
Canada	467	5.3
Japan	122	1.4
New Zealand	53	0.6
United States	1,350	15.2
Latin America	158	1.8
Other Countries	907	10.2
Total	8,880	100.0

Source: "Tourism Policy and International Tourism" O.E.C.D.

It may be noticed that "How" is missing from the above list. Some data on the manner by which foreign residents travel to and from the U.K. are available. The most detailed give the modal split between surface and air transport. As is apparent from Figure 6.1, air travel has become increasingly important, and in 1976 accounted for over 60% of visitors to the U.K. (61)

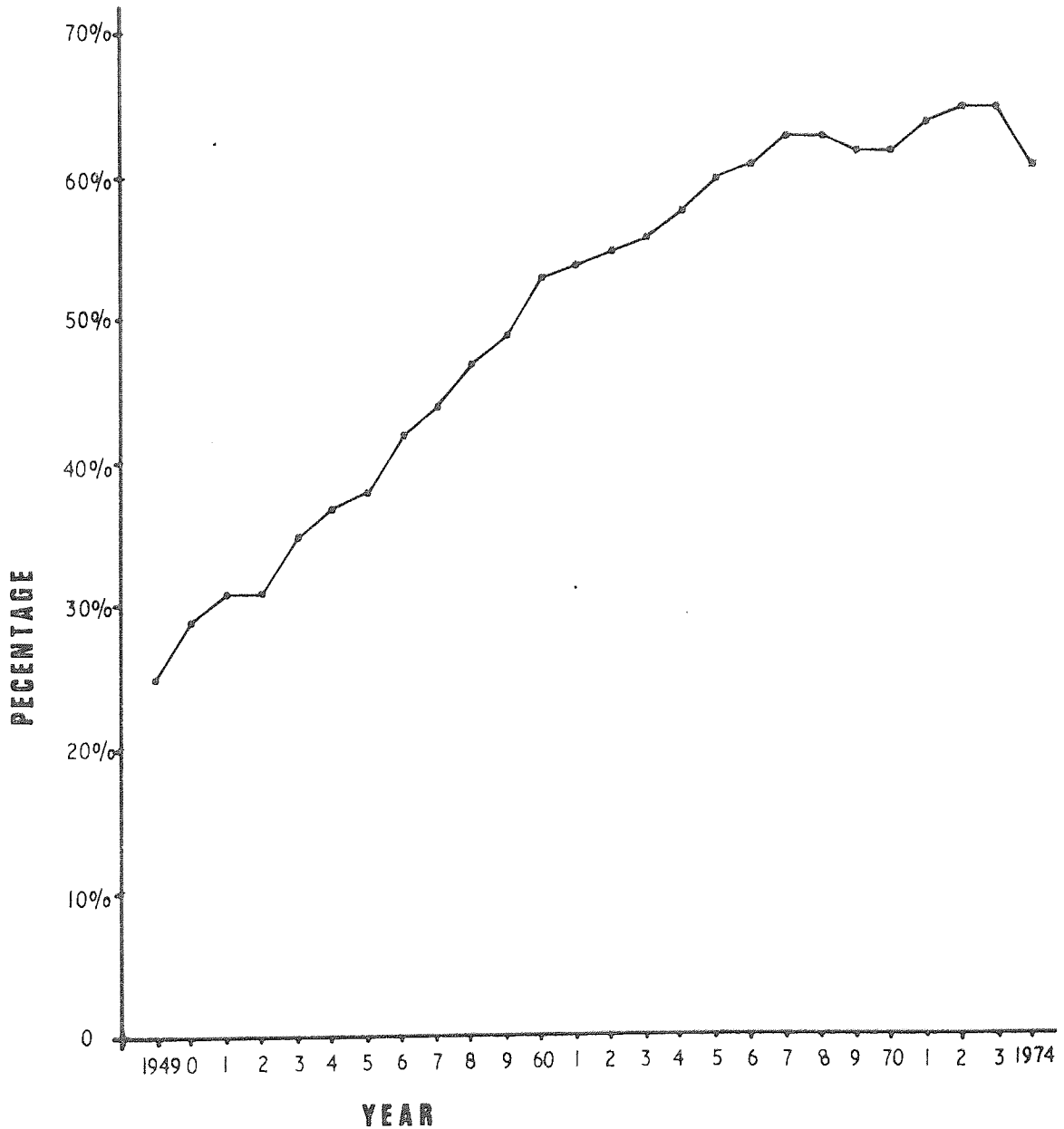
## 6.2 The Relevant Aspects of Incoming Tourism Development

### 6.2.1 The Benefits of Tourism

In their paper on the economic impact of an airport on the surrounding region, de Neufville and Yajima suggest that investment in airport development may be seen as the provision of subsidised transportation. They use classical supply and demand curves to argue that this subsidy lowers the cost of supplying a product or service. Consequently, a new equilibrium point is established at a higher production level, thereby stimulating the economy. (31.7) This is illustrated in Figure 6.2.

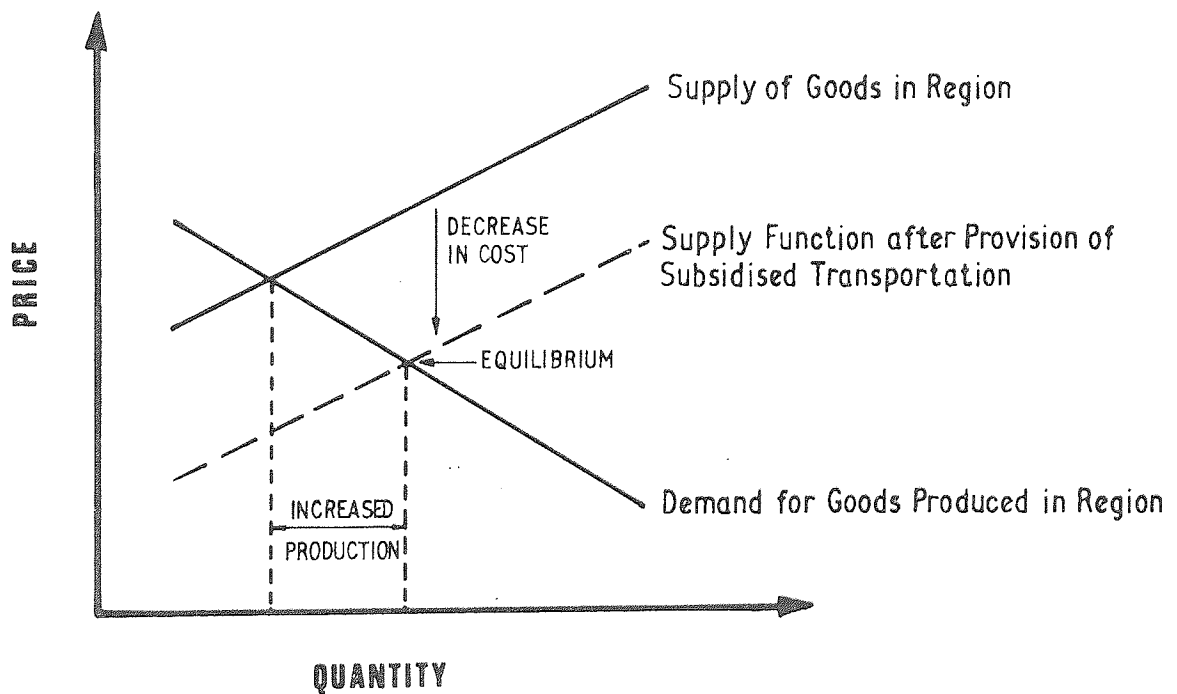
Tourism may be viewed in a similar light. In this case, however, it is not the supply function which is being lowered, but the demand function which is raised. A new equilibrium is again found at an increased production level, as shown in Figure 6.3. This increased production may be seen in three different sectors viz. "commodities" which may only be "consumed" in the region e.g. sunshine, historical buildings etc.; articles for which tourists create an additional demand e.g. clothes, entertainment; and articles manufactured specifically for tourists e.g. souvenirs.

# Percentage of Foreign Visitors Travelling to the U.K. by Air

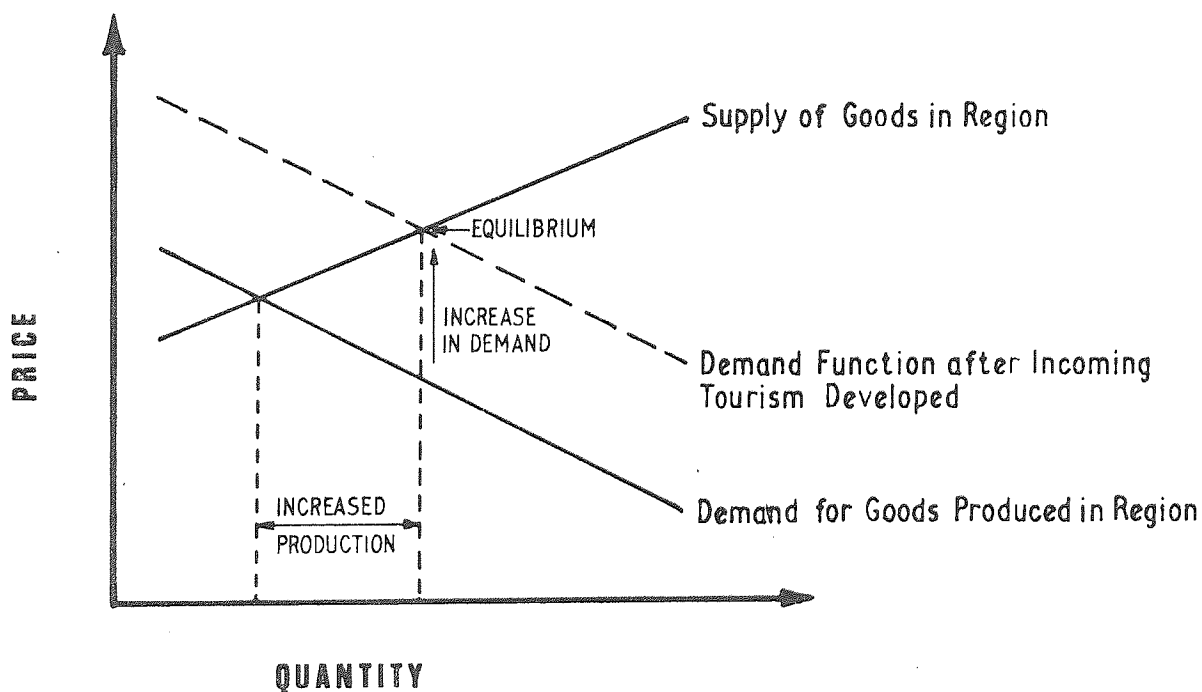


SOURCE:- Table 35 "Digest of Tourist Statistics" - British Tourist Authority

## Stimulation of Economic Activity by Provision of Subsidised Transportation



## Stimulation of Economic Activity by Provision of Subsidized Transportation



The practical realisation of these effects has been experienced widely, the prime example in Europe, being Spain. The role that an airport may play in this has been shown by the Balearic Islands, particularly Majorca.

The main items of expenditure by visitors are accommodation, meals, entertainment, shopping, and internal transport. In 1976, visitors spent on average £13 per day in the U.K.<sup>(61)</sup>. Additionally, this expenditure has multiplier effects. It is estimated by the English Tourist Board\* (E.T.B.) that one job is dependent on each £1,000 spent by foreign visitors.

It may be appreciated that attracting even a small proportion of the tourist market through Birmingham Airport to spend, perhaps, only one extra night in the West Midlands could produce substantial benefits.

#### 6.2.2 The Attractions of the West Midland Region for Tourists

None of the benefits discussed in the last section will be obtained unless tourists can be persuaded to visit the West Midlands. For short-term gains, aggressive marketing and extensive publicity may produce the desired effect. The foundations for longer term growth must, however, be true advantages that the tourist can perceive.

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\* The E.T.B. is responsible for tourism in England, and the various Regional Tourist Boards report to it. The Heart of England Tourist Board is responsible for the promotion, development, and operation of the tourism industry in the West Midlands Tourist Region (corresponding very closely to the West Midlands Economic Planning Region).



Birmingham occupies a central position in the U.K. and, as Figure 6.4 demonstrates, a large area of England and Wales lies within 100 miles. This provides opportunities for developing Birmingham Airport as the starting point for Fly-Drive Holidays.

Birmingham also has the psychological advantage of being the nearest major airport to Stratford-on-Avon, one of the most important tourist attractions in the country. Indeed, 46% of American tourists visiting the U.K. go there, making it second only in popularity to London (with 97%).<sup>(64)</sup> With Oxford and Windsor occupying third and fourth positions in this list, there would be some advantage to tourists in passing through "Shakespeare's Airport" at least once on their holiday. While stays in the Midlands might be lengthened by only one or two nights, there would be some advantage to the lesser known attractions in the area if such package tours were arranged.

The dominance of London as a tourist attraction is likely to continue, as the Department of Trade notes:-

"Incoming leisure passengers ..... are still likely overwhelmingly to prefer to base themselves on London."(20.12)

This does not, however, necessarily mean that they must fly through the London-Area Airports on both arrival and departure, and there is scope for increasing "two-centre holidays".

# The Central Position of Birmingham Airport



When this is considered in relation to the lower cost of living in the Midlands, and the proximity of the West Midlands to London, there must be advantages of starting day-trips to Stratford from Birmingham rather than London. Furthermore, it is the policy of the British Tourist Authority\*(B.T.A.) to encourage tourism away from the congested areas of the South East and London, and to the other regions of the country. (65)

### 6.2.3 The Importance of Air Transport to Tourism

As shown in Section 6.1.3, air transport is the most important means for foreign tourists to reach the U.K.: in 1976, nearly six million foreign visitors came by air. In view of the different characteristics of scheduled and non-scheduled flights, it is important to obtain the division between these two categories of foreign visitors, particularly in the leisure sector. At the present level of treatment no account will be taken of internal (i.e. within the U.K.) movements by air of tourists. Consequently, information is required on foreign, international, leisure passengers.\*\*

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\* The B.T.A. is responsible to the Government for the development and promotion of tourism into this country.

\*\* Survey information published by the C.A.A. only discusses leisure passengers, and no further division between the various categories of leisure passengers, (namely holiday, V.F.R., migration, full-time studies, any other non-business purposes) is given.

No central statistical sources are available which give the number of these passengers on non-scheduled services. Existing survey data do not give the division of these passengers between scheduled and non-scheduled flights, but their presentation does allow estimates to be made.<sup>(24.5)</sup> Table 6.2 summarises the estimates of non-scheduled travel for the 17 largest airports in the U.K. in 1972. To obtain an indication of the possible range of the estimates, five different assumptions were made, and these are now described:-

1. As many foreign, international, leisure passengers as possible travelled on non-scheduled flights. (This leads to the upper limit).
2. As many foreign, international, leisure passengers as possible were accommodated on scheduled services. (This corresponds to the lower limit).
3. All international, business and all domestic passengers travelled on scheduled services, and any remaining seats were filled by foreign leisure passengers. (This gives a more reasonable lower limit).\*

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\* The assumption that all international business and all domestic passengers travelled on scheduled flights, and any remaining seats were filled by U.K. resident leisure passengers, corresponds to Assumption 1.

Table 6.2 Foreign Leisure Passengers at Major U.K. Airports (1972)

Airport	Total passengers (000's)	Foreign international leisure passengers (000's)	U.K. international leisure passengers (000's)	Total non-scheduled passengers (000's)	Foreign international leisure passengers on non-scheduled services (000's)				
					Assumption 1	Assumption 2	Assumption 3	Assumption 4	Assumption 5
HEATHROW	14,277	5,431	2,667	571	0	0	0	383	217
GATWICK	4,989	937	3,286	937	0	0	655	874	740
LUTON	3,083	223	2,741	223	192	223	0	223	221
MANCHESTER	2,273	157	1,234	157	0	0	0	121	74
GLASGOW	1,764	77	317	77	0	0	10	59	13
BELFAST	1,186	21	49	21	0	0	0	18	1
BIRMINGHAM	936	56	533	56	0	0	0	41	26
EDINBURGH	717	25	26	25	0	0	3	14	1
NEWCASTLE	518	6	180	6	0	0	0	4	1
LIVERPOOL	466	25	82	25	0	0	0	16	4
PRESTWICK	430	206	131	198	0	0	67	121	95
EAST MIDLANDS	406	16	194	16	0	0	0	15	8
STANSTED	310	147	99	147	57	121	0	131	104
SOUTHEND	313	99	119	53	0	0	0	24	17
BRISTOL	262	25	166	25	0	0	4	22	16
LEEDS/BRADFORD	258	11	21	10	0	0	0	3	0
CARDIFF	239	10	147	10	0	0	0	9	6
TOTAL	32,427	7,472	11,992	10,623	2,557	249	1,083	2,078	1,544

Source: "Origins and Destinations of Passengers at U.K. Airports" C.A.A.

4. All non-scheduled passengers were in the international, leisure category and were divided in the proportion of U.K. and foreign-resident, international, leisure passengers of each airport.

5. Foreign, international, leisure passengers were divided between scheduled and non-scheduled services in the same ratio as total passenger throughput.

The mean value of these five estimates is 1.5 million foreign, international leisure passengers on non-scheduled services. This corresponds to 0.75 million foreign tourists\* on non-scheduled flights in 1972, or about 20% of all foreign leisure visitors travelling by air. Thus, while scheduled services carried the majority of foreign tourists, the non-scheduled market was still of significant absolute size.

#### 6.2.4 The Level of Foreign Tourist Traffic at Birmingham Airport, and its Implications

In 1975, 85,000 foreign residents used Birmingham Airport to travel to or from the U.K., 52,400 of these being leisure passengers.<sup>(66.1)</sup> The majority of these leisure passengers used scheduled services, 70% being to or from the Irish Republic.\*\*

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\* It is necessary to divide by 2 since "passengers" arrive or depart, while "tourists" arrive and depart.

\*\* Derived from (66.2) and Birmingham Airport Statistics.

Of the Continental scheduled services, information is only available for the Paris flights, which carried a further 8,000 foreign leisure passengers.<sup>(66.2)</sup> The remaining 7,700 passengers were carried on the other international scheduled flights and on non-scheduled flights, carriage on the latter being extremely uncommon.

The position changed slightly in 1976 with the opening of the National Exhibition Centre (N.E.C.) at the beginning of the year. In its first 11 months of operation, there were 19 ad-hoc charter flights carrying 1,400 visitors from European points to Birmingham Airport.\* Traffic on the international scheduled services showed an average 15% increase during weeks when exhibitions were being staged.\*

Thus, the level of activity of foreign international leisure tourists at Birmingham Airport is low. In 1975, the share of the total U.K. traffic on non-scheduled services was something below 0.5%, while the average dependence of flights to Amsterdam, Dusseldorf, Brussels and Frankfurt on foreign leisure passengers was not more than 10%.\*\*

This situation at Birmingham Airport has serious consequences for the West Midlands Region. Although significantly adverse effects on major tourist attractions such as Stratford are unlikely (tourists will probably make a special visit, often on day trips from their base at a London hotel), such practices

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\* Derived from Birmingham Airports Statistics.

\*\* These two figures for non-scheduled and scheduled activities are not additive, since they derive from the same 7,700 passengers mentioned at the beginning of this section. As such, they represent absolute maxima.

do, however, deprive hotels, restaurants, shops, coach and car-hire companies, and entertainment establishments in the region of considerable potential business. Also, there is less opportunity for the tourists to visit places of local "fame".

Evidence is presented in Chapter 12 which supports the hypothesis that provision of a direct international scheduled service stimulates traffic as a whole. In other words, there may be a greater willingness to travel if the trip can be accomplished without changing aircraft or without the involvement of a long surface journey. The limited range of international scheduled services available at Birmingham may impair the number of visits to the N.E.C., although some foreign delegates do travel via London either by rail after overnight stays there, or by making air-connections at Heathrow. This opinion is shared by the N.E.C. management:-

"... it is the shortcomings of air services to Birmingham that is consistently being criticised by European businessmen, many of whom genuinely wish to visit the N.E.C. shows but are not prepared to take 2-3 days over a journey ..." (67)

The absence of scheduled flights to certain destinations may be ameliorated by arrangement of ad-hoc charters and package visits for potential delegates e.g. several of the charter flights mentioned at the beginning of this section were from Scandinavia which has no direct scheduled flights to Birmingham. The scale of this operation is again small, and only 12% of the 11,500 foreign visitors<sup>(67)</sup> in 1976 came by these ad-hoc flights. But, to quote the N.E.C. again:-



"Somehow they (European agents) need to be motivated and encouraged into action on charters"

and

"... incentives for British agents to develop "in-bound" programmes should be developed."(67)

Another problem caused by the lack of scheduled flights (in terms of both destinations served and frequency of flights, particularly at weekends) is the difficulty of attracting continental shoppers to the West Midlands. A small Birmingham company, recently established to exploit this market, regards scheduled services as the best means of entering this sector. Arrangement of whole-plane charters not only entails a considerable financial commitment, but also means that hundreds rather than tens of tourists have to be attracted to Birmingham. It also feels that the smaller, upper-end of the market must be attracted before any large scale trend will be apparent.

A corollary of the underdeveloped air tourist market is that the financial viability of the existing international scheduled services is lower than needs be. Increasing inbound tourism on such flights would enable new services to be introduced at earlier times than would be the case if only the basic demand of the business sector were considered.

#### 6.2.5 Summary

Tourism has many benefits to offer to a region, and the West Midlands has many attractions to provide in return. Although the majority of foreign leisure tourists who travel to the U.K. by air use scheduled services, the non-scheduled market

is of a considerable size. Birmingham Airport handles only a small number of foreign leisure passengers, and its penetration of the non-scheduled market is almost negligible. This has serious implications for the economy of the region and also affects the development of international, scheduled services.

### 6.3 Reasons for low level of activity

#### 6.3.1 Scheduled Services

The analysis of section 6.2.3 shows that the majority of foreign tourists travelling by air to the U.K. used scheduled services. The bulk of these services are from the South East, in particular Heathrow. With only five international destinations linked by scheduled services (excluding the Irish Republic), Birmingham could not be expected to handle large numbers of foreign leisure passengers. These existing services are provided primarily for the needs of the local business communities. Therefore, they are designed to meet the businessman's requirements. Consequently, there is only one international scheduled flight during the whole weekend, and no cheaper excursion fares are available. The tariff structure, including the differential in normal fares between London and Birmingham, was cited by the Heart of England Tourist Board (H.E.T.B.) as the major cause of the failure of its experiment to promote package weekends in Birmingham using the scheduled service from Amsterdam.

#### 6.3.2 Non-scheduled Services

Intuition suggests that non-scheduled airlines are more flexible than their scheduled counterparts in the airports that they use, and this is confirmed by the survey described

in Chapter 10. Since they are provided almost exclusively to service the leisure sector,\* non-scheduled flights are not restricted by the demands of the businessman or of the interline passenger. The only operational factor which may inhibit the development of this sector at Birmingham Airport is the length of runway, which places restrictions on the North American traffic.

General bodies, notably the H.E.T.B., the N.E.C., and local inbound tourist promoters, have interests in expanding this sector of the market. These organisations have several features in common:-

1. They are local bodies;
2. They have a wide range of functions;
3. Their knowledge of aviation is limited, and so too is the number of contacts within the industry; and
4. They have only a partial view of the overall setting of their particular interest.

It is suggested that these are some of the reasons behind Birmingham Airport's low share of the non-scheduled market. An additional factor is now discussed.

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\* Visits to the N.E.C. are exceptions to this, but even with the proximity of Birmingham Airport charter flights have made little penetration of the market.

### 6.3.3 Marketing of Birmingham Airport as an entry-point of the U.K.

The marketing abroad of the U.K. as a tourist area is the responsibility of the B.T.A. The national and regional tourist boards' function is to provide advertising material and to look after the tourist when he arrives. There is no truly local marketing effort, with the B.T.A. trying simply to attract tourists to this country. While it is policy to attempt to direct them to the less developed areas, there is no emphasis given to individual entry-points.

The only mention of Birmingham Airport in the Heart of England literature is in an advertisement for British Airways' scheduled services. British Airways also has a promotional film on the West Midlands area, but it must be remembered that it is a national organisation, and not concerned exclusively with Birmingham Airport. Again, it is only involved in part of the potential tourism development in the region.

### 6.4 A course of action to improve the benefits of Tourism in the West Midlands

The West Midlands has much to offer the incoming tourist, and the potential may be developed profitably through Birmingham Airport. The existing low level of activity in this sector at the Airport indicates that some new impetus is required. The basic reason behind the present failure is the lack of co-ordination, and this section discusses the effects which might be felt if this deficiency were remedied.

Consider, for example, the position of scheduled services. Three separate bodies, the H.E.T.B., the N.E.C., and the local inbound tourist promoters, are trying, or have tried, to increase the number of foreign visitors to the West Midlands using the scheduled services at Birmingham Airport. All these efforts have been made independently and, with little knowledge of the aviation industry and each representing only part of the total traffic, stood little chance of success. There is a need to combine these attempts with those of the Birmingham Chamber of Industry and Commerce, representing the fundamental demands of the business community. It is also important to establish contacts at European points to co-ordinate activities at that end.

In the non-scheduled sector, there is also an opportunity for an active role to be played to the benefit of the local economy. Here, the problem is not so much one of co-ordinating other bodies, as of providing expertise and contacts to individual parties. Aircraft are normally chartered by one firm or tour company with a specific purpose in mind. Thus, a non-scheduled flight to Birmingham is unlikely to carry both weekend shoppers and visitors to the N.E.C. The purpose of any involvement would be to advise interested parties on how to organise non-scheduled flights, either on an ad-hoc or a series basis. Allied to this, there might be a campaign to persuade foreign tour operators to organise holiday flights to the West Midlands, suggesting possibilities such as two-centre holidays and fly-drive schemes. In 1976, two thirds of all foreign tourists arriving by air for holidays in the U.K. were on I.T. packages, (61) so that relatively little effort would cover a large market.

The importance of Birmingham Airport as an entry point to the U.K. might be emphasised by mounting a unified advertising campaign.

#### 6.5 Summary

Tourism is an important foreign currency earner for the U.K., and produces many real benefits. The West Midlands is well placed to attract large numbers of tourists. Air is the most important means of travel to the U.K. by foreign residents, but the number of foreign leisure passengers using Birmingham Airport is small and this has serious consequences for the economy of the region.

The number of international scheduled services available at Birmingham is limited, and there are problems in using them for incoming tourism. Although non-scheduled services are more flexible, this large market is virtually untapped because of difficulties of organising such flights. The absence of any marketing of Birmingham Airport as an important entry point of the U.K. is also a handicap.

To rectify this poor situation, there is a need to co-ordinate the activities of all interested bodies. Additionally, this would not only increase the financial viability of existing scheduled services, but it might also hasten the introduction of new ones. Non-scheduled services might be stimulated by the provision of aviation knowledge and contacts. An advertising campaign might also prove of value.

## CHAPTER 7

### Factors influencing Airlines in their provision of air services

#### 7.1 Introduction

##### 7.1.1 Purpose of Chapter

This chapter discusses the final Stage I topic, namely the interest of airlines in providing air services at certain airports. The need for an investigation of this subject (as described in Chapter 3) stemmed from the large number of complaints being received, and from a feeling that any County Council policy might be ineffectual without air services. Indeed, the previous three chapters have confirmed this latter point as will be further discussed in Chapter 8. An additional and more practical demonstration of the importance of this topic, is given in this introductory section, with an evaluation of the implications on investment decisions in the U.K. of the provision of air services. Previous work on this topic is also reviewed.

Section 7.2 looks at the role that external agencies may play in influencing airlines in their use of airports. In particular, attention is focused on Government Policy and the use of subsidies. The role that an airport operator might play is deliberately not considered at this stage. The criteria which airlines might use in the absence of such external factors are then discussed (Section 7.3). It is convenient not only to divide the discussion between freight and passenger services,

but also to further split the latter category into scheduled and non-scheduled components. Information for this section comes from informal discussions with members of the airline industry, rather than being the result of a structured survey of the type described in Chapter 9. Section 7.4 describes three examples of the interest actually shown by airlines in providing, or not providing, air services at U.K. airports.

#### 7.1.2 Importance of Topic

In the course of their work on the financial positions of British airports, Doganis and Thompson consider the effect that the provision of air services has on airport economics.<sup>(26.1)</sup> They give several examples of airport investment decisions which have been based on assumptions that airline operations will continue. For instance, a runway extension was completed and navigational aids were installed at Liverpool Airport mainly for the benefit of British Eagle who provided the bulk of services. Shortly afterwards, when this airline collapsed, Liverpool was left not only with little traffic but also with large debt charges. The fluctuating fortunes of airlines have caused similar uncertainties in planning airport development at Tees-side and Stansted. This shows that it is not uncommon for airport authorities in the U.K. to make investment decisions having assumed the continued existence of air services. This has led to considerable financial losses in the past.



### 7.1.3 Previous work

Very little research on the rationale of airline decision making in terms of where and how to provide air services, has been published. During the initial investigations for this work, the attitude encountered was very much that reasons for supplying and locating air services were 'obvious' and consequently perhaps not worthy of research. There was also a feeling that this was an airline problem, and this is even apparent in Central Government thinking:

"... if the demand for air travel in a particular area is sufficient, airlines and other air operators can be expected to develop services to cater for it..."

and

"... in a commercial environment it is unlikely that a significant potential demand for air services will remain untapped for long periods".(20.13)

Sealy continues the assumption that air services will automatically increase in line with demand and that it is someone else's responsibility to monitor development, with the statement:

"The development of services from regional airports to our EEC partners is a recent trend that will surely grow in importance".(68)

In general terms, the development of the air transport industry supports these statements (see Figure 2.3). When considering specific cases, however, these opinions are not necessarily valid, as this thesis seeks to demonstrate. Because of the overall correctness of these sentiments, little work has been prepared which is of relevance to this present research.

Indeed, in this country, only the Department of Transport Technology of Loughborough University has even given consideration to the problem. The main purpose of this unit was to investigate the feasibility of new terminal area concepts, and a considerable amount of survey work was performed at Manchester Airport<sup>(69,70,71)</sup>. During the course of this the views of the airlines were sought, and a short questionnaire was sent to a small number of airlines. No results have been published, although the author has seen the un-structured replies of two airlines. It is difficult to draw conclusions from these, and the Loughborough study cannot be considered (and does not pretend to be) a thorough investigation of the topic.

To summarise, the position in this area is similar to that encountered in Chapter 5, where a large body of opinion held that airports attracted industry and commerce despite there being little or no supportive evidence. With this present topic, many bodies assume that air services will be provided to meet demand (and some make investment decisions accordingly), while little work has been performed to verify this in discrete situations (the overall validity is not questioned here). Some of the fundamental principles behind the provision of air services are now discussed.

## 7.2 External Influences

### 7.2.1 Government Policy

The development of the U.K. Airport System has been described in Chapter 2, which included a review of the most recently published Government ideas on the future.<sup>(20)</sup> This consultation

document was intended to consolidate the comments made by various bodies after the Maplin Review<sup>(10)</sup>, and to suggest certain courses of action. It is interesting to note that of the 125 organisations written to by the Department of Trade (D.O.T.) prior to its production, not one was an airline, and of the 52 other bodies who later offered comments there was only one airline - British Airways.<sup>(20.14)</sup>

With the decision not to build a new third London Airport, the D.O.T. suggested several methods of relieving pressure on the South East Airports by encouraging greater use of regional airports. The measures studied were:-

1. A charge on passengers using London Airports;
2. The use of the air transport licencing system;
3. Launching aid for scheduled services from regional airports; and
4. Passenger ceilings at London airports.<sup>(19.1)</sup>

It may be appreciated that the Government, through the British Airports Authority (B.A.A.), the C.A.A., and the D.O.T., may exert an influence over the use of airports by airlines. The magnitude and direction of the airlines' reactions will depend on the measures adopted and the nature of the individual airlines. Repercussions from any action by the British Government to move foreign airlines against their will from Heathrow might

be expected, and British airlines might suffer overseas. (10.2)

Such possibilities therefore dilute the influence that Government Policy may have over airline operations.

### 7.2.2 The Use of Subsidies

In the previous section, it has been stated that the Government has considered the provision of financial support to establish scheduled air services. Another method of providing subsidised air services is to form a national airline. This state 'flag-carrier' may then be obliged to operate services for non-commercial reasons e.g. political, social and economic.

Subsidies may also be provided by other means and by other bodies. For example, reference has already been made to the view that the establishment of non-profitable airport facilities is a form of subsidy. (31.7) In this country, Doganis and Thompson feel that some airlines have been attracted to certain airports because of airport operators' favourable responses to requests for improved facilities. (26.2)

A form of indirect subsidisation practised at Birmingham Airport in the past has been to grant (with the permission of the D.O.T.) 50% reductions in landing fees paid by airlines in the first few years following the introduction of new scheduled services.

Air services in Scotland offer examples of the use of direct subsidies. The C.A.A. has recommended that, in view of the important contribution made by these services to the

social and economic life of the more isolated communities, the air transport system should be supported when necessary from public funds. (72) British Airways (Scottish) has stated in a letter to the author that it, in practice, receives no subsidies: on certain routes, fares have been raised to more realistic and potentially profitable levels, while the lower density routes are operated by Loganair. This latter airline, however, does receive direct grants from various bodies in Scotland to provide air services. The different mechanisms which exist for the payment of this support are compromises between the commercial desires of Loganair to ensure an overall profit, and the wishes of the benefactors to guard against inefficient operation.\*

Airport Authorities may aid airlines in establishing air services by for example conducting market research on their behalf. The possibility of indirect financial support of this type is considered at some length in Chapter 11.

### 7.3 Airline Criteria

#### 7.3.1 Freight Services

Chapter 4 has demonstrated that the provision of pure freighter services at regional airports such as Birmingham is unlikely to occur. The one possibility for development is the pure freighter charter sector of the market. Because of the difficulties of aircraft positioning, the only means

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\* This was discovered during the survey of airlines conducted for Stage II of the project (Chapters 9 and 10). It is not however, appropriate to discuss details of one airline there.

by which this growth could occur on anything more than an ad-hoc basis would be if a U.K. cargo charter airline based itself at Birmingham Airport.

For an existing airline to move to Birmingham, it would have to perceive some commercial advantage in doing so. Since the practice of trucking air freight to airports in the South East is well established, an airline could not expect to gain a significant amount of business by locating near the air freight productive centre of gravity of the U.K. - and even if this was true, it is not known if Birmingham is the nearest airport. Charter freighter operations are in the main centred in the long-haul market. This places a greater emphasis on the availability of a runway of sufficient length to enable the aircraft operated by a company to fulfill their maximum performance potential.

### 7.3.2 Scheduled Passenger Services

Initial, informal discussions with British Airways and British Midland Airways i.e. the 'local' carriers, revealed that scheduled services were only introduced when an airline was confident that the services would become viable within a short time, normally less than two or three years. Often the effect on the airline's other services would be calculated to determine whether the new flight would produce an overall benefit for the airline e.g. before British Airways would start a direct service from Birmingham to Hamburg, the impact on the flights from Birmingham to Heathrow and from Heathrow to Hamburg would be assessed. Having reached this stage in the planning process, an airline then has the problem of locating a suitable aircraft

type at the chosen airport and at a commercially acceptable flight timing. This aircraft must also be integrated efficiently into the airline's route network.

At the present time, scheduled services to international destinations are concentrated on the four regional airports serving the major population areas outside the South East: Birmingham, Manchester and Glasgow (Abbotsinch and Prestwick). These four airports handled 74% of the international scheduled service passengers using regional airports in 1974, compared with their 56% share of total passenger throughput. (20.15)

Passengers to domestic destinations are less inclined to travel great surface distances to utilise services, as the D.O.T. notes:

"Domestic scheduled services are more closely related to local catchment areas ....." (20.16)

Consequently, domestic services are more widely shared between airports and airlines have smaller potential markets for their services.

### 7.3.3 Non-scheduled Passenger Services

Passengers in this sector of the market have different characteristics to those discussed in the previous section. To quote Doganis and Thompson:

"... non-scheduled traffic is less spatially specific (about the airport used) than is scheduled traffic..." (26.2)

This allows non-scheduled airlines greater flexibility in the airports that they may operate from. Operational constraints are aircraft positioning and integration, and runway length, although this latter factor is of less concern in the short-haul Inclusive Tour sector, which forms the majority of non-scheduled traffic at Birmingham Airport.

Managements of non-scheduled airlines stated that in practice the decisions on which airports to operate from are made by the Tour Operators. Care must be taken in determining the airports to be used, particularly to the more popular holiday destinations, in order to remain competitive.\* With the less popular and newly introduced destinations, Thomson and Cosmos, the leading Tour Operators, stated that proximity to large potential markets, particularly London, was an important factor in their decision processes. This implies some concern for the surface distance which passengers have to travel to reach their departure airport. Since 44% of passengers at Luton Airport (one of the main I.T. airports) had origins or destinations outside the South East Region in 1972<sup>(24.1)</sup>, there is possibly a contradiction between theory and practice and it is conceivable that little quantitative work has been done to determine the optimum airport for the introduction of new destinations.

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\*During the Winter 1977/78 season, Thomson Holidays for example, will be flying from 19 different U.K. airports to Majorca.(73)



7.4 Recent Examples of the Interest of Airlines  
in Providing Air Services

7.4.1 British Airways and International Scheduled Services

It is the stated policy of British Airways to develop direct scheduled services from U.K. regional airports to major points in Europe<sup>(74)</sup> Indeed, Birmingham has been specifically mentioned as one of these regional airports, and it is enlightening to trace the history of such sentiments.

As early as December 1971, there were reports that British European Airways were evaluating services between Birmingham and Copenhagen and Milan.<sup>(75)</sup> The following year, Mr. Cyril Herring, Executive Member of the British Airways Board, stated that there were

"tremendous opportunities for more flights into Europe from Birmingham".<sup>(76)</sup>

In September, 1973, Mr. David Nicolson, Chairman of British Airways was:

"sure British Airways would fly from Birmingham to Milan as soon as they could, also possibly Zurich".<sup>(77)</sup>

It was also stated that as part of its five-year plan, British Airways intended to develop at least one new air route each year between Birmingham and European cities.<sup>(78)</sup> In February the following year, it was expected that a Birmingham-Zurich service would be introduced in the summer of 1975<sup>(79)</sup>, and in November, British Airways was holding talks with Swissair and Alitalia over the introduction of new passenger services to Zurich and Milan.<sup>(80)</sup>

Between 1971 and 1977 no new international scheduled services were in fact introduced by British Airways from Birmingham, and none were planned for the Winter 1977/78 season (ending on 31st March 1978). This indicates that airline actions do not always match their initial intentions for some reason, valid or invalid. There is consequently a need to monitor such expansion plans.

#### 7.4.2 Birmingham Airport as a hub for third-level services

At the beginning of the 1970's, the British Air Services Group (BAS) was interested in establishing a network of services between the major cities of Britain.<sup>(81)</sup> These flights were to be operated by small aircraft with no more than perhaps twenty seats, this fulfilling the third level description. The network was to be centred on Birmingham, where passengers were to be able to transfer between flights.

In September 1970, further details were released: the aircraft being considered was the Skyliner, a deluxe version of the Short Skyvan, with 19 seats. The destinations to be served from Birmingham included Newcastle, Liverpool, Edinburgh, Southampton, Cardiff and Bristol, and it was intended to mount "a practical investigation" of the scheme's feasibility.<sup>(82)</sup> Nearly a year later it was announced that BAS were about to apply to the Air Transport Licencing Board for a 'blanket licence' to operate all these routes.<sup>(83)</sup> It was later stated by Mr. Cyril Herring, then Group Director of British Airways Regional Division but formerly Managing Director of BAS, that this scheme had been "temporarily shelved".<sup>(84)</sup>

With the development of, and continual structural alterations to British Airways and the consequent changing positions of the personalities involved, it may be appreciated that such schemes can easily be forgotten. During the airline survey (Chapters 9 and 10), it was discovered that the Skyliner aircraft was unsuitable for the network. It is conceivable that better aircraft are now available.

#### 7.4.3 Services to Amsterdam

The previous two examples have considered the non-provision of services. On a more positive note, the number of services to Amsterdam from U.K. regional airports is considered here and is summarised in Table 7.1. Also included in this table are the populations living within 30 minutes travelling time of some of the airports.

It may be seen that these services are operated by six different airlines (plus the 'fifth-freedom' carriers from Heathrow\*). This has produced a very dispersed pattern with the number of services provided bearing little relationship to either the total passenger throughput of each airport (see Figure 2.2) or the population within 30 minutes travelling time of the airport.

There are four possible explanations of this:

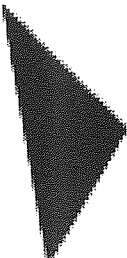
- (1) The services are rationally provided and when considering destinations individually an airport's existing size and catchment area are not sound bases for forecasting traffic;

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\* The air transport industry operates by international agreement in accordance with the 'freedoms of the air'. The fifth-freedom is the right of an airline to carry traffic between two countries, neither of which is its own country. This is discussed in more

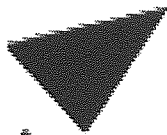
Table 7.1

Scheduled Passenger Services to  
Amsterdam from U.K. Airports



**Aston University**

Illustration removed for copyright restrictions



**Aston University**

Illustration removed for copyright restrictions

Source: ABC World Airways guide (May 1977)  
"Airport Strategy for Great Britain: Part 2" D.O.T.

- (2) Services are over-provided at some airports giving rise to certain financial implications for both the operating airlines and the airport operators making investment decisions;
- (3) Services are under-provided at some airports, e.g. Birmingham, and consequently inferior communications are offered to local passengers; and
- (4) A combination of the above possible reasons.

Existing work gives no indication as to which of the alternative explanations is most likely. This example also shows that either air services are illogically provided or that the criteria described in section 7.3.2 are more complex than this initial, superficial investigation has revealed.

## 7.5 Summary and Conclusions

The interest of airlines in providing air services is of relevance to the W.M.C.C.'s policy of using Birmingham Airport to aid the local economy. The topic also has important implications for decisions on investments in airport expansion, as illustrated by events in this country. Airport operators have invested considerable sums of money in development without any guarantee of services being provided. Had they concerned themselves with some of the factors influencing airlines, such as the feasibility of various operations and the airline's financial viability, then these decisions could have been made with more confidence. The number of U.K. airlines which have gone into liquidation indicates that an airport authority should not take for granted an airline's ability to manage its own affairs.

Very little research has been performed in this area and the prevailing attitude in the industry is very much that the influencing factors are relatively straightforward and are the airlines' concern. Indeed, the most recent Government suggestions on a national airports plan, including regional diversion, have been made with virtually no reference to airline opinions. This is in spite of the statement in the Maplin Review that

"... the airlines\* were anxious about ... the increased overheads they would have to bear if they had to disperse a significant proportion of their operations to a number of separate airports outside the London area ....."(10.2)

While the provision of direct subsidies can immediately lead to an increase in the number of scheduled services, the extent of the influence of the other external factors, namely indirect subsidies and Government policy, is uncertain.

Although initial investigations showed that the stated criteria on which airlines based their decisions appeared to be logical, they also revealed that there were complicating factors e.g. aircraft integration. Nevertheless, these are problems to be overcome and are not basic, policy considerations. In practice, however, there appear to be some illogicalities in the actual provision of services e.g. flights to Amsterdam, and matters are clearly not so straightforward. In particular, the statements made do not always match the actions taken.

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\*These include U.K. airline operators and representatives of foreign airlines through I.A.T.A..

The work described in this chapter has shown the importance of this present topic to airport development, on investment grounds alone. It has also revealed that there is a considerable gap in the documented knowledge on this subject. It is normally assumed that airlines can be relied upon to supply air services in response to market demand. Evidence has been presented, however, to show that, although the stated criteria are sensible, there is some room for anxiety about the provision of services.

The central position of this subject in the whole question of the effect of an airport on the local economy is discussed in Chapter 8, where it is selected as the area to be studied in more depth in the second part of this thesis.

## CHAPTER 8

### The Validity of the W.M.C.C.'s Airport Policy

#### 8.1 Purpose of Chapter

The previous four chapters have described studies conducted on individual topics with the aim of clarifying some of the fundamental issues relating to the effect of a regional airport on the economy of its surroundings. Certain conclusions were reached at the end of each chapter, and these findings are now drawn together in an overall assessment of the W.M.C.C.'s policy on Birmingham Airport (Section 8.2).

Stage I of the project was also designed to identify the critical factor influencing the implementation of any valid policy. The selection of this factor, which is to be studied in more detail in Stage II, is discussed in Section 8.3.

#### 8.2 Assessment of Policy

To reiterate, the W.M.C.C.'s attitude towards Birmingham Airport was based on a belief that it stimulated the local economy and made the region more attractive for commercial and industrial development. The purpose of the first part of the research was to put these feelings on a firmer footing.

One of the first results of the work, described in Chapter 4, quelled fears that the low level of air freight picked up or set down at Birmingham Airport might be having a suppressive effect on local industry. While this situation was not good



for the Airport's finances and diverted much freight onto already busy roads, it was not adversely influencing the regional economy. The practice of trucking freight to London had developed into a highly efficient system able to carry at least 20 times as much cargo as was flown through Birmingham Airport.

The validity of the suggestions that an airport acts as a growth point for commerce and manufacturing industry was diminished, if not dismissed, in Chapter 5. This work suggested that very few firms, if any, would be attracted to the region simply because of the airport. This facility only becomes of importance to firms when comparisons with other regions are being made. The need to be competitive with other areas is equally appropriate when the retention of companies already in the region is being considered. Thus, the possession of an airport with scheduled air links is largely for negative reasons, and it is not a positive stimulant for economic growth.

The position is, however, different with incoming tourism as shown in Chapter 6. Considerable and tangible benefits can accrue from tourism, and the full force may only be felt by the correct development and use of the Airport. In this case, the Airport, or more accurately, air services, can stimulate the economy.

Thus, the W.M.C.C. policy of using Birmingham Airport to stimulate the local economy is valid, although perhaps not in the manner envisaged. While the Airport may be an aid to companies already in the region, new ones are unlikely to be attracted. Incoming tourism is the sector with best potential for growth and hence the source of beneficial effects.

However, it was demonstrated in Stage I that this policy was dependent not on airport facilities, but on the provision of air services, as is discussed in the next section.

### 8.3 The Importance of Air Services

Chapter 4 demonstrated that air freight is unlikely to become of significant importance to Birmingham Airport. Any attempt to develop it, however, would require the support of a charter airline, and its willingness to base some or all of its aircraft at Birmingham. Progress by the Local Authority in this field would consequently be eased by attention to the locational factors influencing airlines.

The distinction was drawn in Chapter 5 between airport facilities and the existence of scheduled air services at that airport. It is the latter which are of prime concern to the local business community. Thus, in order to retain existing companies in the region and to be competitive with other regions for the attraction of new ones, an airport must have good scheduled air services. It is argued throughout this thesis that Birmingham does not have good scheduled connections, particularly to international points.

It was shown in Chapter 6 that the Midlands was missing significant opportunities to benefit from incoming tourism, because of the low numbers of foreign visitors passing through Birmingham Airport. This stemmed from the inadequacies of the air services, and was also affecting the success of the National Exhibition Centre.

The need to investigate airline opinions and decision criteria more fully became apparent in the preliminary discussion of Chapter 7. This showed the subject's importance to airport operators on investment grounds alone. The absence of any detailed research in this area, coupled with some unexplained behaviour on the part of the airlines, emphasised this requirement.

Thus, the first four chapters of Stage I have shown clearly that further investigation of the factors influencing airlines in their use of airports should be made in Stage II of the research project. This topic is the critical factor affecting airport development, not only for investment reasons but also, and perhaps more importantly, for using the airport to aid the local economy.

Besides providing information on the problem area most affecting Airport policy, Stage II of the project is intended to determine the role which should be fulfilled in order to achieve any desired objective. Stage I has in part already indicated the nature of this role: scheduled air services are more important than non-scheduled flights, since the latter

have only a limited beneficial effect on the local economy (specifically in the Hotel Industry (Section 5.2.2)) if they are carrying British residents on outbound inclusive tours\*. Even with incoming tourism, scheduled flights are about four times more important nationally than non-scheduled ones. It was during the discussion of inbound tourism (Section 6.4) that a possible role as a co-ordinator, which the W.M.C.C. could adopt, became apparent.

#### 8.4 Summary

This chapter has concluded that the W.M.C.C.'s policy of using Birmingham Airport to aid the local economy is valid, but not in the ways imagined: it will not act as a strong magnet attracting commercial and industrial relocation, but it may be profitably used to develop incoming tourism. An airport's importance derives from its function of enabling air services to be provided, and is not an inherent characteristic. This has been demonstrated by the first three Stage I studies: air freight cannot possibly be developed without the co-operation of airlines (even with this, it would be difficult); an airport is unattractive to commerce and industry without good scheduled air services; promotion of tourism requires the provision of air services. Thus, there can be no development in any of the fields without the attraction of airline interest in any given airport.

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\* The decision of the W.M.C.C. not to allow substantial expansion of the I.T. market at Birmingham Airport, was a reflection of its judgement that the environmental costs outweighed the economic benefit of any growth in this sector (see Appendix A). It was beyond the scope of this project to make such an evaluation, which was the responsibility of the politicians.

The first part of this thesis has begun to indicate that the role of Birmingham Airport might be to concentrate on scheduled services and incoming non-scheduled ones, while the W.M.C.C. might adopt a role of co-ordinator. Stage II investigates this potential role more thoroughly by examining in more detail the interest of airlines in providing air services.

## Stage II

The previous five chapters forming Stage I of the thesis have investigated and assessed topics felt to have a bearing on the effect of an airport on its local economy. The aim of these studies was to test the validity of the W.M.C.C.'s policy of using its Airport in support of the economy, and to isolate the critical factor influencing airport development. That factor identified in Chapter 8 is studied in more detail in this second part of the work, which is also intended to define a role for the Airport and the W.M.C.C., now that the policy has been shown to be valid.

In the following four chapters, evidence is collected and interpreted on the factors interesting airlines in their use of airports. This area has been identified in Stage I as being the topic of central importance. In carrying out this work, two different approaches are used. The first is an analytical investigation, based on a survey described in Chapter 9. The general results of the survey are presented in Chapter 10, but specific findings on individual airlines are also utilised later, in Stage III. Conclusions on the survey and the possible implications are discussed in Chapter 11. The second research method used is that of the case-study. This involved an investigation of the West German airport and air services system, and is described in Chapter 12, where comparisons are also made with the U.K. system.

A Survey of Airline Decision Criteria

9.1 Introduction

Having decided to analyse more deeply the factors influencing airlines, it was necessary to determine the best means of accomplishing this.

Comments from senior airline executives frequently appear in the trade journals, such as "Flight International", "Travel Trade News", "Airport", and provide useful background knowledge and an indication of current thinking within the Industry. Such statements are not, however, systematically taken in terms of time, position of official, and airlines reported, and therefore, form no coherent pattern. To obtain the required information, it was decided to conduct a survey of the airlines, and this chapter describes the manner in which that survey was conducted.

The purposes of the survey are stated in Section 9.2, while its organisation is described in Section 9.3. The design of a questionnaire used and the reasons for inclusion of the various questions are the subjects of Section 9.4.

9.2 Purpose of Survey

Besides collecting information on the behaviour of airlines as a group in order to explore the Stage I work more fully, it was believed that the survey offered an excellent opportunity to obtain data on airlines as single entities. Such investigation

would be of more practical value in Stage III of the project than the establishment of the characteristics of the "average" airline. A dossier on each of the airlines interviewed would be of use if the W.M.C.C. wished to approach a specific company with detailed suggestions for the establishment of an air service. This market research aspect had a large bearing on the contents of the questionnaire, as may be seen in Section 9.4.

### 9.3 Organisation of Survey

#### 9.3.1 Its Scope

Freight airlines were excluded from the survey. It was felt that the factors controlling air freight were so weighted against its development at Birmingham Airport that study of these airlines would not produce great rewards. A further justification for this decision was that the shipment of freight by air direct from Birmingham was not essential to the Midlands' economy.

Despite the findings of the first part of this thesis that scheduled services were of most importance to the economy, non-scheduled airlines were also included in the survey. This was done to obtain information for the development of foreign tourism into the Midlands, and to guard against the possibility of these airlines changing character and becoming scheduled carriers. Also, at the time of the survey (the first half of 1976), the W.M.C.C. had not made its decision to limit the growth of I.T. traffic (see Appendix A). Additionally, a survey of non-scheduled airlines would help to cover the gap in existing knowledge.



### 9.3.2 Mechanism of Survey

Rather than contact airlines and invite unstructured comments on their reasons for use of certain airports and their decision criteria as a whole, it was thought better to design a questionnaire, as described in Section 9.4. This would give a much greater uniformity in the type of information collected, and would facilitate comparisons. The drawback of this method was that a certain amount of inflexibility was introduced into the survey. When formulating the questions, attempts were made to minimise this. Standard works on questionnaire design, and indeed survey techniques as a whole, were consulted e.g. Oppenheim.<sup>(85)</sup>

The initial investigation of "the interest of airlines" topic described in Chapter 7 suggested that there were differences in characteristics between scheduled and non-scheduled services. It was convenient to continue to segregate these and, indeed, to make a further division: this was between U.K. and foreign airlines. It was felt at the time that the nationality of an airline might lead to variation in the problems encountered e.g. aircraft positioning in this country might be a smaller problem for foreign airlines than U.K. airlines, while for the former, consideration of handling agents might be more important. Consequently, four types of airlines were studied:-

- U.K. Scheduled;
- U.K. Non-scheduled;
- Foreign, Scheduled; and
- Foreign, Non-scheduled.

This division also determined the manner in which the survey was conducted. There was a need to discover airline policy and attitudes on certain subjects, so that much of the data requested was of a non-factual nature. Therefore, in order to obtain valid results, it was necessary to seek the opinions of executives at the most senior level possible. The best means of accomplishing this was in a personal interview. For U.K. airlines it would be possible to visit the company headquarters, and indeed for foreign, scheduled airlines it was felt that sufficiently senior personnel (at least initially) would be available at the airlines' U.K. head offices. Foreign, non-scheduled airlines, however, presented some problems. While some had U.K. agents, this was by no means common. In the absence of finance to permit international travel, these airlines were surveyed by postal questionnaire. Thus, personal interviews were requested with three types of airlines, and the remaining type surveyed by post.

### 9.3.3 Identity of Researcher

The question of identity of the Researcher had then to be faced, since he was not only a post-graduate student but also an employee of the W.M.C.C.. While both of these facts had to be acknowledged, it was felt that the initial reaction of the prospective interviewee would be conditioned by the letter-head used for the first approach. The guise of a student might not always result in meetings with senior personnel\*, while an official approach on behalf of an airport owner could

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\*Attempts to arrange a short, pilot survey had come across this difficulty.

induce some bias into the answers later given. Nevertheless, it was decided to adopt this latter method. The response to the survey (Chapter 10) indicates that this approach successfully produced the desired effect. The problem of bias was very limited, but it is discussed in the next chapter.

#### 9.3.4 Selection of Survey Sample

The airlines to be surveyed were selected from the World Airline Directory published annually by Flight International<sup>(86)</sup>. This contains details such as the history of the airline, its present nature (e.g. scheduled or non-scheduled, passenger or freight), its sphere of operations (sometimes including a short description of its route network), the size of its aircraft fleet, and the names of its top officials.

A list of the airlines to be surveyed was drawn up from this directory. The basic criterion for inclusion in this list was whether an airline could conceivably operate passenger flights to and from U.K. regional airports, such as Birmingham. Consequently, all U.K. airlines were recorded. With foreign scheduled airlines, attention was focused on those in the short-haul, European sector. Long-haul scheduled airlines were only considered if their countries had strong ethnic ties with the Midlands e.g. Air India, British West Indian Airways, or if the airline had a substantial non-scheduled activity e.g. Pan American. Other long-haul carriers, such as Singapore Airlines, with a low frequency operation into

the U.K. were not listed. Foreign non-scheduled airlines were selected on a similar basis with the result that most were either European or trans-Atlantic carriers. (Although it was a policy not to consider scheduled long-haul operations from Birmingham, (15.2) interest in the non-scheduled sector was prompted by the findings on incoming tourism, described in Chapter 6).

This procedure produced a total of 89 airlines suitable for survey. Since the numbers in two of the four categories were small, it was decided to test the entire sample, rather than take a representative proportion.

#### 9.3.5 Pilot Survey

A pilot survey was organised with four airlines, and the questionnaire tested. The interview technique described below was found to be effective and the questionnaire stimulated valuable comments. With the help of time-tables, all the required information was elicited, indicating the adequacy of the method. This trial did, however, show that parts of the questionnaire were ambitious and this led to exclusion of some questions in later interviews e.g. Q.35. Since only slight amendments to the questionnaire were needed, the data collected were valid and the four airlines were not re-surveyed.

#### 9.3.6 Interview Technique

During the personal interviews, the main purpose of the questionnaire was to act as a check-list of questions designed

to stimulate conversation. As much background information on the company as possible was assembled prior to the interview from the literature. Questions not felt to be relevant to the particular airline being interviewed (because of earlier responses), were omitted. This was particularly common with U.K. airlines since such small numbers were involved and since there was a considerable variation in character.

A different problem was encountered when interviewing the U.K. managers of the foreign scheduled airlines\*. These individuals were frequently foreign nationals and in some cases their command of the English language was less than fluent. While answers were invariably provided, checks had often to be made to ensure that the question had been properly understood.

The average length of an interview was an hour to an hour-and-a-half. Occasionally, time limits were imposed by the interviewee, and in these cases the more important questions were posed first.

#### 9.4 Design of Questionnaire

Since the characteristics of an airline were felt to depend to some extent on its category (i.e. scheduled or non-scheduled, U.K. or foreign), it was necessary to construct four different questionnaires. It was possible, however, to achieve a high degree of commonality of questions. The version designed for U.K. scheduled airlines is attached as Appendix C.

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\*The U.K. managers of these airlines (based in London) were interviewed rather than the local district managers. The survey demonstrated quite clearly the wisdom of this decision (Section 11.2.5).

There was a need to determine some basic facts about the airline against which the rest of the responses could be judged, e.g. Question 1 on the history of the airline enabled the selection of the airline's base (Q.8) to be seen in context. The subjects of the first few questions were moulded by this consideration.

In view of the direct effect on the local economy of the establishment of an airline's base, the next questions were on this topic. It was also suspected (and probed further in Q.14) that air services were easier to provide from the base airport, so reinforcing this importance.

Investigation of the factors affecting provision of services away from the airline's base was then made. At this point the market research features of the survey began to emerge e.g. Q.13 looked at the airline's policy on night-stopping (i.e. the airports where aircraft and crews spend the night when not flying), which would be important information when devising proposals to put to an airline.

Questions were then posed to discover if there were plans to alter the nature of the company's operations and whether this might affect the airports used.

The questions which followed (Q.19 to Q.28) concentrated on the market research techniques used by the airlines themselves when considering expansion of flights on existing routes and

provision of new air services. Various aspects of the decision making processes involved in the introduction of new routes were studied in the next six questions. For example, Q.33 tried to identify (in an indirect way) whether an airline attempted to fit a possible new service into its existing route network, or determined the optimum network incorporating the new service.

The satisfaction of airlines with the facilities at and around their base airport was investigated in the next questions. The aim of this was to discover the importance of various facilities and to set standards for the possible new terminal complex at Birmingham.

The remaining questions considered communications between airlines and airport authorities. It was intended that they should reveal any gaps which could be hindering the development of air services.

## 9.5 Summary

This chapter has described the rationale behind, and the mechanisms of, a survey conducted on airlines.

The survey organised was intended not only to investigate some of the points revealed in Chapter 7 on the behaviour of airlines as a group, but was also regarded as an important market research exercise. Information gathered on specific airlines would be of value in Stage III of the project and later marketing ventures by the W.M.C.C..

It was convenient to divide the passenger airlines between four categories, according to whether they were scheduled or non-scheduled, U.K. or foreign. Personal interviews were possible with three categories, while the remaining one was surveyed by means of a postal questionnaire. The questions included in the questionnaire have been discussed.



## CHAPTER 10

### Results of the Survey

#### 10.1 Introduction

##### 10.1.1 Scope of the Chapter

The purpose of this chapter is to present the results of the survey conducted to discover the factors influencing airlines in their provision of air services. Definition of the characteristics of the different airline categories is confined to a qualitative discussion. Application of statistical techniques is not felt to be valid, in view of the small number (in absolute terms) of airlines interviewed. This is also consistent with the philosophy of the project: for example, there is little practical value in determining the relative degrees of importance (by means of regression analysis) which the "average" airline attaches to various factors when selecting its base. Of more value to the W.M.C.C. when negotiating with an airline would be an appreciation of the general principles involved and the specific issues affecting that airline.

Besides presenting a discussion of the characteristics of the different airline categories in Section 10.2, this chapter also assesses the response to the survey (Section 10.1.2), and considers the quality of the data (Section 10.1.3).

The conclusions to be drawn from the survey are presented in the following chapter.

### 10.1.2 Response to the survey

The overall response to the survey was good. Table 10.1 contains details of the number of airlines approached and the response by category.

It may be seen that the response rate for airlines asked for personal interviews (i.e. the first three categories) was over 80%. Generally, the interviewees were most co-operative and gave of their time liberally.

The response from foreign non-scheduled airlines, surveyed by postal questionnaire, was lower, at 17%. By the normal standards of postal questionnaires, this is acceptable. It must also be remembered that the questionnaire was long (27 questions) and was in English - often a foreign language for the recipient.

Table 10.1 also notes the number of airlines declining (rather than ignoring) the request for co-operation. This was normally due to a lack of interest in Birmingham so that at least this information was obtained. Other airlines initially declined the survey but reversed their decision when it was explained that their non-interest in Birmingham was of as much importance to the interviewer as an intention to introduce air services immediately. These airlines have been recorded in the "interviewed" column.

The survey had an overall response rate of 53%.

Table 10.1

Response to Survey

Airline Category	Number of Airlines					Response Rate
	Approached	Interviewed	Completing postal questionnaire	Declining Survey		
U.K.Scheduled	13	10	1	1		85%
U.K.Non-Scheduled	5	4	1	0		100%
Foreign Scheduled	30	24	0	4		80%
Foreign Non-Scheduled	41	-	7	2		17%
Total	89	38	9	7		53%

### 10.1.3 Quality of Data

Very little information requested from the airlines could be given in a hard, statistical form. Most information involved comments and attitudes and could not be quantified absolutely. This has a considerable impact on this presentation of the results.

During the construction of the questionnaire, much emphasis was placed on the maximum elimination of subjectivity from the answers as was possible e.g. when investigating the market research techniques employed by the airline, the interviewee's attention was focused on a specific example. The effectiveness of this technique was not the same for all topics. For example, with base location criteria, the interviewee had frequently joined the airline sometime after the decisions had been made. Several times, the Author was left with the impression that the answers were given to fit the status quo e.g. non-scheduled airlines based at Gatwick felt that ease of landside access was more important than those based at Luton.\*

Despite these weaknesses, it is felt that, the answers were honestly and sincerely given. As discussed in Chapter 11, the inconsistencies probably reflect the state of the art of airline management.

Similarly, it is felt that the existence of bias was very limited and normally identifiable. Many of the airlines seen had no interest in using Birmingham Airport and openly stated this. Three foreign scheduled airlines referred the

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\*Gatwick has a main line railway station and a direct connection to the M23 motorway, while access to Luton Airport is on a two-way road system through a trading estate.

Author to their Birmingham Sales Managers, and a slight bias was detected here. This subject is discussed further in Chapter 11. Only when considering financial matters is it difficult to assess the degree of bias attached to the answer. For example, when selecting a base, there can be little doubt that the rental charge of accommodation is an important consideration, but just how important in relation to, say, good passenger facilities, is difficult for the external observer to judge.

## 10.2 Presentation of Findings

### 10.2.1 U.K. Scheduled Airlines

Although only 11 airlines in this group were questioned, they present a considerable variation in size and type of operation e.g. from Loganair to British Airways.\* Their policies and management techniques also show large differences. One common feature, however, is that it is normally possible to associate each one with a particular U.K. airport. The interest in this section is in their behaviour in relation to this base airport, rather than their attitude towards Birmingham Airport. This latter feature only becomes of importance if an airline wishes to establish a link to Birmingham.

Very few of the airlines made a positive decision when establishing their present base. Several of the airlines developed from small air taxi firms, and thus, had a local identity. Their base was therefore located at the nearest major airport. Others had been operating through an airport before a structural reorganisation enabled a base\*\* to be recognised there. Four

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\*British Airways as a whole was not interviewed. Separate parts of it were identified as being of relevance to the survey, and thus were treated as individual airlines.

\*\*The term "base" is used in the sense of aircraft being located there, maintenance being performed there, aircrew living in the area, and planning, administrative, and managerial staff also being in the vicinity.

of the airlines had, however, had to make a choice between two airports. Having ensured that both met the required safety standards, the criteria adopted by the airlines was the size of the potential catchment area for their services. Also considered to be important were attractive rentals and an ability to obtain licences to operate air services without too much difficulty.

The airlines' services tended to be centred on their base airports. Services at other airports were either from the base, or formed part of domestic bus-stop services. Some airlines were also prepared to develop secondary bases with one or two aircraft, some aircrew and minor maintenance facilities, in order to provide air services at these airports. Empty, positioning flights to base for more extensive engineering work were kept to a minimum by attempting to 'rotate' the aircraft between primary and secondary bases via some commonly served third point. Positioning flights at a frequency of more than once or twice weekly were very rare.

As regards handling at airports other than their base, airline policy was largely determined by size: small airlines normally adopted the cheapest method, while the larger ones would establish some staff, in order to present and preserve their image.

Two airlines were planning to begin some operations in the Inclusive Tour sector, while others saw extension of scheduled services to Europe as their main expansion area. However, none were expecting to alter their character dramatically.

The market research techniques employed by the airlines were wide ranging, particularly when investigating the introduction of new services. Some airlines were able to utilise their computer booking facilities to produce estimates of the potential traffic between two areas. Others derived forecasts from published statistics and annual reports, besides making comparisons with other routes. The opinions of sales representatives were sometimes tested, and a few airlines organised field surveys of major companies. At the other end of the spectrum, more than one airline based its decisions on the instinctive feeling of senior personnel that there ought to be sufficient traffic between two points to justify a service. Decisions to expand or take-over existing services were based on actual traffic figures which were usually available.

External agencies were contracted by some of the airlines to perform these studies. Even when the exercises were performed "in-house", the number of staff employed was small.

A few airlines took the forecasting beyond the prediction of passenger traffic. They looked at the possible air freight that might be carried, and considered secondary effects such as fare differentials and the type of equipment to be used (i.e. jet or turbo-prop). The impact of a new service on existing routes was also studied by certain airlines and had a considerable influence on whether the new route was actually introduced.

In general, airlines allowed three years for a new service to become completely profitable. After its first year, the

route had to be meeting its operating costs, while after two years, overheads had to be covered.

Few airlines had the facilities to keep all possible routes in their sphere of operations under constant review. Most were content to conduct investigations when an individual route was suggested by the sales department, area managers or other bodies such as Chambers of Commerce. Only three airlines conducted a regular review (biannually) of possible services between selected airports.

Most airlines reviewed their route structure twice a year in concurrence with the I.A.T.A. seasons. The networks normally underwent only small changes from season to season. Established routes, with a certain historical priority attached, tended to retain similar timings. One airline's policy was so extreme that new routes were only considered if, having allocated resources to the established flight programme, spare capacity was found to be available at an airport.

In general, the airlines felt that there was an acceptable level of communication between themselves and airport authorities. Contact, however, tended to be informal and irregular, with central management relying on several sources, including sales representatives, for information.

#### 10.2.2 U.K. non-scheduled airlines

This category of U.K. non-scheduled airlines, was the smallest surveyed, and only five companies were contacted.



They did, however, form a much more coherent pattern than their scheduled counterparts just discussed. All had been formed within the last 15 years and operated jet aircraft almost exclusively. Nearly all flights were to international destinations, with I.T. work to the Mediterranean comprising the bulk of the operations.

The bases of all the airlines were in the London area, because of the potential market for the services. When deciding between the airports in the area, the airlines' first criteria was the adequacy of the airside facilities, particularly the safety features and the runway length. The next considerations were purely financial and related to favourable rentals and the provision by the airport authority of extra accommodation, such as hangars.

All airlines stated that it was the decision of Tour Operators which determined the airports operated from, provided that facilities were capable of handling the aircraft. Extra costs involved in operating away from base airport were passed on to the Tour Operator. One airline gave prospective charterers two price quotations: one for the requested airport and one for its base. It was also stated that the former price was sometimes artificially inflated to encourage operation through the airline's base.\*

To accommodate operations away from base, two airlines established several secondary bases throughout the U.K. These tended to be at the larger airports in order that maximum utilisation of the aircraft was potentially possible. When

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\*This policy was intended to minimise problems when aircraft developed faults

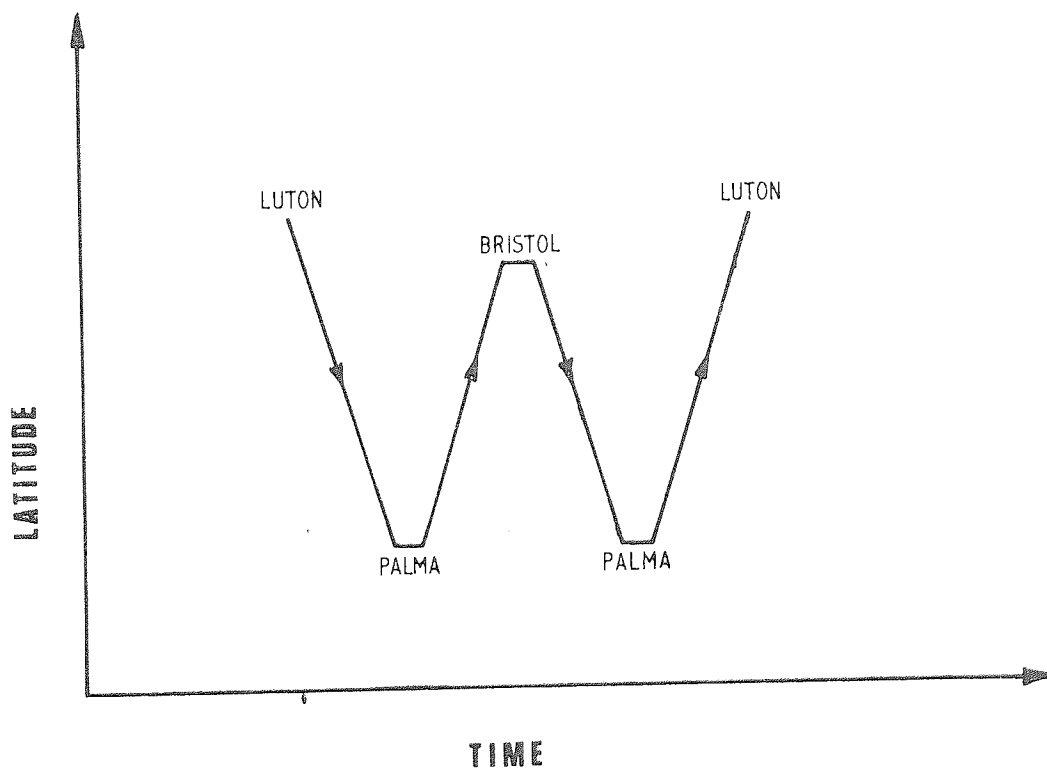
serving the smaller U.K. airports, whose catchment areas could not sustain large I.T. programmes, most airlines adopted a "W-flying pattern". (In this type of operation, an aircraft flies from its U.K. base to the other U.K. airport via a third, Continental point. It then returns to its U.K. base via the same Continental point. In this manner, flights are operated from the second U.K. point without the need for empty positioning flights. Figure 10.1 is a schematic example of this pattern\*\*). Some difficulties were created by this type of operation, and one airline would not even consider it unless the same Tour Operator was involved throughout the entire pattern. The same airline also did not favour empty positioning flights direct from its base to other U.K. airports, unless the aircraft could be used for several I.T. series. This would then mean that the cost of each positioning flight (of the order of £1,000) could be divided between several holiday programmes.

In view of the investigations of Chapter 6, these non-scheduled airlines were also questioned on the number of foreign residents brought into this country. Four airlines carried foreign tourists via their base airport only, and for only two was it a significant part of their business (but still in the minority). Three airlines regarded it as a convenient way of utilising spare capacity. No detailed statistics on the number of foreign passengers carried were available from any of the airlines.

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\*\*This pattern was also sometimes used to position an aircraft at another U.K. airport for several flights.

# "W - Patterns" a Schematic Example



- LUTON - Airline Base
- BRISTOL - Other U.K. Airport
- PALMA - Continental Point

Other common features of the airlines were that they used the cheapest available means for ground handling, and that they felt a need for better and more formal communications between airports and airlines. None of the five airlines were planning to enter the scheduled sector of the market.

### 10.2.3 Foreign scheduled airlines

The 24 airlines interviewed in this group again constituted a systematic pattern, as did the previous category. With only one exception, they were the national "flag" carrier of their home country, and had operations into London Heathrow Airport. A few also had flights into some of the U.K. regional airports, principally Manchester and Glasgow.

There was a considerable lack of basic statistics on the airlines' markets. For example, only a few airlines had conducted surveys to determine whether their passengers were travelling for business or leisure purposes, although most were willing to make estimates. Inquiries were also made as to the origins of the passengers within the U.K. Only one airline was able to give the information by economic planning regions as requested. Others gave estimates based on the sales of their offices throughout the U.K.\*. The remaining airlines were prepared to make "guesstimates" which involved a large proportion of passengers, normally over 80%, coming from London and the South East Region. Few airlines had any detailed information on the number of transfer passengers\*\* at Heathrow Airport,

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\*These are concentrated in London, Manchester, Glasgow and Birmingham, and there are only 10 foreign airline offices outside these cities(87).

\*\*A transfer passenger is one whose only purpose in being at a particular airport is to change aircraft there. This topic is discussed in more detail in Chapter 12.

although many considered it sufficiently important to warrant the full-time attention of one member of staff.

The first criterion adopted by all the airlines when deciding at which U.K. airports to operate, was the potential market available for their services. (They assumed that all candidates for flights had airside facilities that were technically adequate and met international safety standards). This prime consideration dictated that London was the first U.K. city served by all the foreign airlines. The airport to be used was then determined by the requirement to be competitive, and this meant that every airline desired to operate from Heathrow, the home of British Airways.

The importance of the potential market for the services was also reflected in the airlines' expansion plans. When these involved the provision of flights outside the London area, the airports to be used were Manchester and then either Birmingham or Glasgow. Services would, however, be provided only when they were viable in their own right, and the airlines showed no interest in regional diversion as suggested in recent Government documents<sup>(19,20)</sup>. Indeed, when regional diversion was first mentioned at each interview, the airline reaction was one of not even wishing to leave Heathrow, let alone move out of the London Area Airports. Varying degrees of willingness to transfer all services to either Gatwick or Stansted if British Airways' competing services were also moved, were encountered. None of the airlines desired a "split operation" with some of their services at Heathrow and the rest at Gatwick or Stansted.

Investigation of the introduction of new routes was normally conducted by headquarters' staff from the airlines' home country. Some of the airlines would bring these personnel to the U.K. for a few days to make local inquiries. These would be aided by the area sales managers and representatives who had frequently made the first suggestions for the service. A much harder attitude than that of U.K. airlines with regard to the financial success of a new service was found. In general, a service had to be profitable within a year of introduction.

The airlines had differing policies on the subject of night-stopping in the U.K. Some European airlines would not night-stop in order to minimise crew costs, while others were prepared to do so in order to operate early morning flights or to increase aircraft utilisation. The long-haul airlines were sometimes obliged to night-stop in the U.K. because of curfews at other airports or to keep within crew flying-hour regulations.

None of the airlines had noticed any impact on traffic of the National Exhibition Centre at Birmingham, and none envisaged any monitoring exercises. Many of the managers seen were only vaguely aware of its existence and had little information on the dates of exhibitions. For knowledge of events and developments at airports outside London, most relied on their regional sales representatives. The majority of interviewees, however, felt that their contact with airport authorities was adequate and probably better than in most countries.

#### 10.4.2 Foreign non-scheduled airlines

The description of this category of airline is based on the postal replies of only seven companies, two of them in the long-haul sector. Furthermore, only four of the companies had substantial operations into the U.K. Since a self-administered questionnaire was used, not all questions were answered.

Provided that aircraft were able to operate at maximum payload and range from an airport, the airlines adhered to the Tour Operators' requests for the U.K. airports to be used. When a choice of airports existed to serve the same market e.g. London, financial considerations became important, and one airline changed airports after an increase in landing fees. One factor also considered by two airlines was the ease with which they could make arrangements to use an airport. Aircraft integration and positioning in the U.K. was not a particular problem for any of the airlines.

Most airlines carried residents of their home country into the U.K. for leisure purposes. Some combined this with the outwards carriage of U.K. residents for holidays, and one relied exclusively on this type of traffic for its U.K. business.

A few airlines found the newsletters issued by some of the U.K. airports useful. One, however, commented that in view of the small number of airports suitable for intercontinental operations, it was relatively easy to monitor developments.

#### 10.2.5 General characteristics of airlines

The survey showed that there were certain basic characteristics common to the majority of airlines, regardless of their category. These are now described.

Of prime importance to the airlines was the standard of airside facilities, and in particular the runway. Many different aspects related to the runway were of concern: its length, its direction, its strength, the quality of its surface, the landing aids with which it was equipped, the safe-guarding regulations imposed at its ends. This feature determined whether an airline would, and could, operate a particular aircraft type from a certain airport to a selected destination.

It is possible that this importance was only a perceived importance, since one airline stated in a postal questionnaire that it required a runway of 8,400 feet to operate at maximum payload from the U.K. to its own country. In fact, this airline was already operating to Birmingham Airport (with a runway length of 7,400 feet) from its home country. In general, airlines required a runway which enabled them to operate their aircraft at maximum payload. For a base operator, the condition on runway length was maximum payload and range.

The second most important consideration of airlines was the potential market available for their services. This was most explicitly stated by the foreign scheduled airlines, but



also featured prominently in the replies of the U.K. scheduled airlines. It had also influenced the base location decisions of the U.K. non-scheduled companies, and played a part in the decisions of Tour Operators (determined during the initial investigations of Chapter 7).

In deciding the location of a base or which airports to use, the standard of terminal facilities for passengers were of very little importance (relative to other considerations). The only qualification that airlines made to this was that facilities should be the same for all airlines. A few airlines did, however, feel that inferior facilities were a deterrent to passengers and hence a restriction to the potential market.

### 10.3 Summary

This chapter describes the findings of the survey. No attempt is made to analyse the findings statistically, but the purpose of the survey is adhered to by the qualitative discussion presented. This treatment is also conditioned by the relatively small numbers of airlines involved in the survey, even though the response rate was 53%. The quality of the data obtained is felt to be quite adequate for the present purposes, and the problems of bias are not significant.

U.K. scheduled airlines presented a very confused picture with different scales of operation, different policies and different techniques. The overall characteristics of U.K.

non-scheduled airlines were much clearer. Their choice of bases was determined by a desire to be near a large market and then by financial considerations. The U.K. airports served were almost exclusively decided by the Tour Operator chartering the aircraft. Foreign scheduled airlines operated predominantly into Heathrow Airport, and were very reluctant to move from there. Their prime criteria when choosing airports to serve in the U.K. was the potential market, although very few possessed detailed statistics on this market. The factors influencing foreign non-scheduled airlines were similar to their U.K. counterparts (viz financial, Tour Operator's decision), but aircraft positioning and integration presented fewer problems.

In general, the operations of airlines were controlled by runway length amongst airside features, and by the potential market for their services. Passenger terminal facilities had little effect.

## CHAPTER 11

### Implications of the Survey Findings

#### 11.1 Introduction

##### 11.1.1 Purpose of chapter

This chapter discusses the results of the survey that have been described in Chapter 10. In particular, it concentrates on individual comments made and situations encountered as the survey was conducted. Singly, these could be dismissed as extreme cases, or as interesting but unimportant. When considered collectively and against the general backcloth presented in Chapter 10, these examples do, however, assume a considerable significance, with a discernable pattern emerging.

In order to demonstrate the influence that was exerted by these considerations on the conduct of the remainder of the Research Project, several examples are described here (Section 11.2). The conclusions drawn also point immediately to a possible solution to the problem. This is discussed in Section 11.3.

Throughout this chapter, attention is focused primarily on scheduled airlines. The exclusion of non-scheduled airlines is assessed in Section 11.1.2.

##### 11.1.2 Concentration on scheduled airlines

Although the survey was performed on both scheduled and non-scheduled airlines, and the results for all categories have been presented in Chapter 10, this present chapter concentrates on scheduled airlines.

Stage 1 of the project pointed out the importance of scheduled services, and indicated that non-scheduled ones carrying outbound U.K. residents had little beneficial effect on the local economy. This stage did, however, reveal that non-scheduled services could be important to the development of incoming tourism and visits to the N.E.C.

The survey has shown that British non-scheduled airlines are not particularly active in the field of inbound tourism, and that such operations are normally centred on their base. Little information was obtained from the foreign non-scheduled airlines, but it was sufficient to indicate that the bulk of their operations are controlled by Tour Operators. Since this part of the survey was conducted by post it is difficult to draw any further conclusions, other than by analogy with the scheduled airlines. This is attempted in Section 11.3.3.

## 11.2 Examples of Airline Managerial Techniques giving rise to concern

### 11.2.1 Market research with specific reference to traffic forecasting

The methods employed by the airlines to investigate possible new air services vary considerably, from an instinctive feeling that a route would be viable, to computer analysis of historical data. As this subject has a considerable bearing on the development of air services, it is essential to discuss each of the approaches more closely.

The "instinctive feeling" technique cannot be dismissed out of hand. It may be unprofessional, but if it is effective, its use is justified. The very satisfactory growth (as stated

by the airline) of a service through Birmingham introduced on such a basis is shown in Figure 11.1. The success of this method depends on the assessor's ability and his knowledge of the area. An added advantage of this method is that the assessor also has a feel for the type of service required, in terms of timing and frequency. Airlines employing this technique tended to provide a "businessman's service" on some routes with morning-outward and evening-return flights.

Apart from the subjective nature of this method, it has two other disadvantages : if, for some reason, the airline should be deprived of the assessor's services, then it could encounter many problems in this area; secondly, when applying to the C.A.A. for a licence to operate a service, the airline must present some quantitative evidence on the probable traffic on the route\*. This means that at some time a more scientific exercise must be performed. (While this written evidence may be sufficient to convince the C.A.A. to grant a licence, the airline's decision to operate is still based on the instinctive feeling.)

One of the more scientific methods is to combine a survey of local firms with a review of relevant statistics. Field surveys are normally concentrated on major companies, and thus only sample part of the total market. A danger of this micro-approach is that now a number of individuals are making estimates on a possible service which could only be to their

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\*This is discussed in more detail in Chapter 14.



Aston University

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benefit, but to which they have no financial commitment. This can lead to over-estimates. The accuracy of the sampling method is also open to question. For example, in its annual travel survey,\* the Birmingham Chamber of Industry and Commerce (B.C.I.C.) asks member companies about the number of visits made to various European destinations during the previous year. For 1975, the visits to the five European cities served by direct scheduled flights from Birmingham bore no relation to the passenger figures for these routes.

Published statistics in the U.K. give little additional help to the researcher. Traffic flows available from the C.A.A. give the average monthly passenger flows (on scheduled and non-scheduled services) between the U.K. and all other areas<sup>(46.3)</sup>. For the more important parts of Europe, city to city flows are given\*\*. Statistics of the International Civil Aviation Organisation supplement these, and give traffic details for each international scheduled flight sector for every third month<sup>(114)</sup>. In order to utilise these figures for forecasting traffic between two specific airports, considerable assumptions have to be made e.g. to investigate Birmingham to Copenhagen, some assumptions on catchment areas and propensities to fly are required, since the only traffic flows available are U.K. to Denmark and London and Manchester to Copenhagen. Table 7.1 suggests that some difficult decisions are required. The statistical sources available in West Germany (and described in Chapter 12) show the U.K. data to be completely inadequate for market forecasting.

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\* Over 1,000 firms are circulated with postal questionnaires and normally of the order of 200 reply. Few airline field surveys are this extensive.

\*\* The flows are measured by the number of passengers on direct flights between the two points.

Most airlines keep statistics for their own purposes, which are not published. For example, traffic on its existing routes is known and may be used by an airline to forecast, by comparison, the possible traffic on a potential route. Some airlines, particularly the foreign carriers, assess demand from various parts of the U.K. by the sales of their regional offices. Since the number of these offices is limited, there is the danger that regional demand is underestimated, with some provincial booking being done through the London office.

Another method of forecasting traffic is based on counting the number of passengers already flying between two points under consideration via some intermediate point already served by the airline. This is achieved by analysis of the flight booking records, which, for many airlines using this method, are closely linked to their computerised reservation systems. In this manner a firm forecasting foundation is first established. Allowance must then be made for other factors, such as passengers from the regional airport's catchment area travelling first by surface means to the intermediate point (which is often Heathrow in this country), before flying to the final destination. This is one of the weaknesses of this method: it has to fall back on the other techniques. Another limitation is that only one airline's traffic is considered.

The results obtained from this, one of the more sophisticated techniques, are not necessarily any more accurate than those achieved with the less scientific approaches. For example, this method predicted a load factor\* of 42% on a new service

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\*"Cabin load factor" on passenger flights is the number of seats sold as a percentage of the number available. In this thesis, the term is



immediately prior to introduction, yet the actual load factor achieved was 67%. The airline involved was too happy about the success of the service to realise that a region had been deprived of a direct service for longer than was necessary.

This technique also predicted that a direct flight between Glasgow and Paris would not be viable for the airline. This is difficult to accept intuitively since Glasgow has three flights a day to Amsterdam, one to Copenhagen, and one to Iceland. Also, both Manchester and Birmingham have two daily flights to Paris, while Cardiff and Bristol share one.

Since all the forecasting methods involve a subjective input, a considerable importance is attached to the quality of the personnel conducting the studies. The maximum number of staff employed on market research by any of the U.K. airlines interviewed was four, and many had no permanent staff at all. The use of external agencies cannot be entirely satisfactory as they not only lack local knowledge but also some of those employed are strangers to the air transport industry. Thus, the studies performed are "ad-hoc" exercises, and no regular means of estimating, say, transit, transfer and interline traffic are established. Indeed, these important categories\* may be neglected altogether. The airlines employing market research staff tend to use them for other duties, such as monitoring performance and handling statistics. In general, market research is treated as "a-man-and-a-boy" exercise - one major airline actually described its staff level with this phrase.

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\*This importance is demonstrated in Chapter 12.

Foreign airlines normally investigate routes with headquarters staff visiting the interesting area and being guided by the local manager. This latter individual has rarely been recruited by the airline for his ability to forecast traffic, but rather to meet sales targets. He is often, therefore, not acquainted with local statistical sources, and the foreign personnel may easily leave with comments and opinions rather than facts and figures on potential traffic.

The level of traffic at most regional airports in the U.K. is low. This almost certainly means that the number of new routes being considered for any airport, including Birmingham, is limited. When these routes are divided between a number of interested airlines, the number of studies performed by a particular team or individual is very small. Thus, no experience or expertise is able to develop, so that forecasting techniques cannot be strengthened.

#### 11.2.2 Base operator

Besides the direct economic benefits of having an airline based at an airport, there are other advantages of being an airline's home. Since the majority of aircraft night-stop at base, they are available for early morning departures and thereby offer favourable flight timings for local businessmen. Full maintenance facilities are normally available there, so that the reliability of services is improved, and stand-by aircraft are more readily obtainable. The airlines also tend to have spare capacity at their base rather than elsewhere, so that, for example, increasing the daily frequency of a successful service is easier from base.

Introduction of new services also tends to be easier and/or cheaper from the base airport, because of aircraft positioning. British Air Ferries' (B.A.F.) interest in flying between Birmingham and Rotterdam (discussed in Chapter 14) is a good example. B.A.F. preferred not to incur the extra costs such as crew expenses that basing an aircraft overnight at Birmingham would entail. Instead, they planned to fly the aircraft first from its Southend base to Rotterdam (an established route) and then operate to Birmingham. This meant that the departure from Birmingham to Rotterdam would have been the aircraft's third flight of the day with a non-ideal, mid-morning timing.

The survey revealed quite clearly that Birmingham did not have a true base operator. British Midland Airways' (B.M.A.) home was East Midlands Airport which was the centre of operations and maintenance activities. Despite B.M.A. having a staff of over 100 at Birmingham, all administration, planning and other headquarters staff were located at East Midlands. Although a significant number of Birmingham's scheduled services were flown by B.M.A., no aircraft were based at this Airport.

British Airways (B.A.) was the airline providing most of the other scheduled services at Birmingham and this Airport was indeed the base of several aircraft. At the time of the survey (March 1976), Birmingham was the responsibility of Regional Division (Channel) of British Airways\*. This unit had another major operating centre at Jersey and provided

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\*Regional Division had four operating parts at the time, the other three being Scottish, Cambrian and North East.

services between the Channel Islands and several U.K. points including London. Major maintenance (i.e. above engine changes) was performed at Glamorgan Airport. The headquarters was, however, in London so that planning staff based there had no association with either Birmingham or Jersey, and only a remote (in a geographical sense) knowledge and feeling for the local markets.

There have subsequently been two re-organisations within British Airways. The first merged what were essentially four separate airlines into one operating unit, which was still called Regional Division. The headquarters remained in London. The most recent changes were made in April 1977, and Birmingham came under the control of the newly created U.K. and Ireland Division. This has provided greater flexibility in the operations through Birmingham and, for example, Tridents of the former European Division of B.A. are more easily available to give extra capacity for services through Birmingham. The planning staff of the division remain, however, in London.

Thus, although a base operator is important to an airport for several reasons, Birmingham does not possess one. There is no airline dedicated to the development of air services, even if this dedication is only a result of the airline's own desires to be successful.

One of the most important considerations of all the scheduled airlines was the potential market available for their services. One airline co-operating with the survey operated a service via an airport with a small catchment area at a higher frequency than a very similar service via a larger airport serving a much bigger population. When questioned on this point, the airline's spokesman stated that this was because of aircraft integration problems and that the aircraft was needed at the smaller airport to fly another service. Because of a study of the airline's time-table before the interview, this was known to be incorrect. When challenged on this point no satisfactory answer was obtained. This demonstrates that airline management can be inconsistent.

The provision of air services between U.K. points and Amsterdam was illuminated in Chapter 7. The airlines operating these services and which participated in the survey, were all quite satisfied with their performances. Therefore, services are not overprovided, as was suggested as a possible explanation of the level of service at some airports. One airline used aircraft in a joint passenger and freight configuration, so reducing the seating capacity to be filled and giving opportunity for an extra source of revenue. Most of the airlines regarded Amsterdam as a good connection point for further destinations and many advertised this feature. Thus, a significant proportion of passengers were in the interline category e.g 30% from Leeds/Bradford.\*

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\*Stated during a Public Hearing at the C.A.A. (described in Chapter 14).

One airline pointed out that interline traffic of this type represented a considerable loss in revenue for British aviation e.g. the fare to a long-haul destination in the Far East was perhaps 10 times the income to an airline for flying a passenger from the U.K. to Amsterdam. This has the largest effect on British Airways. Such considerations are of very considerable importance to some airlines when deciding on the introduction or expansion of a route. The C.A.A. is also concerned with this and requires some airlines to make statistical returns on the level of this traffic as a condition on the grant of a licence.\*

The existence of interline traffic has been used by Rosenberg to explain British European Airways' behaviour in the "irrational air network" which has built up between the U.K. and Italy<sup>(88.1)</sup>. The motivation of Alitalia is not discussed, and neither can the present survey shed light on the issue.

#### 11.2.4 Expansion Policies

The opening statement of one interviewee was:

"We are not interested in Birmingham - British Airways would never allow us to get a licence to operate from there".

This may or may not be true, but it is the belief of the Planning Manager of a U.K. airline. This will therefore have a significant impact on the airline's expansion plans, and Birmingham may be expected to suffer. Similar sentiments of keeping to one's own "territory" were detected from other airlines, but not so explicitly.

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\*Stated during a Public Hearing at the C.A.A. (described in Chapter 14).

The expansion plans of many of the foreign airlines also appear to lack foundations. While all of them are opposed to regional diversion, very few have any statistics on the origins and destinations within the U.K. of their passengers. Most airlines wished to remain at Heathrow in order to stay competitive, and this included the ability to carry interline passengers. Again, very few airlines were able to provide figures on the level of this activity.

Those airlines considering expansion outside London supported their statements on the necessity of a large potential market, by naming Manchester, Birmingham and Glasgow as the leading candidates for services, but this policy rarely had any specific statistical support. It is conceivable that in the absence of any detailed knowledge of the regions, foreign airlines are applying the maxim "big becomes bigger". This will influence the order in which regional airports are provided with services, and the optimum sequence for development may not be that implemented.

#### 11.2.5 Deficiencies in Communication

The initial point of contact of the survey for foreign scheduled airlines was the U.K. Manager. Whenever possible the interview was with this person, but on three occasions, it was only possible to see the airline's Birmingham Manager. These individuals were much more optimistic about the introduction of services through Birmingham than were the U.K. managers as a whole.

The local manager of a fourth airline was a frequent visitor to Birmingham Airport to discuss proposals for new services. His enthusiasm did not stop there, and his U.K. Head Office reported receiving lengthy documents, several times a year, pressing for a new service through Birmingham. It is unfortunate that these were considered alongside a continuing decline in his sales figures. This indicates that the statements of local managers must be taken with a certain reservation.

The survey also showed that for some airlines there was a lack of communication between regional and national representatives. For instance, one airline did not know that its home base was consistently one of the three most popular new destinations requested in the Birmingham Chamber of Commerce surveys - the airline's Birmingham manager had not sent a copy of the survey results to the U.K. Head Office\*. This is particularly worrying since one of the more popular sources of information of U.K. airlines were surveys by Chambers of Commerce. Another example of this communications gap is the N.E.C. as described in Chapter 10.

It is possible that the differing of opinions and attitudes and the lack of communications is not confined to the U.K.: it may extend to the relations between the U.K. staff of the airline and the headquarters management in the airline's home country e.g. one airline stated that it was unlikely to provide air services, either regular or ad-hoc, to Birmingham for the N.E.C. yet the following week, two such charters in the airline's colours arrived.

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\*With the co-operation of the B.C.I.C. this was immediately rectified, and the danger of a similar situation existing with other airlines circumvented.



The previous five sections have discussed areas affecting the development of air services. All have revealed weaknesses in the existing system which, from Birmingham's viewpoint, give rise to considerable concern.

None of the various forecasting techniques is entirely satisfactory, relying to some extent on subjective decisions. The personnel conducting these studies are few in number and, for many airlines, do not have a specialist knowledge of the local market. When these factors are considered against the small scale of operations at Birmingham, the worries described in Chapter 7 are reinforced rather than reassured.

The apparent irrationalities of the route patterns of some airlines has not been explained. The interviews did, however, reveal that interlining passengers are an important feature of some airlines' operations. Interlining traffic represents a loss in revenue for British airlines, the most important of which is British Airways. Although some U.K. airlines regard Birmingham as the domain of British Airways, this airline cannot be regarded as a true base airline. It has other responsibilities and opportunities for development, so that growth for British Airways does not necessarily mean growth for Birmingham.

There are some doubts about the contacts of foreign airlines with the provinces. The airlines have few statistics on their market and may be content with their monopoly (in partnership

with British Airways) at London. When they do decide to venture into the regions they adopt a safety-first policy by developing first through Manchester where some are already established.

The survey has shown that there are several management styles for running an airline and/or the behaviour of some airlines is irrational and not carried to a logical conclusion\*. This does not mean that existing managerial techniques are incapable of organising and operating a viable airline. Nevertheless, it is felt that some airlines could be more efficient, and at the same time, be of greater benefit to the West Midlands region. For example, an airline might be basing an aircraft at Tees-side dedicated to providing a service to Milan. At no extra cost, the aircraft could be at Birmingham and would almost certainly earn an increased revenue to Milan. The airline may not even have considered this, tacitly anticipating (quite rightly) opposition from British Airways and possible failure to win the licence for the service.

The whole area of development of services is surrounded by clouded thinking, preconceived judgements and differing policies and practices. Subjectively enters the equations governing introduction of services too frequently. The personalities, and their motivation, have too much effect on the issues. Chance plays too large a part in the success or failure of an airport and consequently in the well-being of its region. But, in the very nature of the problem lies the solution.

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\*A third possible explanation for the conflicting evidence obtained i.e. that the survey was badly performed, is discussed and dismissed in Chapter 10.

11.3 A solution

11.3.1 A Role for the W.M.C.C.

Despite the sophistication of the aircraft used by the airlines, their managerial policies and techniques may be described as simple, if not rudimentary. Indeed, the term "policy" may be over-generous, implying a consistent theme and a link between decisions. Because of these failings, it is felt that it is possible for influence to be exerted on airline decisions by an external body - a body willing to develop techniques, to provide continuity, to consolidate all the various activities, and to provide some logical and, perhaps more importantly, lateral thinking.

The W.M.C.C. is in a unique situation to fulfill this role. Not only is it the Operating Authority of Birmingham Airport, but it is also responsible for the economic prosperity of the three million citizens resident within the County. An involvement with the air transport industry will help fulfill the Council's prime aim of airport ownership, namely of using the Airport to support and stimulate economic growth.

Only a public body is sufficiently independent to be able to perform such a role. The body must also have a full appreciation of the implications of any policies, and must have a complete picture of the total market for a service. This excludes organisations such as the Heart of England Tourist

Board and the Birmingham Chamber of Industry and Commerce. Central Government departments, including the Civil Aviation Authority, are also not considered suitable for this role: they not only lack local knowledge, but, with national responsibilities the full force of the arguments for using certain airports might well be lost in compromises\*.

The examples discussed in Section 11.2 provide many illustrations of the functions which the W.M.C.C. might fulfill in this marketing role:

Market research techniques, probably combining those already in use, could be developed and refined. This not only provides definite evidence with which to approach airlines, but it also establishes continuity for forecasting traffic on routes from Birmingham. Since some level of subjective input would almost certainly still be necessary, the results are liable to become more accurate as experience of the method is gained.

Having discovered a potentially viable service, the W.M.C.C. could then discuss, with an appropriate person in a suitable airline, the possibility of its introduction. Not only should forecasted traffic figures be provided, but also possible timings for the flights and ideas for integrating the route into the airline's existing network. These latter factors in part determine the suitability of an airline. Also to

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\*During meetings arising from the remainder of this project, the C.A.A. stated that it considered the W.M.C.C. to be the most suitable body for co-ordinating the activities at its own Airport.

be considered, are the airline's policies on such matters as night-stopping and interlining passengers e.g. it is hardly sensible to ask an airline to provide flights to a major European interline point if any of the airline's other services stand to suffer. This needs an intimate and up-to-date knowledge of the industry.

Once an airline is convinced that a service is viable, then the Council has a responsibility to support the introduction of flights and to help translate the forecasts into actual passengers. These duties include: aiding the airline to obtain a licence from the C.A.A. or the D.O.T. to operate the service (see Chapter 14); persuading the B.C.I.C. to organise Trade Missions and export drives to coincide with the start of the service; formulating, with the co-operation of Tour Organisers, package programmes to carry leisure tourists on the flights.

The W.M.C.C. might also be able to inject some rational thinking into the industry, in terms of the existing route structure of some airlines, and the expansion policies of others. For example, one of the reasons for the lack of direct, international scheduled services from Birmingham may be British Airways' fear of loss in revenue from passengers interlining at European points. This category of passengers should present, therefore, an incentive to foreign airlines to develop services from the U.K. regional airports, rather than expand services through Heathrow. Apart from a monopoly on terminating traffic between Birmingham and, say, Zurich,

Swissair for example would not only obtain interline passengers from Birmingham to long-haul destinations, but also would not increase interlining opportunities for Swiss nationals through Heathrow\*.

Other areas of activity for the W.M.C.C. are the establishment of an effective system of contact with the airlines, and the search for a base operator for Birmingham.

### 11.3.2 Support for this Role

The need for the County Council to take an active role in promoting Birmingham Airport to the benefit of the area, has been argued from the survey evidence presented in Chapter 10 and more explicitly in Section 11.2. There is, however, direct justification for this function.

The seeds of this idea of an authority attempting to influence the provision of services at its own airport can be seen in Central Government thinking:

"In the case of non-scheduled leisure traffic originating in the United Kingdom, the initiative rests predominantly with tour operators and also to some degree with the airport operators to provide or encourage the provision of holidays starting from regional airports".(20.17)

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\*The few statistics obtained during the survey indicated that the foreign airlines lost more traffic at Heathrow through interlining, than they gained for transfer to their own flights at their home base.

More positive requests for help from the W.M.C.C. have been encountered during the survey. At the beginning of one interview, the U.K. manager of a foreign airline said:

"You get us a licence and we will begin operating to Birmingham next week".

During a conversation with the U.K. manager of another airline, a possible scheme for the airline operating to Birmingham was mentioned. The reaction was:

"We are very interested, but the impetus will have to come from the Midlands".

This is a clear indication that the W.M.C.C. must market its airport to the air transport industry.

### 11.3.3 Non-scheduled airlines

This chapter has concentrated on scheduled services: the basic problem facing the development of Birmingham Airport has been highlighted using scheduled service examples; the solution and the role of the W.M.C.C. have been illustrated, again using scheduled services. It is felt, however, that development of non-scheduled services requires a similar treatment.

The sole reason for development of non-scheduled services under existing policies (see Appendix A) is to promote inbound tourism. The role of co-ordinator, as described in Chapter 6, which is needed to stimulate incoming traffic is complementary to, and perhaps overlaps, the one described in this chapter. This suggests that the W.M.C.C. may profitably perform both functions.

At the present time, there would be considerable difficulties in attempting to attract trans-Atlantic tourist traffic, because of the runway length. If, at some time in the future, the W.M.C.C. should consider extension of the runway to accommodate this market, then it would have to be confident that it could persuade the air transport industry as a whole, and North American tour operators and airlines in particular, to use Birmingham Airport. Thus, the full development of incoming tourism depends on W.M.C.C. success in influencing the provision of air services through Birmingham.

#### 11.4 Summary

This chapter has discussed some of the individual statements made by airlines during the survey. It is argued that the development of air services relies at present too much on chance, rule-of-thumb judgements and blinkered thinking. Because of these misgivings, the West Midlands County Council should adopt an active role in marketing Birmingham Airport to the air transport industry. The W.M.C.C. is in a position to give continuity to the development of air services, to co-ordinate the actions of many organisations, and to make an original contribution to the area.



## CHAPTER 12

### The West German Air Services System

#### 12.1 Introduction

##### 12.1.1 Purpose of Chapter

This thesis has argued that Birmingham is underprovided with air services, particularly scheduled flights to international destinations. The survey of airlines has revealed that the 'system' by which air services are developed is so haphazard as to be a major source of concern. However, this does not necessarily mean that Birmingham has suffered, although this does appear to be the case. This chapter attempts to prove the inadequacies of Birmingham's air links by a comparison with the West German System. It also investigates the reasons for the de-centralised nature of the German network.

This introductory section discusses the validity of any comparison between the U.K. and the German Federal Republic (G.F.R.), and then describes the manner in which this part of the Research Project was conducted. A brief summary of the German statistical system, which is of considerable importance and value to the performance of this comparison, is then given. Section 12.2 provides some background information on the airports and the air services of the G.F.R., and on Stuttgart, the airport chosen for a case study.

The characteristics of the air passengers are then investigated in Section 12.3. Particular attention is paid to the passengers from the main catchment area, the surrounding land of Baden-Wurttemberg, and the passengers using Stuttgart Airport. The stimulative effects that air services may have on traffic are also assessed.

Section 12.4 considers in more detail the international scheduled flights available from Stuttgart, in both theoretical and practical terms. The performances of individual services and their dependence on different types of traffic is then noted. The following section (12.5) goes on to describe the development of these services both qualitatively and quantitatively. The general applicability of these results to the G.F.R. system as a whole is also considered.

Comparisons between the developments of the U.K. and the G.F.R. systems, and between the situations of Birmingham and Stuttgart are made (Section 12.6). The important features of the German air transport industry, from which valuable lessons may be learnt, are then highlighted.

#### 12.1.2 Validity of Comparison

Attempts to contrast the development of the air services of two countries can only be valid if there exist certain similarities. For this reason, the United States of America, with its advanced airport system is unsuitable. However, many similarities exist between the G.F.R. and the U.K., and some of these are summarised in Table 12.1 There are, of course, differences between the two which might be significant e.g. the Gross National Products are not the same.

Table 12.1

Comparisons between U.K. and G.F.R.

	<u>G.F.R.</u>	<u>U.K.</u>
Size: Area	95700 sq mls	94500 sq mls
Length	500 mls (N-S)	650 mls (N-S)
Population (1969)	60.8 m	55.5 m
Degree of Urbanisation (This is the measure of the no. of people living in towns, cities)	48%	49%
Total employed	25.8 m	24.3 m
Breakdown by economic sector:		
Primary (Agriculture, forestry, fishing, mining, quarrying)	12%	4%
Secondary (Manufacturing, construction)	45%	45%
Tertiary (Service)	43%	51%
Air passengers (1970)	31.7 m	31.6 m

Source: "VTOL : A European Study Volume 1 The Study Areas"  
University of Southampton, Department of Civil Engineering  
(1971) Chapters 2 and 5

### 12.1.3 Conduct of Work

With the aid of the German Academic Exchange Service, a visit to Germany was possible. To perform this work, a case-study of one German airport was considered appropriate. Stuttgart Airport was selected for several reasons:-

- (1) It had a good range of scheduled international air services;
- (2) It was one of the medium sized German Airports;
- (3) It was the home of the Association of German Airports (Arbeitsgemeinschaft Deutscher Verkehrsflughäfen - ADV)

With these points in mind, the co-operation of the Airport Company at Stuttgart (Flughafen Stuttgart GmbH-FSG) was obtained, and the study conducted during February and March 1977.

### 12.1.4 The German Statistical System

To appreciate the scope afforded to this study, it is useful to review briefly the method used in the G.F.R. to collect and analyse the relevant air transport statistics.

For each flight, a report, the "Flugbericht", is completed. The form used is reproduced as Appendix D. Besides identifying the flight concerned, information is provided on passengers, freight and mail carried. For the first category, not only are the number of departure, arrival and transit passengers stated, but for departing passengers their airport of final destination is also shown. Thus, the flow of interlining passengers is clearly evident.

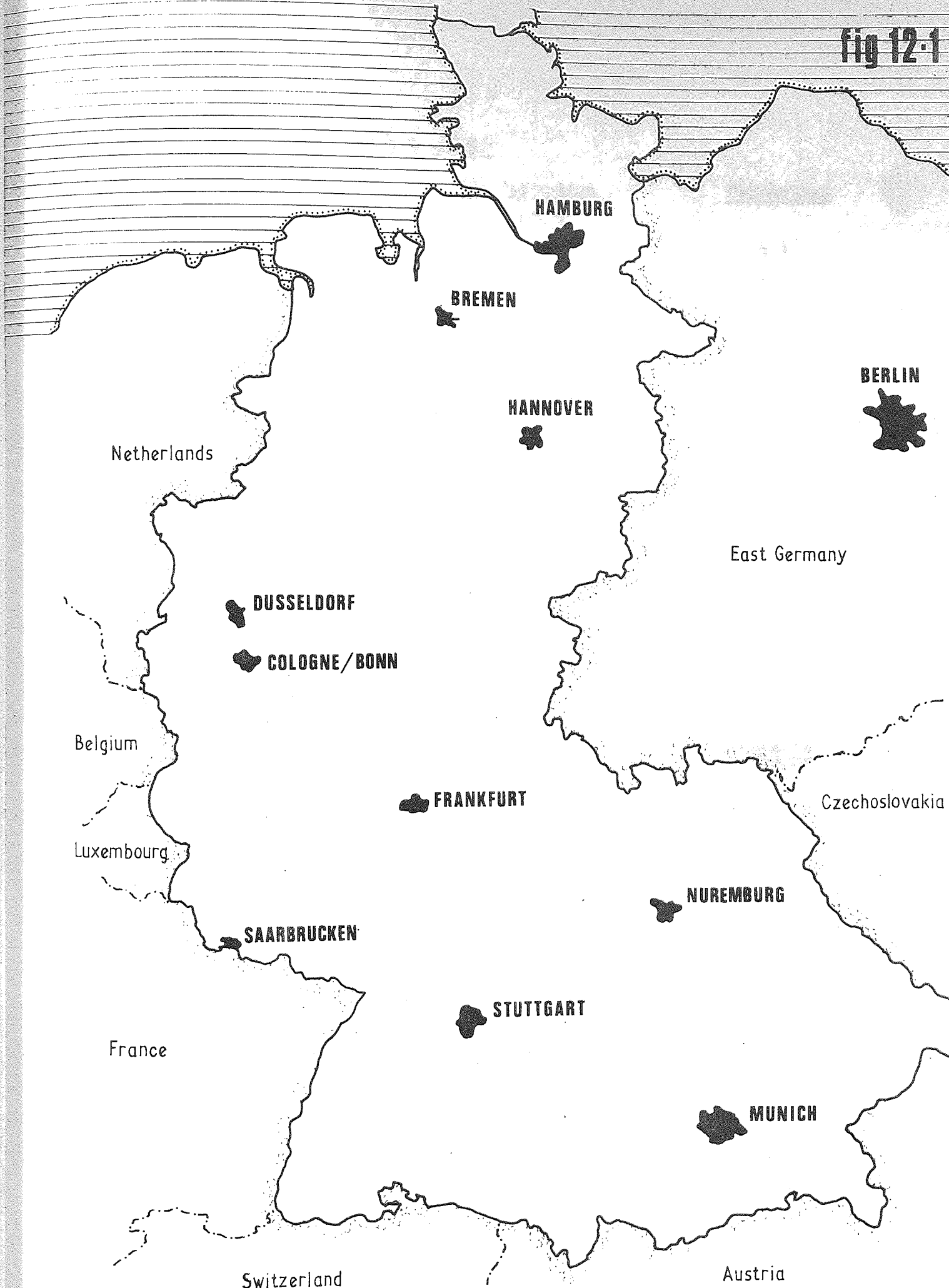
Certain German airports extract information from these reports, before sending them to the Federal Statistics Office (Statistisches Bundesamt). Here they are analysed by computer, and two sets of compilations are of particular concern to this work. The first, known as A14, gives the number of passengers travelling direct to every other major point, and their final destination from this airport. This information is available on monthly and annual bases. The second set of tables, A15, are similar, but give the number of passengers flying from each of the major German airports to every other important destination in the world, together with their routing via intermediate airports.

## 12.2 Background

### 12.2.1 Aviation in West Germany

West Germany has eleven major airports located as shown in Figure 12.1. Frankfurt is the largest, being the 'hub' airport and having the majority of Intercontinental flights. The traffic levels at the airports for 1974 are shown in Table 12.2. Indeed, of the Top Twenty Airports in Europe in 1973, five were in the G.F.R. (Table 12.3)

Herring has compared the number of scheduled passenger services to foreign destinations available from regional airports in the U.K. and in the G.F.R., and this is shown in Table 12.4. (89) Missing from the Table are Frankfurt (hub), Berlin (special case), and Nuremburg and Saarbrucken (no international services in 1974). The destinations served from the U.K. airports tend to be Paris, Amsterdam and smaller airfields in Norway (for oil) and on the French coast, while the destinations from the G.F.R. airports are much more varied.



**The Major Airports of West Germany**

Table 12.2

Passengers at G.F.R. Airports in 1974

<u>Airport</u>	<u>Air Passengers</u> 1,000's	<u>Percentage</u>
Hamburg	3,528	9.5
Hannover	1,947	5.3
Bremen	528	1.4
Dusseldorf	4,869	13.1
Cologne/Bonn	1,786	4.7
Frankfurt am Main	12,192	33.0
Stuttgart	2,271	6.1
Nuremberg	624	1.7
Munich	4,330	11.7
Berlin (West)	4,279	11.5
Other Airports	638	1.7

Source: "Statistisches Jahrbuch 1974 für die Bundesrepublik Deutschland"

Table 12.3

European Airports Top Twenty 1973

	<u>Passengers</u> (x 1,000)	<u>Movements</u> (x 1,000)
1. Heathrow	20,128.7	268.2
2. Orly	13,918.1	203.3
3. Frankfurt	10,648.3	188.7
4. Copenhagen	7,636.0	168.9
5. Madrid	7,356.9	107.7
6. Amsterdam	7,180.6	125.5
7. Palma	7,093.6	80.1
8. Zurich	5,853.2	151.7
9. Gatwick	5,765.1	74.6
10. Berlin (Tegel and Tempelhof)	4,772.5	75.0
11. Athens	4,626.1 (1972)	88.6 (1972)
12. Dusseldorf	4,477.8	77.7
13. Munich	4,023.7	71.6
14. Barcelona	3,931.5	61.7
15. Milan Linate	3,832.5	74.0
16. Stockholm Arlanda	3,342.0	63.3
17. Brussels	3,106.6 (1972)	75.5
18. Hamburg	3,106.4	57.5
19. Istanbul	2,865.7	53.9
20. Lisbon	2,712.1	45.3

Source: "Flight International" 6 June 1974

Table 12.4

International Scheduled Services at G.F.R. and  
U.K. Airports, 1974

Airport	Number of foreign destinations served on direct flights	Number of airlines operating international services
Bremen	3	3
Cologne/Bonn	20	8
Dusseldorf	34	14
Hamburg	28	14
Hannover	10	6
Munich	44	21
Stuttgart	19	10

It is interesting to contrast this picture with that of the UK  
Year = 1974

Airport	Number of foreign destinations served on direct flights	Number of airlines operating international services
	(Excluding the Irish Republic)	(Except to the Irish Republic)
Exeter	1	2
Bristol	2	2
Cardiff	2	2
Southampton	2	2
Ashford	1	1
Norwich	1	1
Birmingham	7	4
E. Midlands	4	1
Leeds/Bradford	1	1
Liverpool	1	1
Manchester	21	10
Teeside	1	1
Newcastle	3	2
Edinburgh	1	1
Glasgow	18	6
Aberdeen	2	1
Jersey	4	3
Guernsey	2	2

Source: "The Growth of the Passenger Market", C. A. Herring



### 12.2.2 Stuttgart Airport 1976/77

With 2.4 million passengers in 1976,<sup>(90)</sup> Stuttgart was sixth in the league table of German Airports.<sup>(91)</sup> Approximately 60% of these passengers were on the scheduled services which nine airlines provided to 21 destinations, domestic and international, as summarised in Table 12.5. The frequencies and the timings of these flights were in the main very good. Non-scheduled services were also well provided, but were seasonal in nature. Additionally, there were several scheduled freight flights each week, as well as night-mail services.

The national flag-carrier, Lufthansa (DLH), dominated the scene, and operated almost two thirds of the scheduled passenger services and had flights to over half of the destinations. It operated all the major domestic services, except those to Berlin. These flights were provided equally by Pan Am and British Airways and were operated by aircraft based in Berlin.

International services of British Airways, Air France, Swissair, Olympic Airways and Sabena also operated on an "in-and-return" principle i.e. the aircraft arrived from the airline's home country and returned there within a short period, normally less than one hour. However, the aircraft of Alitalia and SAS arrived late in the evening and "night-stopped" in readiness for early morning departures.

Table 12.5

Scheduled services from Stuttgart Airport, Winter 1976/77

Destination	IATA-code	Number of direct weekly connections	Airline(s)	Notes
<u>International</u>				
Athens	ATH	6	Olympic	via SKG or VIE
Barcelona	BCN	3	Lufthansa	
Brussels	BRU	5	Sabena	
Copenhagen	CPH	5	SAS	
Lisbon	LIS	1	Lufthansa	
London	LHR	14	Lufthansa, British Airways	
Madrid	MAD	4	Lufthansa	
Milan	LIN	13	Alitalia, Lufthansa	
Paris	CDG/ ORY	12	Lufthansa, Air France	
Rome	FCO	7	Alitalia	via LIN
Salonica	SKG	3	Olympic	
Vienna	VIE	10	Lufthansa, Olympic	
Zurich	ZRH	21	Swissair	
<u>Domestic</u>				
Berlin	TXL	27	Pan Am, British Airways	
Bremen	BRE	6	Lufthansa	
Dusseldorf	DUS	27	"	
Frankfurt	FRA	28	"	
Hamburg	HAM	24	"	
Hannover	HAJ	17	"	
Cologne/Bonn	CGN	13	"	
Munich	MUC	13	"	

Source: Stuttgart Airport Timetable, Winter 1976/77

Lufthansa had four aircraft based at Stuttgart overnight, and they began the day with domestic departures. Throughout the day, a mixture of international and domestic flights was operated, although not necessarily by the same aircraft. In the main, B727's and B737's were used, although the mid-morning flight from and to Frankfurt was flown by an Airbus (A300B). The other airlines used aircraft in the DC9/B737/BAC1-11 category, with occasional B727's and Tridents.

### 12.3 The Passengers

#### 12.3.1 Air Passengers from Baden-Wurttemberg

Stuttgart lies near the centre of the Land of Baden-Wurttemberg and it is therefore important to study the characteristics of "locally" originating air-passengers. However, information on this is somewhat limited. Indeed, it is confined to a survey conducted at the eleven major airports in 1971 and co-ordinated by the ADV.<sup>(92)</sup>

This investigation showed that approximately 7.9% of air-passengers at G.F.R. airports originated in Baden-Wurttemberg. If scheduled passengers only were considered, the proportion was about 7.3%.

The retention of traffic originating in Baden-Wurttemberg (i.e. both visitors and inhabitants) by Stuttgart Airport was nearly 64%. The bulk of the remaining traffic went to Frankfurt, with only Munich of the other airports capturing a noticeable amount. Almost two thirds of the traffic that went to Frankfurt came from the region of Nordbaden, to the West and North of

the Land. Indeed, the three cities of Heidelberg, Karlsruhe and Mannheim accounted for 55% of the traffic going to Frankfurt, which was their main airport.

The propensity to fly (P.T.F.) (i.e. number of air journeys per year per head of population) for Baden-Wurttemberg was 0.30 in 1971. This compares with a figure of 0.56 for Germany as a whole.

### 12.3.2 The Passengers at Stuttgart Airport

More recent information is available on the passengers using Stuttgart Airport from the survey conducted there in July and October 1975\*. 92.5% of the passengers came from Baden-Wurttemberg. For scheduled traffic, the Land contributed over 95% of the total passengers, reflecting the greater unwillingness of scheduled passengers to travel long distances for air services. Almost 28% of passengers came from the City of Stuttgart - 36% if scheduled services only are considered. Approximately three-quarters of the scheduled traffic came from within 50km of the airport (this area is very similar to the 30-minute catchment area).

The survey revealed that 29% of passengers were travelling for business reasons. The majority of these passengers used scheduled air services. Conversely, non-scheduled flights were used almost exclusively for private reasons. However, there was a considerable use of scheduled services for private travel. These relationships are summarised in Tables 12.6 A and B.

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\*Unpublished.

Table 12.6A

Flight Type used by Travel Reason of Passenger

Flight Type \ Travel Reason	Business Reason	Private Reason	Combination of Business and Private Reasons	Total
Scheduled	98.4%	30.8%	93.3%	51.0%
Non-scheduled	1.6%	69.2%	6.7%	49.0%
Total	100.0%	100.0%	100.0%	100.0%

Table 12.6B

Dependence of Flight Type on Travel Reason

Flight Type \ Travel Reason	Business Reason	Private Reason	Combination of Business and Private Reasons	Total
Scheduled	55.7%	42.1%	2.2%	100.0%
Non-scheduled	0.9%	98.9%	0.2%	100.0%
Total	28.9%	69.9%	1.2%	100.0%

Source: Stuttgart Airport Passenger Survey, 1975.

In 1975, approximately 7% of scheduled service passengers at Stuttgart were in transit.<sup>(90)</sup> Additionally, some 3% were transferring flights there, although this figure does not include international to international transfers.<sup>(93.1)</sup> These are, however, felt to be small since the number of such connections was limited (see Section 12.4)

Many passengers flew from Stuttgart only to interline at other airports. It was possible to study this for outbound passengers only, but because of the overall balance of arrivals and departures, it is reasonable to assume that the same conclusions are generally true for inbound passengers.

In 1975, about 60% of scheduled passengers flew direct to their destination - the remaining 40% interlined at other airports; about 35% of passengers flew on to international destinations, while approximately 5% took flights internal to the interline airport\*. These proportions varied enormously from route to route, as may be seen later (Section 12.4).

However, two points emerge:

- (1) Approximately 95% of interline passengers\* travelled on flights with connections in the Lufthansa timetable or in the ABC World Airways Guide. (N.B. Whether the interline passengers actually took the connections given, or travelled to other destinations with different flights, is not known).
- (2) There was a definite tendency to interline at German Airports: although they offered 56% of the connections to international destinations,<sup>(93.2)</sup> 75% of passengers interlined through these points.\* Thus, there is some loyalty or other tendency to use the national carrier, Lufthansa.

Despite the large proportion of interline passengers, support for the direct scheduled services was good. Figure 12.2 shows the percentage of travellers using the direct services as a function of frequency (for international routes only). It may be seen, for example, that a daily service during the week was used by at least 55% of travellers.

### 12.3.3 Stimulation of traffic

There have been suggestions<sup>(20.18)</sup> that provision of an air service between two points will stimulate traffic between them. With the statistics available, it was possible to pursue this hypothesis a little further and determine whether the services were meeting a demand or creating one.

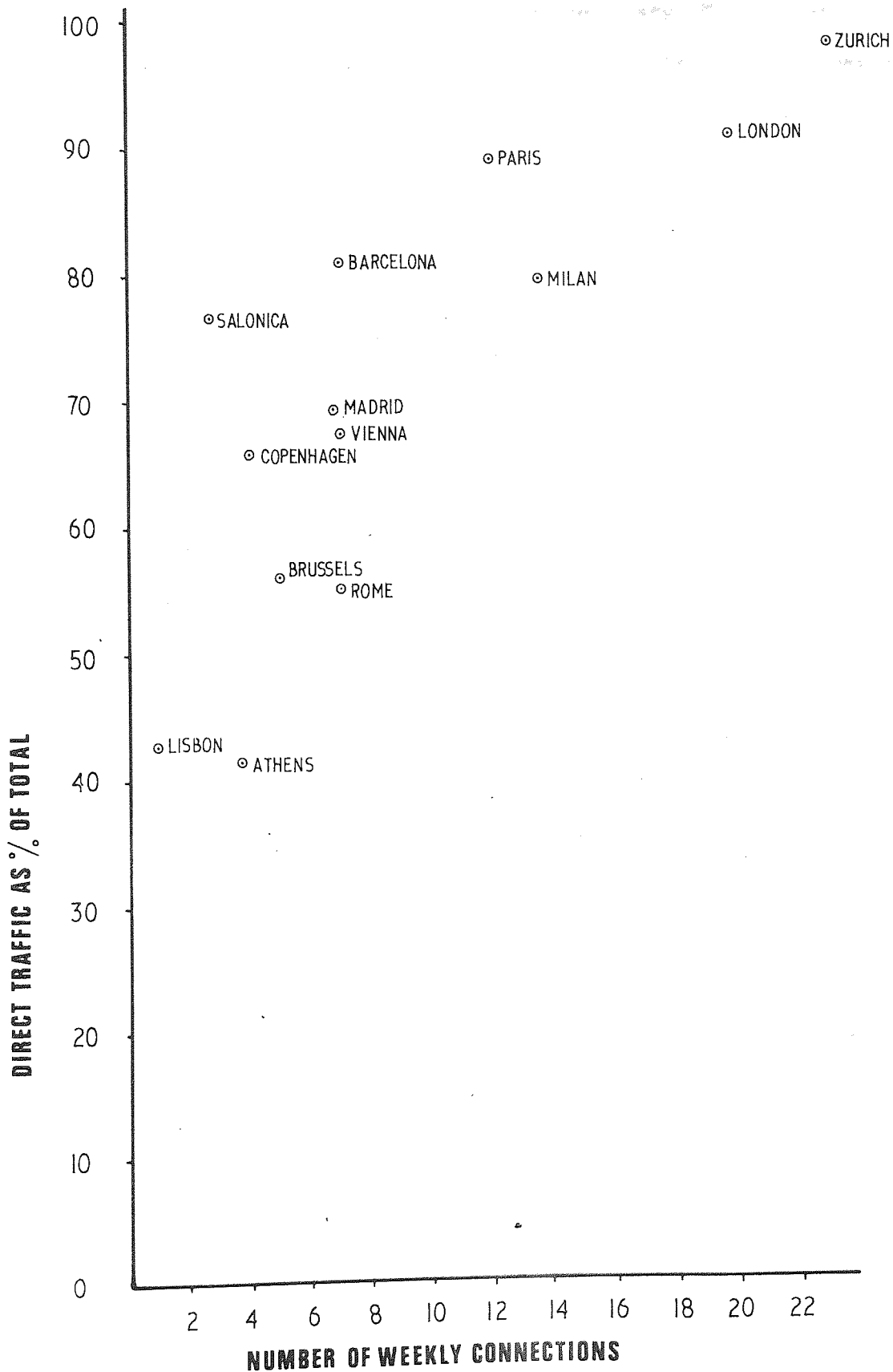
If the hypothesis is true, two effects will be apparent:-

- (1) Traffic between two points with a direct service will be above that of two comparable points without a direct service; and
- (2) On introducing a direct service, total traffic between the two points will increase.

In order to establish comparable routes, the traffic between West Germany and one other country was studied. Investigation of all the routes from Stuttgart was not valid, since the links between and the common interests of, any two countries are constantly changing and it is unlikely that the links between different country-pairs will change at the same rate. The U.K. was used as the other country, as apart from the greater knowledge possessed and the interest offered, alternative modes of transport are less convenient than for other European countries.

fig 12.2

# Use of Direct Services as a Function of Frequency



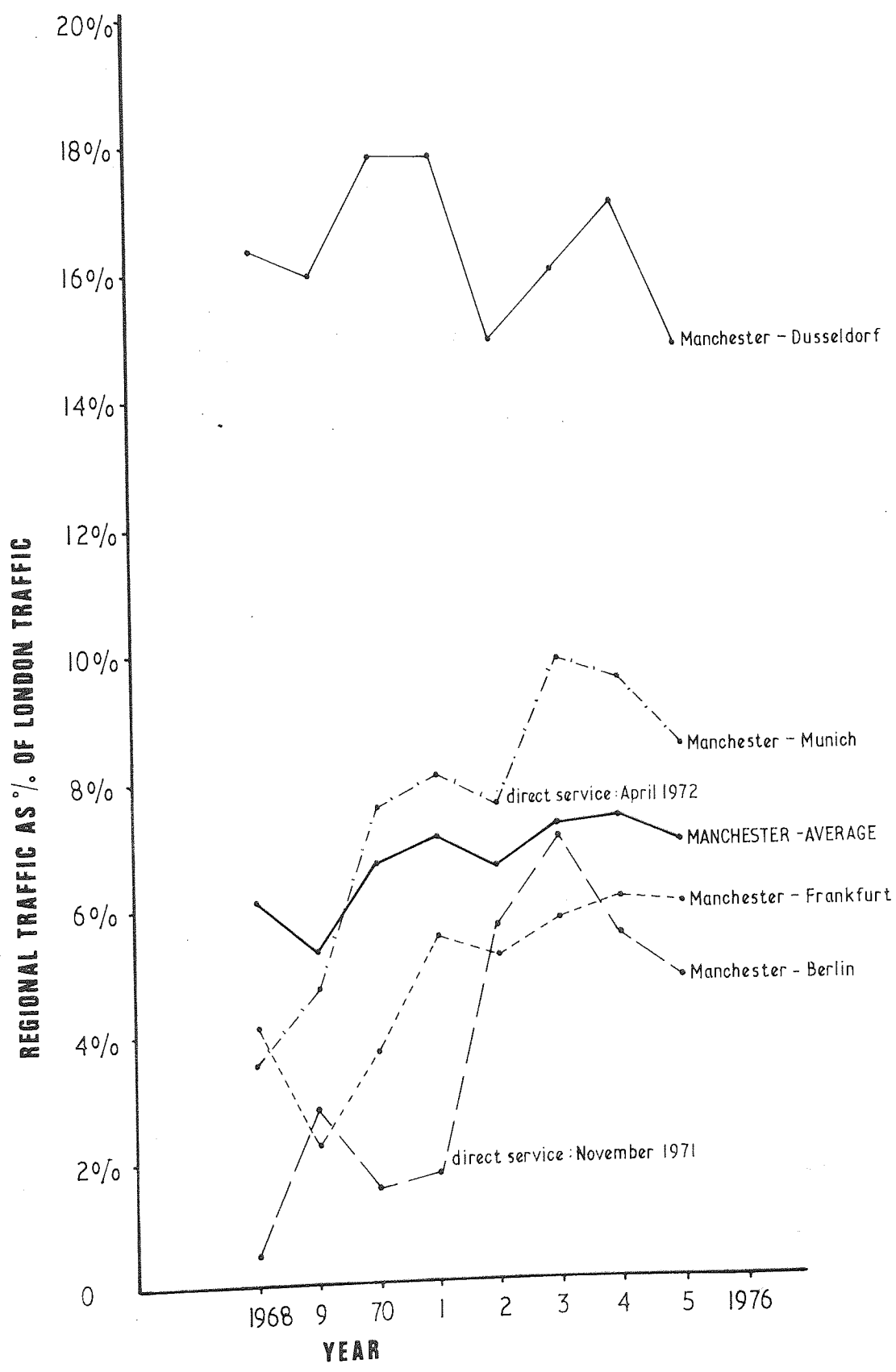


The statistics available show the number of passengers travelling from each German Airport, either directly or by interlining, to each airport in the U.K. Traffic to London, Birmingham and Manchester was studied, these being three points with direct scheduled services to the G.F.R. It was inappropriate to consider absolute traffic volumes between, say, Manchester and the German airports, since the latter have different catchment areas. The traffic to London from each G.F.R. airport was taken as a "bench-mark", and the total traffic to Manchester or to Birmingham from the same airport divided by it, the ratios of the U.K. regional airports' catchment areas to that of London being relatively constant. This procedure was completed for eight years at the ten German Airports. The results are summarised in Figures 12.3 and 12.4 which show the Manchester and Birmingham shares of the market for routes with direct services and the average share of all traffic from the G.F.R., as a function of time.

Two important points emerge from these figures:-

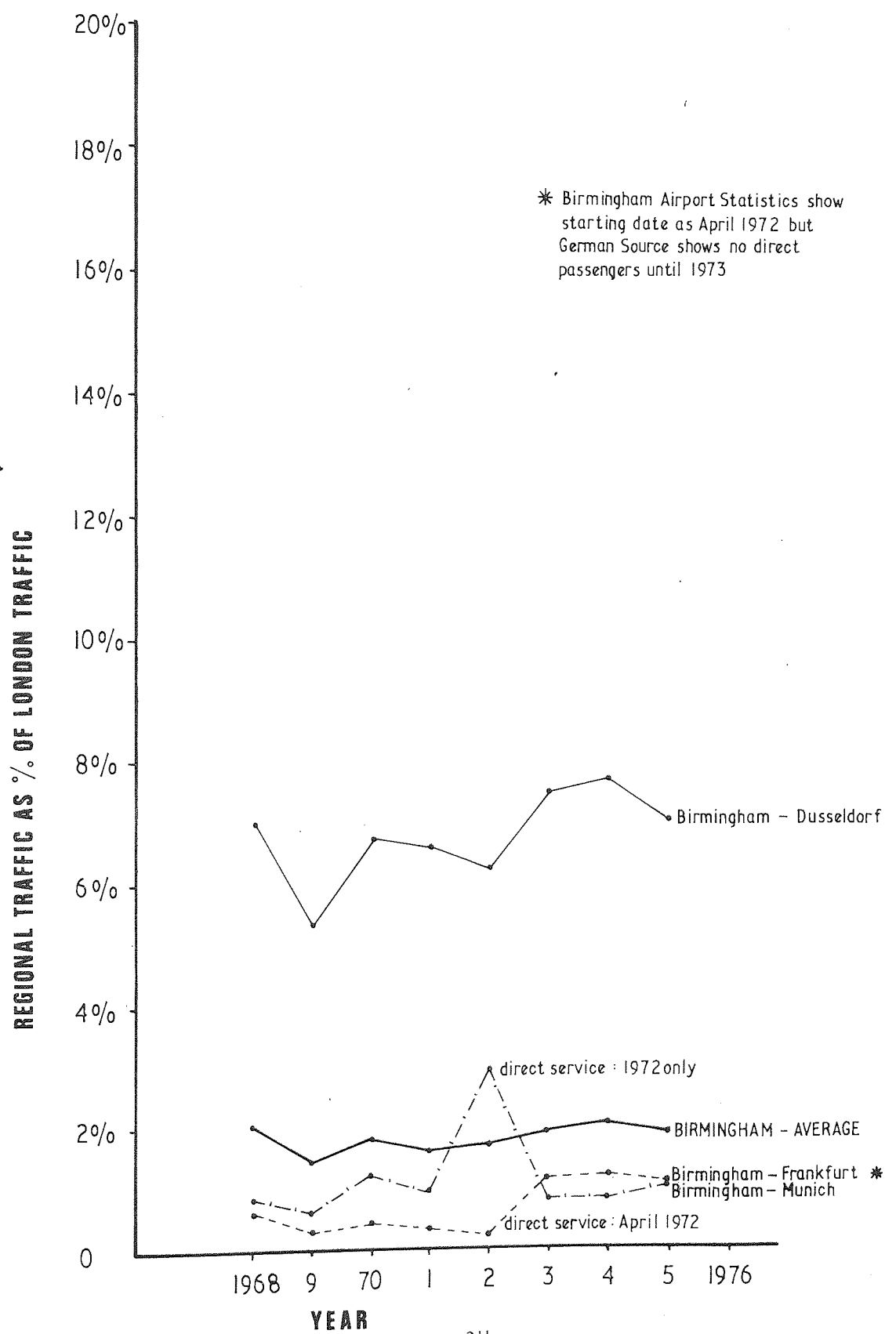
- (1) With the exception of Frankfurt and Manchester-Berlin, all routes from Manchester and Birmingham to Germany with direct scheduled services, consistently had above average market shares. The "poor" performance of the Frankfurt routes from Manchester and Birmingham might be attributed to the following cause: London and Frankfurt are the hub airports of the respective countries, and there is a high frequency of flights between the two.

# Stimulation of Traffic :- Manchester - G. F. R. Routes



SOURCE : Confidential

# Stimulation of Traffic:- Birmingham - G. F. R. Routes



Thus, a passenger in London may find it convenient to interline to a further destination at Frankfurt or return via Frankfurt. A passenger at Manchester or Birmingham with only one daily flight to Frankfurt may, however, find that it is more convenient to interline via Heathrow to his final destination. Passengers who arrive at Frankfurt from international points and who continue to the U.K. are not revealed by these statistics.

- (2) During the period studied, four direct scheduled services were introduced, one for part of the time only. This was Birmingham-Munich, and the market share showed approximately a 3-fold increase. The Birmingham-Frankfurt share showed a 3 to 4-fold increase on the introduction of a direct service. The frequency between Manchester and Berlin was increased, and a corresponding increase in market contribution was experienced. Introduction of a Manchester-Munich service, however, caused only a slight increase in the contribution. It is believed that this service was closely connected to travel associated with a large international project, and termination of the air service in April 1976 closely followed completion of the project.

Thus, the hypothesis of stimulation of traffic is supported, since the effects described at the beginning of this section have been detected.

It is possible that before the introduction of a new scheduled service, the market existed but was not revealed by these statistics. For example, passengers from Frankfurt to Birmingham may have flown to Heathrow, and then driven to Birmingham.

#### 12.4 The Flights

##### 12.4.1 Theoretical Considerations

The air passenger will normally regard his flight simply as a means of transferring himself from point A to point B. Rarely will he consider where the aircraft has come from or will go to after depositing him at B. However, as this chapter demonstrates, such factors are of considerable importance in developing and maintaining air services. It is useful to review and clarify some of these operational factors at this stage.

Flights may operate on an "in-and-return" basis as described earlier (Section 12.2) i.e. an aircraft begins a flight from its base, flies to the destination, and then returns to its base. Alternatively, an aircraft may operate a multi-sector or "bus-stop" flight. Such a flight starting from the aircraft's base would call at several airports before reaching the final destination and returning, perhaps via the same intermediate points, to base.

Consider, for example, the route shown below between the airports A, B, C and D.



Passengers travelling from A to D would generally prefer to fly non-stop without intermediate calls at B and C. The traffic between A and D may not be sufficient to make this operation economically viable. Thus, traffic must be supplemented by making the intermediate stops. For example, the total traffic between B and C is composed of four elements:-

$$T_{BC} = t_{BC} + t_{AC} + t_{AD} + t_{BD}$$

Where  $T_{XY}$  is the total traffic flow between X and Y, and  $t_{XY}$  is the local traffic between X and Y.

For a continued commercial operation  $T_{BC}$  must be above a certain break-even level. These considerations are discussed in more detail by Rosenberg. (88.2)

It is useful to sub-divide the local traffic,  $t_{BC}$ , into three further categories:-

- (1) Passengers arriving at B by surface transport, flying to the destination airport, C, and leaving it by surface means, and vice versa. These will be termed here "Terminating passengers".

- (2) Passengers arriving in B from other airports (except A) by air, changing planes at B, and terminating at the destination, C. These are "Transfer passengers".
- (3) Passengers arriving at B by surface transport, flying to the destination C, and then connecting with other flights to their final destination. These are "Interlining passengers".

These passengers all board the flight for the first time at B, this being the reason for their classification as "local traffic".

The passengers  $t_{AC}$  and  $t_{AD}$  are seen (and, indeed, classified) at B as "Transit passengers".

#### 12.4.2 The Position at Stuttgart Airport, Winter 1976/77

Of the 13 international destinations served from Stuttgart, no less than eight were served by multi-sector flights. However, it was possible to reach all but two of the airports (Rome and Athens) non-stop. In some cases, Stuttgart was the origin of the flight (i.e. Airport A) with the aircraft going to two destinations, while in other cases it was one of the intermediate points (i.e. Airport B or C).

During the same period, there were 222 transfer connections per week available at Stuttgart.<sup>(93.3)</sup> In the main, these connections were between German airports and international

points, e.g. Berlin to Zurich via Stuttgart was possible 20 times a week. Only ten connections were between two international points, viz. Milan to Copenhagen, and Vienna to Brussels.

A considerable number of interline connections were available to passengers beginning their journey at Stuttgart. There were approximately 1,650 outbound connections per week during the period considered. <sup>(93.4)</sup> Only 44% of these were via the German hub of Frankfurt, and as many were via international points, Zurich and London being the main centres.

#### 12.4.3 The Dependence of Flights on Traffic Segments

The dependence of each of the international scheduled flights on the different segments was analysed for 1975.

The four basic passenger categories were:-

- (1) Terminating traffic;
- (2) Transfer traffic;
- (3) Interline traffic; and
- (4) Transit traffic.

When the flight continued to a further point, the local traffic was categorised for both destinations. While it was possible to determine the number of transit passengers accurately, information for the other three categories was available only for outbound passengers. It was assumed, in the absence of data to the contrary, that traffic on the inbound flight was in the same proportion.



The dependence of the flights on the different categories is summarised in Table 12.7. For the sake of confidentiality, the flights are identified only by letters A to P, and only overall load factor and percentages of total passenger load are given.

Some comments may be made on this table:-

- (1) Only two flights carried loads of more than 75% of terminating passengers, the highest being flight L with 85%.
- (2) Flight M had a low load factor, only 24.7% for local traffic (34.9% overall with transits). This local load factor was improved in 1976 to 29.8% by an increase in interlining traffic - which is now about 30% of local traffic.
- (3) The load factor of flight N has also been improved to 47.5% in 1976, but mainly as a result of a reduction in capacity. Traffic has, however, increased despite the contribution of interlining passengers falling to some 8% of total.
- (4) The load factor of flight H improved in 1976 to 56.8%, mainly because of an increase in transit passengers to over 50% of the total load.

Thus, the majority of flights operate with reasonable load factors, and can be expected to be above the break-even level. The commercial viability of only three flights, Flights H, M and N, is in doubt.

Table 12.7

Characteristics of Flights from Stuttgart

Flight	Destination 1		Destination 2		Transits % of load	Total Load	Overall Load Factor % of seats sold
	Termin- ating % of load	Trans- fer % of load	Termin- ating % of load	Trans- fer % of load			
A	20.6	5.2	9.4	1.8	29.1	100%	75.4
B	26.7	2.6	8.5	0.8	40.9	100%	44.8
C	66.2	4.1	21.5	3.3	0.0	100%	53.6
D	6.4	0.9	0.1	6.9	84.6	100%	53.4
E	3.4	0.5	0.1	13.6	81.6	100%	55.5
F	44.2	7.8	-	-	36.9	100%	48.7
G	31.6	2.5	-	-	51.1	100%	46.6
H	50.6	5.1	-	-	26.5	100%	38.3
I	43.1	3.8	-	-	35.5	100%	46.3
J	31.2	3.1	-	-	45.8	100%	43.6
K	83.1	3.2	-	-	-	100%	49.7
L	85.0	3.2	-	-	-	100%	47.3
M	65.9	4.4	-	-	29.1	100%	34.9
N	71.9	3.2	-	-	-	100%	33.9
O	43.1	6.7	-	-	-	100%	50.1
P	72.2	2.3	-	-	1.1	100%	49.0

Source: Confidential

This analysis strongly suggests that terminating passengers should not be the only consideration when forecasting traffic for new services. If the services from Stuttgart relied exclusively on this category, very few would be operating.

12.5 Development of Air Services from Stuttgart

12.5.1 A Qualitative Description

Since 1960, there have been direct scheduled passenger services from Stuttgart to 32 destinations.<sup>(93.5)</sup> Detailed analysis of airport timetables shows that the use of multi-sectored flights has been fundamental to the provision of these services.

All destinations presently served have grown from these "bus-stop" services. Often, particularly at the beginning of the period, the airlines had fifth freedom traffic rights. For example, services between Stuttgart and London were provided by Austrian Airlines (en-route from Vienna) until the end of the Winter 1962/63 Season. SAS, the Scandinavian airline, was also prominent in the use of fifth freedom rights, and has served no fewer than 15 destinations from Stuttgart in as many years. This policy has "tested" routes before their adoption by the national carriers e.g. Madrid, Barcelona, Lisbon.

Several of the airlines also had internal traffic rights e.g. Alitalia's flight from Rome and Milan was able to carry local traffic between Stuttgart and Hamburg. Indeed, five non-German airlines were providing 50% of Stuttgart's domestic services in 1960, although this has decreased since then.

Many of Stuttgart's former destinations owed their services to multi-sector flights; traffic from Stuttgart was a useful addition to the transit load, but was by no means the reason for the service. Only two major points have had their links to Stuttgart suspended: New York and Amsterdam\*.

Thus, the thirteen international destinations served by direct (i.e. on one aircraft) passenger flights, have all stemmed from the use of multi-sector flights or fifth freedom traffic rights. Some airlines even had cabotage (internal traffic rights). Indeed, all but five routes still depend to some extent on these techniques to boost traffic.

#### 12.5.2 A Quantitative Analysis

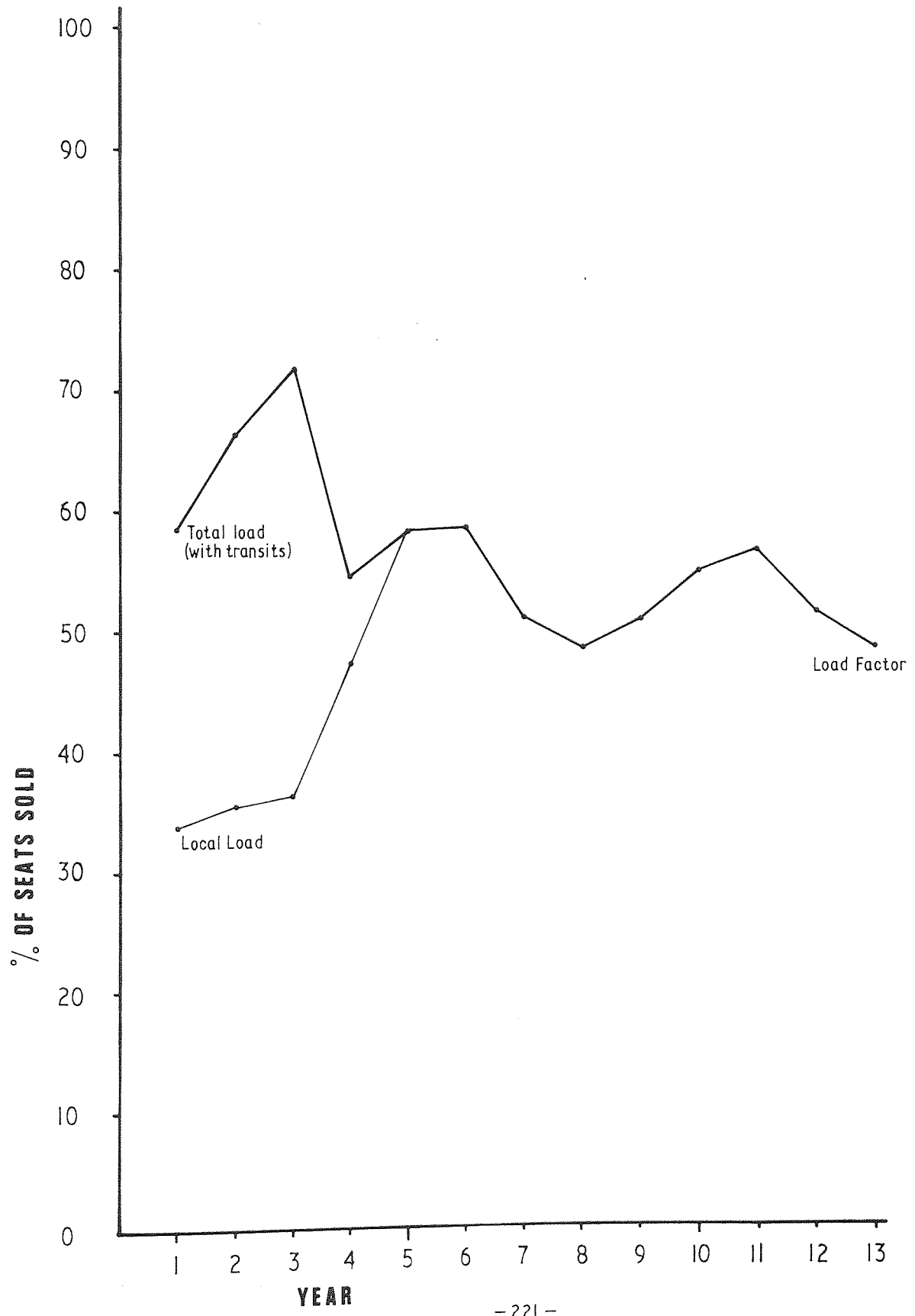
Four (international) destinations were selected and the development of the services over a period of years was analysed. The dependence on transit traffic was investigated for each destination. For the sake of confidentiality, the routes are referred to by letters W through to Z, percentages rather than actual traffic figures are used, and the time scale is defined as year 1 to year 13.

In years 1 to 4, Destination W relied on transit passengers to give the flights respectable load factors (see Figure 12.5).

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\* The reasons for this decision are discussed in more detail in Appendix E.

# Variation of Load Factor with Time Destination W



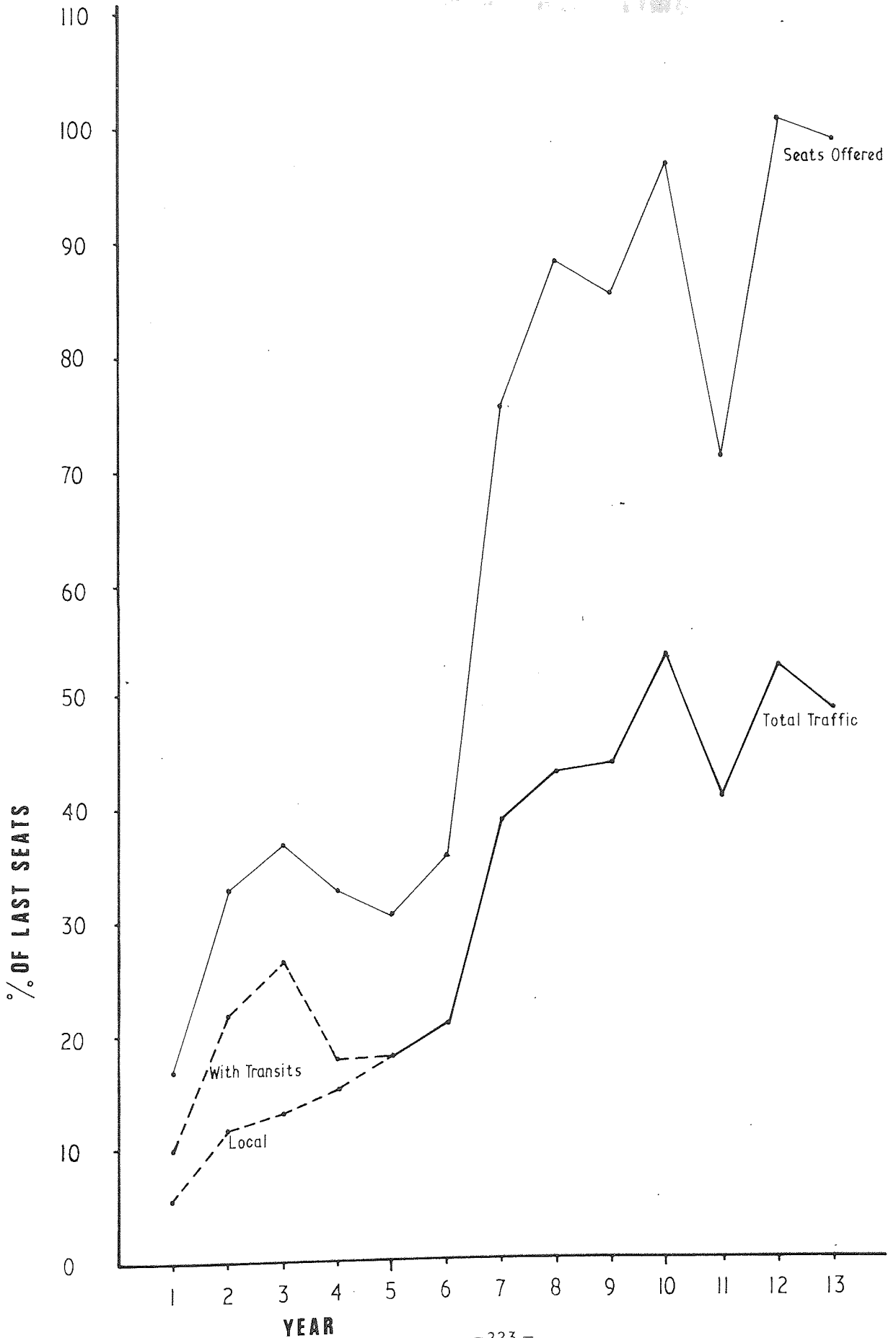
Perhaps in year 3, the last full year with transit passengers, local traffic was suppressed a little, as the overall load factor exceeded 70%. However, as may be seen from Figure 12.6, local traffic grew smoothly during this period. Since the cessation of transit traffic the load factor has been quite healthy, averaging over 53%.

As may be seen from Figure 12.7, Destination X relied heavily on transit passengers over the years - perhaps unnecessarily so at certain times. However, their presence ensured continuity of service which might not otherwise have been possible. Over the first half of the period, the overall load factor was very good, between 60% and 70%. It does not seem that local traffic has been much suppressed by the existence of the transit passengers, although it is impossible to be categorical.

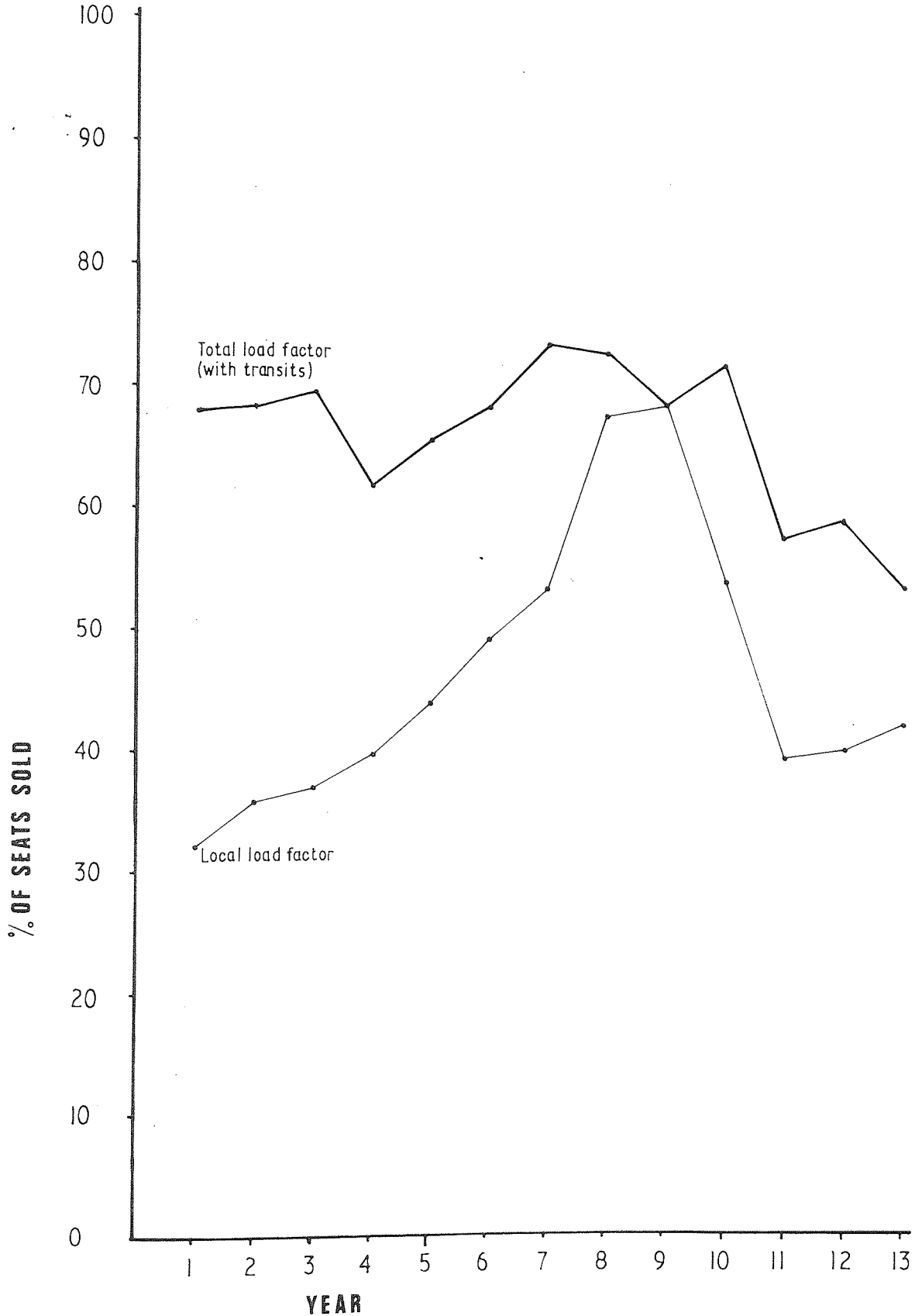
Figure 12.8 demonstrates the dependence of flights to Destination Y on transit passengers. The local load factor has never exceeded 50%, and has rarely been above 40%. Its survival seems to have depended to a large extent on transit traffic. Two attempts have been made to operate without transit traffic - on both occasions after the total load factor had risen above 70%. The airline has therefore taken care not to suppress local traffic.

Flights to Destination Z have depended very heavily on transit traffic over the years, as shown in Figure 12.9. While the local load factor has never been above 30%, the total load factor has normally been above 50%. Without the transit traffic it is most unlikely that a service between Stuttgart and Destination Z would have been provided.

# Growth of Traffic Destination W

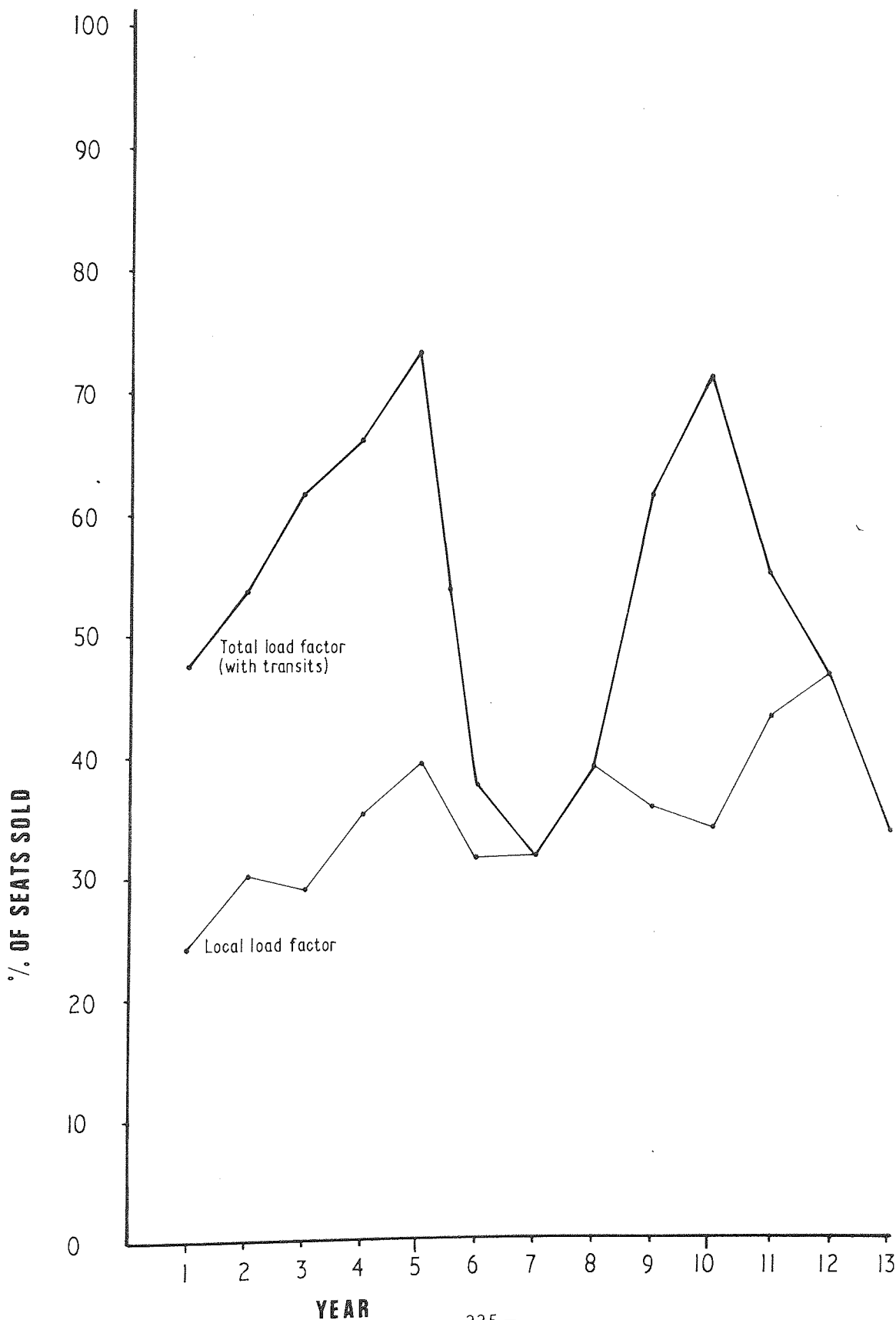


### Variation of Load Factor with Time Destination X

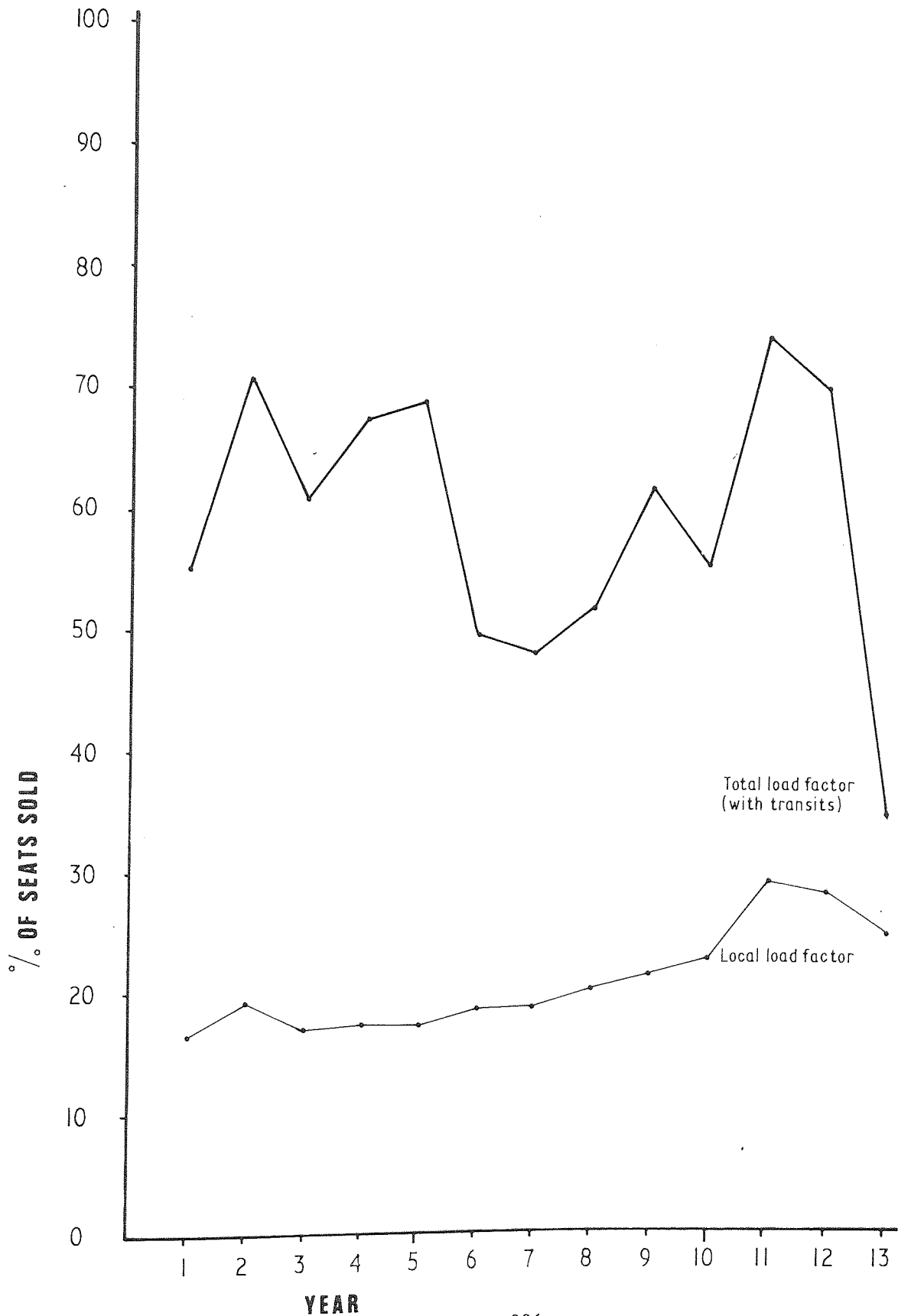




# Variation of Load Factor with Time Destination Y



# Variation of Load Factor with Time Destination Z



In addition to third freedom passengers carried between Stuttgart and these destinations, the carriers were also able to obtain a substantial amount of fifth freedom or cabotage traffic from Stuttgart. This is demonstrated for Destination Z in Figure 12.10. This shows this extra traffic as a proportion of the local traffic between Stuttgart and Destination Z.

This quantitative analysis of the passenger flows on certain routes has confirmed the findings of the qualitative investigation of the development of air services. The use of multi-sector flights and the liberal attitude towards fifth freedom and internal traffic rights has enabled airlines to provide services that might well have been uneconomic if relying solely on local traffic. This policy has also meant that an airline has provided Stuttgart with two air services (i.e. to separate destinations) instead of one. Flights to Destination Z are particularly good examples of these points.

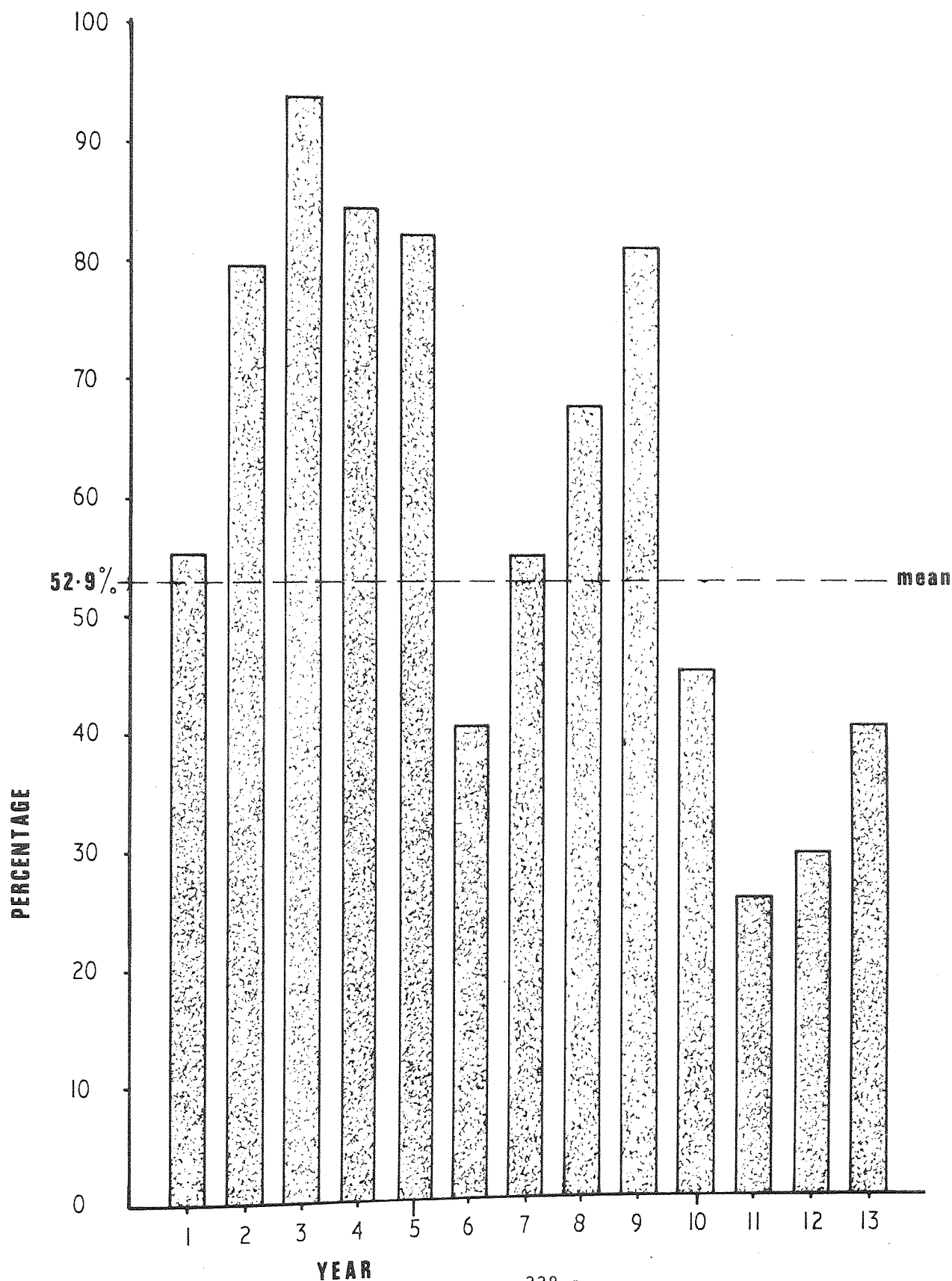
### 12.5.3 Applicability of Findings to the complete G.F.R. Network of Services

In order to test the validity of applying the findings for Stuttgart to the German Airport System as a whole, five other major airports were visited\*. Although it was not possible to perform such a detailed analysis for each, there is general agreement with the conclusions reached for Stuttgart.

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\* Frankfurt, Dusseldorf, Munich, Hamburg and Cologne/Bonn.

### Fifth Freedom or Cabotage Passengers as a Percentage of Third Freedom Passengers to Destination Z



The review of the other German airports showed that their present patterns of international scheduled services are very similar to that of Stuttgart, although the scale is variable. (93.6) Analysis of the historical development of the network has not often been possible. However, the evidence available is in agreement with the findings for Stuttgart. Indeed, examples of fifth freedom services by SAS and KLM to southerly points may still be found (e.g. Copenhagen through Dusseldorf to Lagos, and Amsterdam to Cairo, Nairobi and Dar-es-Salaam via Munich).

The present West German international scheduled route network is based on careful organisation of multi-sector flights allied to adequate catchment area populations of the airports. This dependence on multi-sector flights for the five non-hub airports studied is summarised in Table 12.8. It may be seen that despite over half the connections being operated with multi-sector flights, 78% of the international connections are available on a non-stop basis.

## 12.6 Comparisons of the Development of air services in the U.K. and in the G.F.R.

### 12.6.1 The National Systems

History has played a large part in shaping the West German airport and air services system known today. With the division of Germany by the Allied Powers after the Second World War, (94.1) West Germany was deprived of its focal point, Berlin\*. Frankfurt developed as the German hub airport because of its largely undamaged and long runways, its central position in Germany,

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\*Only airlines of the Occupying Powers, namely Air France, Pan American and British Airways, may provide scheduled services to West Berlin.

Table 12.8

Dependence of International Connections  
on Multi-Sector Flights

Airport	Number of direct connections to international destinations per week (Winter 76/77)*	Percentage of these connections involving multi-stage flights	Percentage of non-stop connections available
Dusseldorf	343	45%	79%
Munich	325	60%	81%
Hamburg	266	55%	71%
Stuttgart	104	45%	88%
Cologne/Bonn	107	63%	75%
Total	1,145	53%	78%

Source: Airport Timetables

\* Departures only are considered, and one flight may make more than one connection e.g. Stuttgart-Milan-Rome counts as two connections, both involving a multi-sector flight, but with only one non-stop connection.

and its trans-Atlantic links (being in the American zone), rather than the size of its local catchment area.

The immediate post war political climate also dictated that Germany was not allowed to have a national airline. Air services were provided by foreign airlines, who experienced little difficulty in obtaining traffic rights. Substantial and intricate networks were established, and the relics of some airlines' systems, such as SAS's, still exist. The creation of Lufthansa in 1955 did not alter the situation substantially, and the skeleton of the network remains: fifth freedom and internal traffic rights have gradually been recinded by the German Federal Government, but the services have been sustained by combination of domestic and international routes. Services between Stuttgart and the Iberian Peninsular are good instances of this: Initially SAS served Barcelona, Madrid and Lisbon from Copenhagen via Stuttgart; more recently, Lufthansa have flown Dusseldorf-Stuttgart-Lisbon, while Iberia have operated Madrid-Barcelona-Stuttgart.

Although the use of multi-sector flights has been a major factor in maintaining and developing the network of air services formed in the immediate post-war era, the services also owe their viabilities to the dispersed population of Germany. The six airports studied had large catchment areas, typically a population of several millions within an hour's travelling time. (93.6)

By contrast, the U.K. air services' system ("network" is something of a misnomer) is firmly focused on London. A classical feeder-hub system developed, with strong domestic routes into London providing passengers to radiate into Europe, and indeed worldwide. The large range of destinations and high frequencies of the services make London, i.e. Heathrow, an attractive interlining point between Europe and North America. This feature is even more attractive if the services between London and Europe are non-stop. Such considerations have dictated that rather than build up high frequencies from several U.K. airports to major European points such as Milan, airlines have preferred to dilute this traffic by giving direct services from London to minor points e.g. Venice. (88.3)

#### 12.6.2 A Comparison Between Birmingham and Stuttgart

Some remarkable similarities exist between Birmingham and Stuttgart as summarised in Table 12.9. Most importantly, they have very similar catchment areas, each with approximately 2.67 million people living within 30-minutes' travelling time. (20.19, 95, 96) The propensities to fly (P.T.F.) are also similar: in 1973, the West Midlands Planning Region's P.T.F. was 0.26 (20.20) (residents only)\*, while for Baden-Wurttemberg in 1971 the P.T.F. was 0.30 (residents and visitors) and 0.19 (residents only).

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\*The limited numbers of foreign visitors using Birmingham Airport (as described in Chapter 6) makes it difficult to assign visitors uniquely and solely to the West Midlands in order to obtain a total P.T.F. However the D.O.T. attempted to ascribe 226,000 trips by foreign residents to the West Midlands in 1973. (20.21) This leads to a total P.T.F. of 0.35.



Table 12.9

Comparisons between Birmingham and Stuttgart Airports

	Birmingham	Stuttgart
Population in 30 minute catchment area	2.67M	2.67M
Propensity to fly:		
Residents only	0.26 (1973)	0.19 (1971)
Residents and Visitors	0.35 (1973)	0.30 (1971)
Distance from hub airport	110 miles (Heathrow)	133 miles (Frankfurt)
Distance from other nearest competing major airport	80 miles (Manchester)	137 miles (Munich)
Number of international destinations served by direct scheduled services (Winter 1976/77)	5	13

Sources: D.O.T.

"Statistische Berichte: A12 Bevölkerung" vom Statistischen Landesamt Baden-Württemberg (1976)

Michelin Road Map No. 987 : Benelux Germany, Austria

"Bon Voyage" German National Tourist Board, Frankfurt (1975)

ADV, Stuttgart

AA Handbook.

If attention is focused on scheduled services it might be more appropriate to consider the division of the P.T.F.'s between business and private journey purposes - non-scheduled flights being used almost exclusively for private reasons. However, information on this is not available for Germany.

Use of scheduled services by private travellers is also a significant factor, comprising 42% of passengers at Stuttgart. A comparison with Birmingham (even if the information were available) would not be valid since there are no scheduled flights to the holiday areas of Portugal, Spain and Greece, as there are from Stuttgart.

It must also be remembered that the P.T.F.'s include both domestic and international travel. For Stuttgart, with a large number of internal services, the domestic element is significant,<sup>(90)</sup> particularly to Berlin. Birmingham has a lower range and frequency of domestic services, and this will adversely affect the P.T.F.: domestic travellers are less likely to travel long surface distances to alternative airports than are international passengers; frustrated domestic travellers may tend to complete their whole journey by surface means.

The evidence presented in Section 12.3.3 suggests that provision of services stimulates air travel: Thus, the P.T.F. of the West Midlands Planning Region may be further suppressed by lack of services at Birmingham.

The proximity to, and the status of, competing airports (Heathrow (hub) and Manchester in the case of Birmingham, and Frankfurt (hub) and Munich for Stuttgart) are also comparable particularly if access time is considered. In the U.K., the situation is complicated by the existence of Luton and East Midlands Airports. However, Luton has only non-scheduled flights, and the scheduled services at East Midlands\* duplicate, rather than complement, the flights available at Birmingham: their effect is to dilute traffic on these routes. Thus, the comparison in relation to international scheduled services is still good.

To summarise, Stuttgart and Birmingham have very similar catchment areas, very similar P.T.F.'s for the surrounding regions, and very similar competition from other airports in regard to scheduled services. Thus, the comparison between the two is valid and close. Stuttgart can support scheduled flights to 13 international destinations, but Birmingham has connections with only five. This is the clearest indication that Birmingham is underprovided with scheduled air services.

### 12.6.3 Important aspects of the German System

It has been demonstrated that Stuttgart, with a similar environment to Birmingham, can support a wider range of air services. That this is possible, is due partly to operational reasons. The use of multi-sector flights, with the transit passengers carried, is an important feature of this. There is also a different attitude to interline traffic - for example, half of Flight O's passengers (see Table 12.7) are in this category. These passengers are seen in Germany as an inherent feature of international communications.

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\*International destinations served are Paris, Amsterdam, Brussels and Frankfurt (via Birmingham).

This difference in attitudes is not confined to the airlines - the G.F.R. airports also have a more positive approach. For example, each German airport has an official responsible for Marketing and traffic development. The collection and analysis of statistics are normally included in his duties. Possibly as a result of this, the statistical system is much more amenable to market research than is the British one. An example of the possibilities is included in Appendix E.

## 12.7 Summary

This chapter has studied the decentralised nature of the West German air services system. It has identified the most significant factors in its development and continued existence, by a concentration on Stuttgart Airport. There are many similarities between Stuttgart and Birmingham which enable a comparison to be made.

In 1976, Stuttgart Airport handled over two million passengers, and had 13 direct scheduled services to international destinations. Many of the passengers on these flights were in the interline, transit and transfer categories. There is evidence to suggest that provision of direct scheduled services between two points has stimulated some of this traffic, although this hypothesis is not proved conclusively.

The use of multi-sector flights to provide services from Stuttgart has been considered, and the dependence of the existing international services on various passenger categories, such

as transits, has also been assessed. The reliance on passengers other than those terminating locally is significant, and often enables flights to operate with respectable load-factors.

The development of the scheduled services has been traced back to 1960. All the existing routes have stemmed from the use of multi-sector flights, which normally had fifth freedom or internal traffic rights. A quantitative analysis of four destinations has confirmed that without non-local traffic, many services would have been unviable.

General agreement with these findings for Stuttgart has been found at other German Airports. Indeed, over half of the international connections from five airports considered depended on the use of multi-sector flights.

The structure of the post-war airport and air services system in Germany was shaped by a de-centralised population and by various political factors. While the latter factors have largely disappeared, the air services network has been maintained by careful operational planning. The present provision of international scheduled services from regional airports is based on a large population within the catchment area, and on a wide-spread use of multi-sector flights. By contrast, the U.K. system has grown around the hub airport of Heathrow, through which many passengers, both British and foreign, interline.

Birmingham and Stuttgart Airports have very similar potential markets whose accessibilities to alternative airports are comparable. It is concluded that Birmingham is underprovided with international, scheduled air services.

### Stage III

Stages I and II of this research project have assessed the W.M.C.C.'s policy, and have defined the role of Birmingham Airport to be a concentration on those air services which most aid the local economy i.e. scheduled and international, in-bound non-scheduled passenger services. Chapters 11 and 12 have both demonstrated the need for the W.M.C.C. to become actively involved in the promotion of these services in order to remedy the existing deficiencies at Birmingham. This participation is now described in Stage III.

Chapter 13 records the reaction of the W.M.C.C. to the idea of marketing its airport to the air transport industry, as well as presenting the opportunities that were available for action. Two possibilities for providing new air services at Birmingham, and the involvement in the air transport licencing procedures are described in Chapter 14. Conclusions from these case studies are drawn in Chapter 15, which also assesses the implications for future action by the W.M.C.C.

Courses of Action open to the W.M.C.C.13.1 Introduction

This chapter describes the entry of the W.M.C.C. into the sphere of developing air services through its own airport. The need for this course of action has been argued in Stage II in relation to the decision-making procedures of the airlines, and the inadequacies of Birmingham's air services.

Section 13.2 describes the reaction of the W.M.C.C. to the suggestion that it should become involved in promoting its airport to the air transport industry. The options which were open to participation at the commencement of this stage of the project (September 1976) are presented (Section 13.3). In the main, these courses of action had been discovered during the survey of airlines (Stage II). The decision upon which of these openings to concentrate is outlined in Section 13.4.

13.2 The W.M.C.C. Reaction

To reiterate, the W.M.C.C. policy with regard to Birmingham Airport was to use it to stimulate the local economy. The Council accepted that air services were of prime importance to any stimulus and that construction of new airport facilities would not automatically lead to any improvement in the provision of services. It agreed also that it could not ignore the development of air services by leaving this to the airlines.

Consequently, it supported the suggestion that it should take the initiative and attempt to influence the provision of air services.

Support for this new policy included the acknowledgement that in all further communication with external bodies related to the air transport industry, the Author would be acting as the official representative of the W.M.C.C. If and when negotiations with airlines or Government agencies reached an advanced stage, senior officers of the W.M.C.C. stated that they would be willing to co-operate.

Thus, it was possible to conduct Stage III of the project on behalf of, and with the willing co-operation of the W.M.C.C.\* The various possibilities for involvement available are now described.

### 13.3 Opportunities for Involvement

#### 13.3.1 Base Location of Airlines

It was believed that three U.K. scheduled airlines might be persuaded by W.M.C.C. effort to establish bases at Birmingham Airport.

The first airline had a widely scattered operating pattern with several aircraft based away from the home airport. Furthermore, the route network did not allow these aircraft to be rotated into the base for maintenance, except at weekends. There were considerable numbers of staff at these outstations, but

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\*Subsequently three permanent posts were established within the County Council with this marketing function incorporated in their duties.



the airline was seeking to consolidate its operations by withdrawing some routes. The dispersed nature of the network was determined by a desire to utilise available capacity, coupled with a small catchment area of its base airport. The airline's Managing Director had stated during an interview for Stage II, that many of these problems would be resolved by a move to Birmingham because of its large potential market.

Another airline, again with a dispersed operation, was trying to create its own identity in order to increase staff loyalty. It saw concentration on one airport as a means of achieving this, regarding the establishment of British Airways' Super 1-11 Division at Manchester as the successful solution to a similar problem.

During the survey, the Managing Director of a third airline had stated that growth rates and passenger targets were set for development plans, and only then was consideration given to the airports which would provide the traffic. From the Government's consultation document<sup>(20)</sup>, it appeared likely that the airline's base would be designated as a Type C airport catering for local needs by the provision of domestic services, general aviation facilities and some charter operations. Thus, depending on the extent of expansion envisaged by the airline, it was probable that its future traffic would not come entirely from its home airport. Establishment of a secondary base at Birmingham might consequently be attractive to it.

Creation of a new base and transfer of skilled personnel would not be a decision taken lightly by any of the three airlines. The role of the W.M.C.C. would be to present the benefits for the airlines of moving to Birmingham and to help in any difficulties that might occur e.g. obtaining licences to operate air services. Appreciation of the problems involved would also indicate the degree of financial incentives (e.g. low rents) that the W.M.C.C. might have to offer.

### 13.3.2 Route Rationalisation

Dan-Air operated from Bournemouth to Manchester and Newcastle via Cardiff three times a week, and via Birmingham on the other two weekdays. It was difficult to understand why Birmingham, with a greater catchment area<sup>(20.22)</sup>, had fewer flights. Indeed, the survey had provided no indication of why any airline should behave in this manner. It was felt that further study of traffic levels and negotiations with Dan-Air might alter the situation to the benefit of both the airline and the population of the Midlands.

### 13.3.3 Expansion Policies

The lack of interest of one U.K. airline in operating from Birmingham Airport has been noted in Section 11.2.4. This airline was seriously considering expansion of scheduled services to Europe, the area of greatest interest to the W.M.C.C. It was clear that without an initiative from the Midlands the airline would not consider serving Birmingham. To attract the airline, the W.M.C.C. would not only have to provide local knowledge on potential traffic but would also have to support a licence application in the face of probable British Airways' opposition.

#### 13.3.4 Traffic Rights

During the course of the survey, three foreign airlines were found who proffered interest in Birmingham Airport but anticipated or had encountered difficulties in obtaining traffic rights.

One European scheduled airline was very eager to develop direct services to the U.K. provincial airports. In fact, it had applied to the U.K. Department of Trade to operate from its home base to Birmingham and continuing to Glasgow before returning along the same path. Although the airline did not wish to carry local traffic between Birmingham and Glasgow, the application had been turned down. A W.M.C.C. involvement would be necessary to re-kindle the airline's interest.

The comments of the U.K. Managers of the other two foreign airlines were presented in Section 11.3.2. It is useful to describe the schemes which interested them in a little more detail, although the extent to which this is possible is limited by the need to maintain confidentiality.

A large proportion of the (ethnic) traffic of one airline, in the long-haul sector, came from the Midlands, so that there was some advantage of operating directly to Birmingham Airport. Unfortunately, its frequency of operation into this country was low, and that of its pool partner,\* British Airways, even

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\* "Pool" agreements often exist when two or more airlines operate on the same route. The agreement fixes a mechanism for dividing the traffic and the revenue between the airlines.

lower. Under the terms of the existing agreement, British Airways had next option on introducing extra capacity on this route. Unless the agreement was changed, to fly to Birmingham, the foreign airline would have to relinquish one of its flights into Heathrow, a move it was loath to make.

The other foreign airline was very interested in obtaining fifth freedom traffic rights in order to serve Birmingham. It did, however, anticipate considerable difficulties in obtaining such rights and was not prepared to devote much effort to this cause. This attitude was influenced by the withdrawal of traffic rights from Aer Lingus between Manchester and both Amsterdam and Copenhagen.

#### 13.3.5 Closure of Manchester Airport

The main runway at Manchester Airport was in such a poor condition that the Airport would have to close completely for about nine months for repairs. To avoid this, the Airport Authority was proposing to build a new parallel runway. Although no decision had been made at the commencement of Stage III, closure would present the opportunity for Birmingham to capture some traffic. While this might only be for a short time in most cases, it might be sufficient to demonstrate the potential of the Midlands. It is interesting to note that when Munich Airport closed for two months in 1969, several services were transferred to Stuttgart. Two of these, S.A.S's flights to Athens and to Beirut, became a regular feature in Stuttgart's timetable from 1970. (93,7)

### 13.3.6 Licence Applications

As Stage III commenced, two airlines were in the process of applying for air transport licences to operate from Birmingham Airport.

British Air Ferries (B.A.F) had applied to the C.A.A. to fly between Birmingham and Rotterdam and Antwerp. Several airlines were, however, objecting to this application and a Public Hearing was to be held.

Also wishing to link Birmingham to the Netherlands was N.L.M., the domestic subsidiary of K.L.M., Royal Dutch Airlines. N.L.M. saw its future expansion on international, short-haul routes, and had applied to the U.K. Department of Trade to operate two return services daily between Amsterdam and Birmingham.

### 13.4 The Decision

For Stage III of the project, it was decided to concentrate on the licence applications of B.A.F. and N.L.M., outlined in Section 13.3.6. One reason for this was that both these ventures required immediate attention. By virtue of this fact, the proposals offered potentially the earliest opportunities of providing Birmingham with new services. Also, the two airlines were showing an active interest in Birmingham at the time, which could not be said of any other airline involved in the options just described. Thus, these applications had

the best chance of success within the resources available e.g. the initial task of convincing an airline that a particular route was viable was not required. Additionally, these cases involved familiarisation with air transport licencing procedures, which were basic to most of the other options for involvement.

There has been no mention in this chapter of promotion of in-bound non-scheduled services. This is because the airline survey of Stage II had yielded little additional information on this sphere of activity, and no specific cases requiring involvement had been identified.

#### 13.5 Summary

The W.M.C.C. accepted that it should promote the development of air services at Birmingham Airport, and supported the efforts in this field. Several courses for immediate action were available at the commencement of Stage III of the project, and it was decided to concentrate on the licence applications of two airlines.

## CHAPTER 14

### The Involvement of the W.M.C.C. in Applications for Air Transport Licences

#### 14.1 Introduction

This thesis has thusfar sought to demonstrate that in order to use Birmingham Airport to aid local commerce and industry, the W.M.C.C. should play an active part in developing air services. The participation in two plans to provide flights to Birmingham is described in this chapter.

Since both cases involve attempts to acquire air transport licences, it is useful to review separately the procedures involved for both British and foreign airlines. It must be emphasised that the descriptions of Section 14.2 are meant to convey the necessary background information required for an understanding of this chapter. They are not intended as deep analytical investigations of the historical development, the practical application, the finer points or the legality of the existing systems.

Sections 14.3 and 14.4 concentrate on the development of the proposals of two airlines: British Air Ferries (B.A.F.) and Nederlandse Luchvaart Maatschappij (N.L.M.) respectively. In particular the involvement of the W.M.C.C. and bodies other than the two airlines concerned is described.

14.2 Air Transport Licencing Procedures

14.2.1 U.K. Airlines

Under current legislation<sup>(11.2)</sup>, all U.K. owned airlines must obtain an Air Transport Licence (A.T.L.) from the Civil Aviation Authority in order to operate commercial air services, be they domestic or international. An application may be for a new service, or for the alteration or revocation of an existing licence, held by either the applicant or another airline<sup>(97)</sup>.

The C.A.A. must publish the basic details of the application<sup>(98)</sup>, so enabling interested bodies to make objections or representations.

"Interested Bodies" are:

- "(a) The Applicant;
- (b) The holder of any air transport licence;
- (c) The holder of any air operator's certificate granted under an Air Navigation Order;
- (d) The holder of any aerodrome licence granted under an Air Navigation Order;
- (e) Any person whose business includes the carriage of passengers or mails for reward .... whose principal place of business is in the United Kingdom, any of the Channel Islands or the Isle of Man;
- (f) The holder of a road service licence granted under Part III of the Road Traffic Act 1960 ....., and
- (g) The holder of a road service licence granted under Part II of the Transport Act (Northern Ireland) 1967."<sup>(97.1)</sup>



It is important for this thesis to note that this list includes airport operators. Twenty one days (from the date of publication) are allowed for these bodies to state an interest in the case by serving notice on both the C.A.A. and the Applicant<sup>(97)</sup>.

If no objections are received, the C.A.A. decides the merits of the application on the ability of the airline to provide a safe, reliable and prolonged (i.e. financially viable) service to the general public. When there are objections, additional factors must be considered, and a Public Hearing is held<sup>(97)</sup>. Each party to the case must produce evidence in support of its viewpoint e.g. the Applicant must normally supply traffic forecasts including estimates of diversion of traffic from existing services and the amount of stimulated traffic, while the Objectors demonstrate the losses they would incur if the application were successful.

The hearing is held before a panel selected by the C.A.A.. In reaching its decision, the panel is guided by certain criteria<sup>(99)</sup>. On short-haul routes, these criteria include allowance for the effects on the long-haul services of British airlines, and a need to protect existing, efficiently operated services (directly or indirectly competing). A rare exception to this latter consideration would be when the new service represented a major improvement of service to the public. After the decision is announced, any party to the case has the right of appeal to the Secretary of State for Trade<sup>(97)</sup>.\*

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\*For further details see, for example, Shawcross and Beaumont(100).

When a new licence incorporates an international sector, the Department of Trade (D.O.T.), on behalf of H.M. Government, negotiates with the foreign government(s) concerned for the acquisition of traffic rights. This normally involves the bi-lateral agreements between the U.K. and the other country, although not all countries have such agreements with the U.K.. The international aspects of this licencing matter are discussed further in the following section.

#### 14.2.2 Foreign Airlines

Of major importance to international aviation relations was the Chicago Convention of 1944. Over 100 countries are now signatories and recognise that

"..... every state has complete and exclusive sovereignty over the airspace above its territory". (101)

As a consequence of this basic principle, agreements on civil aviation are negotiated bi-laterally rather than multi-laterally. The Chicago Convention did, however, lead to the establishment of five, widely recognised freedoms of the air<sup>(102)</sup>.

The First and Second Freedoms are the privileges afforded to aircraft of State A of flying over the territory of State B, and of landing in State B for technical reasons only (e.g. re-fueling). Many countries allow these 'technical rights' for scheduled services\* without negotiation. (103)

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\*'Scheduled' is used in this instance in the sense given it by the Chicago Convention, even though no definition was offered.

It is the 'traffic rights' governed by the Third, Fourth and Fifth Freedoms which are usually subject to bi-lateral bargaining. The Third and Fourth Freedoms are closely related, and control the carriage of traffic (i.e. passengers, cargo and mail) by aircraft of State A between States A and B. The Fifth Freedom is the right of aircraft of State A to carry traffic between State B and State C<sup>(102.1)</sup>. This should not be confused with the carriage of traffic between State B and State C via State A: This combination of Third and Fourth Freedom services is sometimes known as the Sixth Freedom<sup>(6.3)</sup>.

Another term which is important in international negotiations is 'Cabotage'. This is the carriage of traffic between two points in the territory of the same State or its dependencies. For the U.K., the latter points include, for example, Bermuda and Hong Kong. Traffic on cabotage routes is reserved for carriage by a nation's own airlines, unless this privilege is also granted to another country during negotiations<sup>(6.3)</sup>.

The bi-lateral agreements between any two countries take varying forms. In general, however, they concentrate on third and fourth freedoms and give procedures for establishing routes to be flown, capacity to be offered, and number of airlines designated to operate. Certain agreements go further and specify some of these details. Most treaties also include clauses on the fixing of tariffs<sup>(6.4)</sup>. However, only broad attitudes towards fifth freedom flights are normally given. Various amendments to the agreements are made in the course of time, some of which remain confidential.

Having given one of its airlines permission to fly on a certain route, a foreign government must then approach H.M. Government in order to obtain an operating permit for the airline. This process is handled by the U.K. D.O.T. and when a scheduled service is involved, it considers the existing bi-lateral agreement. According to the extent of the details contained in this, the D.O.T. may seek the opinions of interested U.K. bodies in order to fulfill its obligation of protecting the interests of British aviation.

The basic yard-stick used by the D.O.T. is the balance in revenue of the airlines of the two nations on routes covered by the bi-lateral agreement. This revenue includes earnings from both passenger and freight carryings, and is calculated by the C.A.A. on behalf of the D.O.T. It is susceptible to several sources of errors, including unreliable statistics and the availability of several types of fare on some routes. Only scheduled operations are considered. The D.O.T. relies heavily on British Airways' market research sections to advise on probable future developments in traffic between the two countries. The Foreign and Commonwealth Office indicates other political or commercial factors which affect the situation, e.g. the other country may be considering a large order of goods from the U.K.

In contrast with the procedures for British airlines described in the previous section, there is no prescribed method for public involvement in the application of a foreign airline: the applications are not published; evidence from certain sources only is considered; decisions are reached in private and any discussions with foreign governments are also behind closed doors; no official channels exist for the publication of the reasons for a decision, or even of the decision itself.

#### 14.3 The Application of British Air Ferries

During the airline survey of Stage II, (April 1976), B.A.F. had been visited at their Southend base. Towards the end of the interview it was learnt that B.A.F. were proposing to operate between Manchester and Rotterdam. When an application was made to the C.A.A. and the plans became public knowledge (August 1976), they had been expanded to include Birmingham and Antwerp<sup>(104)</sup>. British Airways(B.A.), Air Anglia and Air Freight raised objections, and a Public Hearing was arranged.

The W.M.C.C. did not give evidence at this Hearing for several reasons:-

- (1) It was not known at the time that this was possible;
- (2) Rotterdam was not one of the most requested destinations named in the Birmingham Chamber of Industry and Commerce (B.C.I.C.) Surveys, and instinctive feelings questioned its viability;
- (3) It was considered plausible that Birmingham had been included in the application as a sacrificial pawn

designed to acquire the licence from Manchester.\*

It was felt essential that the W.M.C.C. should maintain and develop a reputation as a credible party to these proceedings: in view of the doubts about this case, an active involvement at this stage was considered unwise. However, the Author was present at the Licencing Hearing as an observer.

At the Hearing, B.A.F.'s proposals were described in more detail: two aircraft would leave Rotterdam in the morning, one for Birmingham and one for Manchester. Both would return a short time later to Rotterdam, arriving there in the late morning. One aircraft would continue after a short interval to Antwerp. In the evening, the reverse flight pattern would be operated. It was estimated that such a service would carry a total of 15,000 passengers between Birmingham and Rotterdam in the first year of operation, and an additional 5,000 passengers per annum between Birmingham and Antwerp.\*\* Freight was expected to play an important part in the viability of this total operation. The application was being made because neither Birmingham nor Manchester (identified in recent consultation documents as being the growth airports of the future<sup>(20)</sup>) had air links with Rotterdam, a third major industrial centre.

The objection from Air Anglia was in relation to the Manchester-Rotterdam sector, considered to be in competition with its own Leeds/Bradford-Amsterdam service, and is thus of no concern to this chapter.

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\*During the survey one U.K. airline reported that it had agreed with British Airways to remove Birmingham from a licence if B.A. would not object to the Manchester parts.

\*\*The services were to be introduced in the order: Rotterdam-Manchester, Rotterdam-Birmingham, and finally the extension Rotterdam-Antwerp.

Air Freight based at Lydd Airport in Kent, relied to a considerable extent on the Midlands and the North of England to provide business (e.g. 42% of its cargo was trucked from "north of Watford"). The diversion of traffic from its flights to Antwerp was the basis of the objection.

British Airways was the major objector and opposed the application on four grounds:

- (1) Birmingham-Rotterdam traffic was adequately served by existing B.A. services, notably Birmingham-Amsterdam and the supporting bus-service between Amsterdam Airport and the centre of Rotterdam. The D.O.T. decision to refuse N.L.M.'s application to operate flights between Amsterdam and Birmingham (described in Section 14.4) was cited as evidence of the adequacy of B.A.'s service;
- (2) The proposed service would adversely affect the economics of the existing services, causing the Birmingham-Amsterdam flights to retreat from profitability to a break-even level;
- (3) Grant of the licences would be in conflict with existing C.A.A. policies in regard to the protection of existing services; and
- (4) The applications were not in the best interests of British Civil Aviation.

During the Hearing it became apparent that B.A.F. did not possess a good knowledge of the Birmingham area: many of its arguments were not taken to strong conclusions; the performance of the existing direct link to the Netherlands was not appreciated; the role of Birmingham in future U.K. Airport strategy appeared not to be fully understood. After the Hearing, direct contact was made by the W.M.C.C. with B.A.F., offering assistance in these matters. It was also felt that in view of the operation proposed and the proximity of Rotterdam and Amsterdam, B.A.F.'s services might be able to ameliorate the problems of travellers between Birmingham and Amsterdam.

B.A.F. replied welcoming co-operation, and were particularly interested in using the Council's local expertise to translate forecasts into actual traffic flows. Unfortunately, before a meeting could be arranged to discuss details, the C.A.A. announced its decision: a licence was to be granted for a service between Rotterdam and Manchester, but not for Birmingham<sup>(105.1)</sup>. Although B.A. later appealed against the grant of the Manchester licence, B.A.F. decided not to continue with the Birmingham route. It was thought that the Birmingham market would have been weak initially and that it would be better to make a new application after about a year.

In reaching its decision, the C.A.A. appeared to be guided by the performance of British Airways' service between Birmingham and Amsterdam. (Air Freight's objection seems to have been discounted.) If B.A.F.'s forecasts were achieved, traffic to



Rotterdam would almost equal that to Amsterdam, and a substantial volume of traffic would be diverted from the latter service. The level was judged to be unacceptable within the policy of protecting existing services<sup>(105.2)</sup>.

In view of the possible future re-application by B.A.F., some comment to the C.A.A. was felt necessary. While agreeing that the service was probably not viable at that time, the W.M.C.C. considered that the traffic had been under-estimated because of the inadequacies of the existing Amsterdam flights. Concern was also expressed that British Airways' opinions had been considered both directly (at the Hearing) and indirectly (through the D.O.T.'s decision on N.L.M.'s application). At a subsequent meeting, the C.A.A. acknowledged that the potential for a new service should not be judged solely against the performance of an existing one. It also felt that this case might be one of the "rare exceptions" when the new proposals would provide a better service to the public, and thus the existing flights might be deprived of some protection.

#### 14.4 The Application of N.L.M.

In 1976, the Dutch airline N.L.M. was considering expansion, and with a limited potential for domestic flights in the Netherlands, looked for growth in the international short-haul sector. It was attracted to the Birmingham-Amsterdam route by facts similar to those presented as Table 7.1, and by the potential of Birmingham as a traffic generator. Its market research section then studied the route in more detail, and concluded that it was underdeveloped.

It is useful at this point to review the history and the performance of flights between Birmingham and Amsterdam. In November 1966, British (European) Airways (B.E.A.) were joined on the route by K.L.M., and both airlines operated two weekly flights at various timings. When K.L.M. discontinued its operation in November 1968, B.E.A. increased its flights to one each weekday. By April 1972, one flight had been added at the weekend, and in November 1973 there was a daily service. However, in November 1974 the weekend flights ceased, while in November 1975, the service was combined with the Dusseldorf flights. In November 1976, the two continental destinations were again served by separate aircraft. (106)

For only one season (Summer 1972) was the departure timing from Birmingham before 10.30 a.m. and indeed, it was normally around midday. The return to Birmingham in general arrived between two and a half and three hours later. One notable exception to this was when the Amsterdam and Dusseldorf flights were combined: although the departure from Birmingham was still about noon, the return flight did not arrive until about 6.00 p.m. This later departure from Amsterdam carried on average load of 74.5%, compared with 61.0% for the out-bound flight. It is considered that this was the result of a more convenient timing of the Dusseldorf-Amsterdam-Birmingham flights. A similar later departure time of 18.35 (local time) from Amsterdam has been in operation since April 1977, with the departure from Birmingham delayed until 16.00 (local time). (106)\*

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\*British Airways has since stated that this later timing was a direct response to N.L.M.'s application.

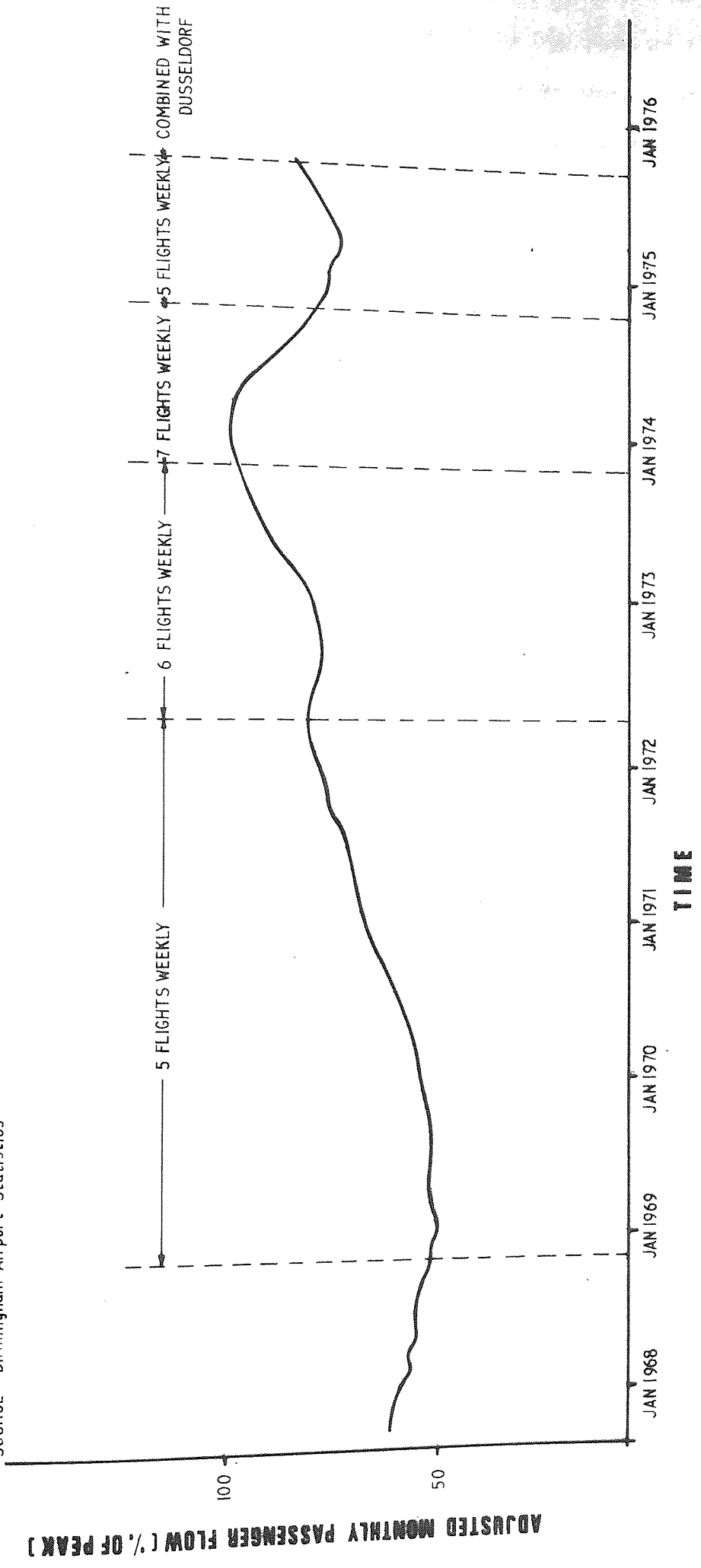
The development of traffic on this route is shown as Figure 14.1. This depicts as a function of time, the monthly total passenger flow (arrivals plus departures) averaged over the previous 12 months (to eliminate seasonal variations), and adjusted on a pro-rata basis to reflect changes in frequency, a base of five weekly return services being taken. For the sake of confidentiality, the peak passenger flow is taken as 100 units, and no absolute scale is defined.

Senior management of N.L.M. visited Birmingham Airport early in September 1976, and shortly afterwards, the Dutch Civil Aviation Authority, on behalf of N.L.M., applied to the U.K. D.O.T. for an operating permit on the route Amsterdam-Birmingham. The proposal was to operate two return services daily (morning and evening) from Monday to Friday with Fokker Friendship F.27 aircraft (44 seats). The D.O.T.'s decision to refuse this application was known by 30th September (the date of the B.A.F. Hearing), but did not become public knowledge until the middle of the following month. (107)

The D.O.T. stated to the W.M.C.C. that the decision had been reached after consultations with "interested bodies" - it is known, however, that this was limited to British Airways, being the only carrier on the route. B.A. recommended against grant of this application for three reasons:-

- (1) Adequate capacity already existed on this route;
- (2) Existing traffic made the route only just profitable;  
and
- (3) No significant growth in traffic was foreseen in the immediate future.

SOURCE:- Birmingham Airport Statistics



Average Monthly Passenger Flow - Birmingham - Amsterdam

The D.O.T. also pointed out that under the terms of the existing Air Services Agreement between the Netherlands and the U.K., only British airlines were allowed to fly between Birmingham and Amsterdam: the K.L.M. service of the late 1960's had been allowed under a temporary permit which, because of the short duration of the operation, had never been incorporated in the full bi-lateral agreement. (108)\*

This decision had been reached by the Civil Aviation (International Relations) Section of the D.O.T. This research has revealed that no account had been taken of airport policy, which was the concern of a separate unit of the D.O.T., housed in a different building. It was subsequently learnt that there was very little contact between the two sections at a "working level". This was most worrying since in its consultation document (20.23), the airport policy section had suggested the concentration of international scheduled services at certain regional airports, it also being implied that Birmingham should be one of these airports. This concentration on the large urban areas was consistent with the findings of the airline survey described in Chapter 10. Furthermore, the W.M.C.C.'s reply to this document, attached as Appendix A, supported the policy of concentration of scheduled services at Birmingham.

The W.M.C.C. was also concerned to learn of this decision, and particularly the reasons given, as it firmly believed the Amsterdam service to be unsatisfactory. This opinion was shared by a knowledgeable and successful source within the airline

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\*For published amendments to the original document, see Shawcross and Beaumont (100.1).

industry who felt that Birmingham could sustain three daily return flights to Amsterdam. Unfortunately, this individual may not be identified for reasons of confidentiality.

Additional support for the inadequacies of the service are, however, provided by the traffic flows. The in-bound load factor of the combined Dusseldorf-Amsterdam flight of 74.5%, not only indicates an increased patronage for a better timed service, but has two other implications: firstly, traffic was suppressed on some arrival flights because they were fully booked\*, while secondly, the inconvenient midday departure from Birmingham produced figures which under-estimate the demand for outward travel to Amsterdam. From its institution, the Amsterdam service has been plagued by poor timings.

The N.E.C. has also had less impact on the Amsterdam route than on the other international scheduled services: while on average, the flow on all international scheduled flights was 15% higher during exhibition periods in 1976, the Amsterdam-Dusseldorf service had an increase of only 5%. This may well be a reflection of the inadequacies of the service, since several of the charter flights mentioned in Chapter 6 originated in Amsterdam.

The second and third reasons cited by British Airways against N.L.M.'s proposals, could be considered to be derived from an inadequate service in the first place.

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\*Airlines regard an average load factor of 70% as the level at which substantial traffic is turned away, and at this figure seek to increase capacity. This is not only their stated criteria (109, 110) but has also been observed in practice (see Section 12.5.2).

It was known that N.L.M. were far from satisfied with the D.O.T.'s decision, and intended to make another application. In order that the supporting arguments described above could be put, the W.M.C.C. wrote to the D.O.T. requesting that in future applications concerning Birmingham Airport it should be consulted.

In reply, the D.O.T. repeated its comments on the Air Services Agreement. It appeared not to have considered a temporary permit and stated that it was:

"open to the Dutch authorities to seek an amendment to the Agreement, a procedure which would normally involve an exchange of this route for a route already operated by the Dutch"(111)

The D.O.T. has since indicated, however, that it will tell the W.M.C.C., on an informal basis, of any approaches by foreign airlines to use Birmingham Airport.

Representatives of N.L.M. visited the Birmingham area in November 1976 to discuss the subject with a number of bodies, including the County Council. N.L.M. was particularly keen to develop leisure travel, including in-bound shopping trips, on the service. The W.M.C.C. was able to provide some information to help N.L.M.'s case, but the extent of this was extremely limited. Regularly collected statistics were not extensive, and questions asked during passenger surveys had not been designed to reveal the type of information required. Nevertheless, N.L.M. was assured of the W.M.C.C.'s continued support. Shortly after this visit, the D.O.T. received letters in support of these proposals from the Birmingham Chamber of Industry and Commerce, from the Heart of England Tourist Board, and from the National Exhibition Centre Limited.

At the beginning of 1977, N.L.M. re-applied and a meeting to discuss the Anglo-Dutch Air Services Agreement was arranged by the D.O.T. with the Dutch Authorities for 29th March, 1977. The discussions mainly concerned the Dutch rights to carry traffic between Amsterdam and Hong Kong, a U.K. cabotage point. This route was so lucrative to K.L.M. that, with the total freight revenue to Dutch airlines, the D.O.T. claimed there was an overall balance of earnings between Dutch and British carriers, despite the imbalance in short-haul routes.\* The Dutch Authorities had no information with which to dispute this assertion, and the D.O.T. was able to press its demands for an exchange of short-haul routes if an N.L.M. permit was to be issued. The Dutch were unwilling to withdraw from a route that was being operated. The next new service to be introduced between the two countries appeared likely to be Manchester - Rotterdam. The D.O.T. was reluctant to discuss the acquisition of traffic rights for B.A.F. until an answer to British Airways' appeal had been given by the Secretary of State.\*\* Consequently, little progress was made on the N.L.M. application, although it was suggested that N.L.M. and British Airways should meet to discuss a possible operation in pool.

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\*Dutch airlines fly on five routes to the U.K. (Amsterdam to Heathrow, Manchester and Glasgow, Rotterdam to Heathrow, and Eindhoven to Gatwick), compared with the 17 of British carriers (Table 7.1). (47.1)

\*\*This decision was published on 31st May, and the appeal was dismissed. (98.1).



Subsequently, management of the two companies met, but no agreement was reached. The opinion of the British Airways' representative was that N.L.M. had lost interest in the service and had been able to utilise its aircraft on other routes without encountering this difficulty.

#### 14.5 Summary and Conclusions

This chapter has described, in the form of two case studies, the W.M.C.C.'s involvement with the air transport licencing procedures currently prescribed by H.M. Government. These differ for U.K. and foreign airlines, but the involvement in the applications of B.A.F. and N.L.M. has enabled a familiarity with both to be obtained. It has also drawn the attention of the two regulatory bodies, the C.A.A. and the D.O.T., to the W.M.C.C.'s interest and activity in this field.

The W.M.C.C. did not exercise its right to make a representation on B.A.F.'s application to fly between Birmingham and Rotterdam, not being convinced of the viability of the route. The C.A.A. reached a similar conclusion but for what appeared to the County Council to be the wrong reasons. When this was brought to the attention of the C.A.A. the comments were received sympathetically and the points accepted in principle. It is hoped that a successful re-application by B.A.F. may now be made at an earlier date than would have been the case without the intervention of the W.M.C.C..

The application of N.L.M. to fly between Amsterdam and Birmingham had a far better base, but the opportunity for involvement by the W.M.C.C. was much less than with the B.A.F. case. The issue was complicated by several external factors, and eventually N.L.M. decided that expansion in other directions was easier. However, not only did the application result in an improved timing for the B.A. service to Amsterdam, but also channels of communication with the O.O.T. were established for future applications by foreign airlines.

Appraisal of Involvement15.1 Introduction

The previous chapter has described the W.M.C.C.'s involvement in the attempts of two airlines to obtain licences to operate air services from Birmingham Airport. Neither of these applications was successful and, in the light of this, the present chapter assesses the role that the W.M.C.C. can and should play in the future.

Section 15.2 examines some of the lessons learnt during the case studies, and some specific examples of how they might be applied by the W.M.C.C. in future action are suggested in Section 15.3. An assessment of some changes in areas outside the Council's domain but which are liable to affect Birmingham, is given in Section 15.4.

15.2 Assessment of Involvement in Case Studies15.2.1 The W.M.C.C. as a Co-ordinator

In Chapter 11 it has been argued that there are considerable gaps in the communications between bodies interested in the development of air services. The case studies have confirmed that an important function of the W.M.C.C. is to act as a co-ordinator of the various activities, and to ensure that all interested parties are kept in contact. This latter role may be as simple as providing a name and address: such was the case when the Birmingham Chamber of Industry and Commerce (B.C.I.C.) sent a copy of its travel survey to B.A.F., to be subsequently used in the Public Hearing. At a higher level,

requiring more expertise the County Council was able to advise the Heart of England Tourist Board and the N.E.C., before these bodies wrote to the D.O.T., following the first refusal of N.L.M.'s application.

The need for this type of involvement was brought home most forcibly, however, by the actions of the D.O.T. It might have been assumed that a body likely to give a 60% grant to the £50M airport project at Birmingham, and a body which was investigating the whole structure of airports in Great Britain, would have considered both these facts when contemplating a licence application by a foreign airline. This would, however, have been a false premise, since there was no contact at a working level between the different sections of the D.O.T. involved.

#### 15.2.2 Availability of Statistics

N.L.M.'s requests for quantitative evidence to support its case revealed a very large and serious deficiency in the statistics available at Birmingham Airport. The data collected on a routine basis merely showed the number of passengers boarding or leaving a flight, with no indication of their division between airports on two-sector flights, such as Amsterdam/Dusseldorf and Brussels/Frankfurt. Their final destination from these and other potential interline points was also unknown, and no record of transit passengers by flight was kept. Information from passenger surveys, such as journey purpose (business, leisure etc.), and trip duration, had not been analysed and presented in the required manner, on a route by route basis.

The scope which a good statistical system offers to a traffic forecaster is amply demonstrated by the work done in Germany on travel between Stuttgart and Amsterdam.\* Although terminating passengers were identified accurately, in a calculation of total traffic flows only estimates were made for the number of interline passengers that might be attracted, and the proportion of terminating passengers that a once daily service might carry. A more detailed investigation of existing traffic flows to determine these factors more accurately is however possible. This in turn would lead to the optimum timing for a new service. Prediction of traffic between Amsterdam and Stuttgart was also helped by the previous existence of flights between the two points, which enabled analogies with other routes to be made.

The ability of the W.M.C.C. to improve the statistical system at Birmingham Airport without national support is in doubt: for example, British Airways has indicated to the Author that it would have most to lose and least to gain by conforming to a system similar to the German one, and hence would be unlikely to co-operate voluntarily. It would appear that the W.M.C.C. must enlist the help of the C.A.A. which has recently asked for suggestions to improve its statistical services. (112)

### 15.2.3 Complexity of Considerations

The case studies demonstrated the complexities which can occur in any licence application. These included the delay in consideration of N.L.M.'s proposals caused by British Airways'

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\*It is interesting to note that investigation of this route was prompted by an instinctive feeling that it should be viable. Quantification of this opinion was possible and is attached as Appendix E.

appeal against the grant of a Manchester-Rotterdam licence to B.A.F., and the influence exerted by events in Hong Kong on the provision of services at Birmingham. These instances reinforce the conclusion that the local body seeking to develop air services should be the W.M.C.C., since a very wide knowledge of aviation, not confined to local issues, is required. None of the other Midland organisations concerned has the resources to provide the necessary expertise.

15.2.4 Establishment of Contacts and Channels of Communication

One reason why N.L.M. is not at present operating services to Birmingham is that the W.M.C.C. was not familiar with the licensing procedures for foreign airlines. With the knowledge now possessed and the understandings reached with the D.O.T., the W.M.C.C. would have been able to increase N.L.M.'s chances of success at the first application. Instead, no part was played in the initial attempt, and then efforts were concentrated on being consulted on future occasions. The arguments in favour of the service, such as the inadequacies of British Airways' flights, U.K. airport policy, and regional development considerations, were not presented by the Council to the D.O.T. at this stage, being retained until N.L.M.'s re-application. It is unfortunate that when this latter event did occur, the Author was in Germany and so the W.M.C.C. did not put forward its case, except through N.L.M.'s evidence. N.L.M. has since lost both patience and interest because of the delays, which would not now be expected to occur to the same extent.

#### 15.2.5 Conclusions

It is difficult to draw many firm conclusions from the case studies just described, because of their largely unsuccessful outcomes.

The need for a W.M.C.C. involvement has been confirmed, however. It is felt that the Council is potentially the best equipped body to provide information on traffic flows, once the deficiencies of the existing statistical system have been rectified, or a survey of the type described in Section 15.3.1 has been performed. Also, it is able to provide data on regional economic and social parameters, as two airlines approaching the W.M.C.C. have recently discovered. Availability of quantitative evidence of these types is essential: no airline will institute services without being convinced of their viability by traffic forecasts. Indeed, it should not be the intention of the W.M.C.C. to attempt to promote unviable services - this would be contrary to one of the very reasons for studying the factors influencing airlines, namely the impact of this topic on airport investment decisions (Chapter 7).

Involvement in the development of air services has also demonstrated that an essential feature of participation is to ensure good communication of relevant information between all interested bodies. Indeed, it is possible that this is the limit of the W.M.C.C.'s ability to promote air services.

The case studies presented here do not allow conclusions to be drawn about the possible effectiveness of future W.M.C.C.

involvement : the failure of these ventures so far to reach the desired objectives may have been due to the lack of statistical evidence and the inexperience of the W.M.C.C. with the licensing procedures. However, the complexities of the issues involved suggest that the influence the W.M.C.C. can exert on the provision of scheduled air services may be very limited. The politics of international relations and the struggles between British Airways and the U.K. independent carriers are important factors, of which the W.M.C.C. must be fully aware.

It is conceivable that the W.M.C.C. may be unable to influence the provision of scheduled services, particularly to international destinations. There is, however, still scope in the non-scheduled sphere, and Appendix F describes one such scheme being pursued by W.M.C.C. personnel.

Thus, the cases studied in Chapter 14 have confirmed the need for an active involvement by the W.M.C.C. in the development of air services, although the effectiveness of such participation remains unproven.

One of the more important aspects of any marketing role is to make certain that airlines are aware of the potential of the Midlands. The next section gives some specific ideas for action in this direction by the W.M.C.C., and supplements the options described in Chapter 13.

### 15.3 Future Involvement for the W.M.C.C.

#### 15.3.1 Services to Amsterdam

Considerable attention in this thesis has been paid to the services between Birmingham and Amsterdam, and their inadequacies.



The attempts of one airline to resolve the problem, and its failure, have been described in detail. This present section outlines another possible solution, given N.L.M.'s lack of interest.

The absence of any useful statistical information has already been noted, and the suggestion made that this should be remedied. This, however, is a long term solution and there is an immediate need for data on traffic flows, particularly in this case to Amsterdam. One method of obtaining this knowledge is by means of a survey of passengers flying between Birmingham and Amsterdam via intermediate points, primarily Heathrow. This could take the form of personal interviews with passengers, when additional information such as duration of stay might also be determined. Another method is to check ticket coupons or even baggage labels. Consultations with travel agents to determine the number of passengers who buy tickets from London to Amsterdam and travel by surface means to the departure airport, are also required. Until surveys of this kind are performed, it cannot be proved beyond doubt that additional non-stop services between Birmingham and Amsterdam are required.

If the results of such a survey clearly show that extra flights each day would be viable, the W.M.C.C. may challenge British Airways (B.A.) to increase the frequency of its services. However, it would take the national airline many months to respond, as exemplified by the combination of the Amsterdam and Dusseldorf flights: although seen as a mistake very early in its operation, it took one whole year to rectify.

The County Council has an alternative course of action: to approach another British airline to operate the service. Air Anglia, with a large scale operation already into Amsterdam, would be a suitable candidate, having in the past dedicated aircraft to providing twice daily return services to Amsterdam from both Edinburgh and Leeds/Bradford. With a 44-seater Fokker Friendship aircraft based at Birmingham, Air Anglia could contemplate operating three return services daily to Amsterdam.

To commence services on the route, any second British airline would need to obtain a licence from the C.A.A. - the licence already held by B.A. Thus, either B.A. would have to agree to share the licence with the second carrier, or the C.A.A. would have to transfer the licence completely.

The first option would require some commercial co-operation between the airlines, similar to that on the Heathrow-Birmingham service provided by B.A. and British Midland Airways. Such co-operation to Amsterdam is less likely, since it would feed a rival interline point. It could also lead to problems of dual-designation on international routes and thus be affected by bi-lateral negotiations.

The second alternative would require the revocation of British Airways' licence, a serious move. The C.A.A. has indicated that some of the smaller airlines might be reluctant to "take-on" the national carrier in such a direct confrontation, and that it might be easier for the W.M.C.C. to apply for the revocation

of the licence. The other U.K. airline would than be able to apply for the vacant, or potentially vacant, licence a short time later. It is almost certain that B.A. would object to such moves and that a Public Hearing would be arranged.

The W.M.C.C.'s application would be based on the inadequate service to the public provided by B.A. Among the evidence that would have to be presented would be the number of connections to long haul services at Amsterdam made by an improved service, and an estimate of the consequent number of passengers making use of this facility.

Such a course of action by the W.M.C.C. could not be taken lightly. The final decision made by the C.A.A. or possibly the Secretary of State, would probably have a political content. However, even if the application failed, it might spur B.A. to provide an extra (morning) service on weekdays more quickly. Its reaction to competition has been evident several times in recent months:

- (1) Retiming of the Amsterdam service after N.L.M.'s application;
- (2) Introduction of direct Glasgow-Paris flight one year ahead of schedule\* in response to British Caledonian's application to fly on that route [98.2]; and
- (3) Statements that it intends to fly on scheduled routes from Gatwick to Dublin, Copenhagen, Dusseldorf, Frankfurt and Zurich by April 1978, in response to applications to fly on the same routes by British Island Airways, Dan-Air and British Caledonian [113].

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\*Stated by British Airways to the Author

### 15.3.2 Other existing services *Scandinavia and the Iberian Peninsula.*

An instinctive feeling suggests that several of the other scheduled services at Birmingham could also be improved. For example, flights to both Glasgow and Paris appear to be well supported, and further investigation might show that both could sustain an extra daily flight. British Airways is known to be considering a third daily Paris flight for the Summer 1979 season, but in view of its past record (see Section 7.4.1), a local impetus would not be amiss.

Similarly, traffic between Birmingham and Norwich is growing steadily, and discussions should be held with Air Anglia to determine the best way of increasing capacity i.e. by using larger aircraft, or by providing additional flights.

### 15.3.3 New Destinations

A survey of the type described in Section 15.3.1 would reveal the most popular destinations of passengers using scheduled services at Birmingham. This would enable the most likely candidates for new direct services to be determined. High on the list are liable to be Copenhagen, Milan and Zurich.

The W.M.C.C. should then make some traffic predictions and approach certain airlines to introduce services. It is essential to consider all possible candidates when making these selections. For example, Dan Air, with its contacts in the Inclusive Tour sector, might be able to boost traffic to Milan.

A licence for the route Birmingham to Copenhagen is presently held by British Midland Airways. In view of the poor scheduled

service connections between Scandinavia and the Iberian Peninsula, consideration of an extension of the flight to Lisbon or Madrid on a few days a week so that sixth freedom traffic could be carried via Birmingham, might be worthwhile. If lessons are to be learnt from the German air services network, traffic on services should be increased by as many means as lateral thinking of this sort can devise.

It is important to progress from the idea that "air services from Birmingham" equates to "British Airways". It is a question of picking "horses for courses" e.g. on the less dense traffic routes only airlines with smaller aircraft and lower costs are liable to be able to offer the standard and frequency of service demanded.

#### 15.4 Future Changes in External Influences

Although, as has been demonstrated by the case studies, the external factors which can affect the development of air services are many and varied, it is possible to identify some which will in all likelihood have a bearing on Birmingham. Most are far more localised than the recent re-negotiation of the air services agreement between the U.K. and the U.S.A. although this can be expected to have an impact on Birmingham at some time.

Of much greater importance is the Government policy on future airport development, due to be published in Autumn 1977. This is likely to name Birmingham as one of the major regional airports on which scheduled services should be concentrated.

This will add greater weight to the Council's arguments in support of these services, since reliance will no longer have to be placed on Government suggestions or issues still open to discussion.

Also of significance is the re-organisation of British Airways in April 1977, which placed Birmingham under the responsibility of U.K. and Ireland Division. Many of the senior managers of this unit were responsible for the creation of Super 1-11 Division at Manchester in the early 1970's, and developed several international services from there. Indeed, the General Manager of U.K. and Ireland, Mr. Stephen Hanscombe, has stated\* that the development of international services from the provinces are the domain of his Division since this strategic objective is more likely to be attained than if administered by European Division. In support of this statement, he and several senior managers are moving to the Midlands.

The other 'local' airline, British Midland Airways, is also looking toward the future. It is beginning to re-equip with DC9 jets, which are more suitable for international services than its ageing Viscounts.

#### 15.5 Summary and Conclusions

Although neither of the proposals described in Chapter 14 came to fruition, they have demonstrated the need for W.M.C.C. interest in developing services. One reason for the lack of success was the inexperience of the W.M.C.C. in the field of air transport licensing, but this has now been rectified.

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\*During a Public Hearing at the C.A.A. on 7 July 1977

Still to be remedied is the absence of statistics that may be used for market research purposes. The complexity of the issues involved dictates that any organisation adopting this essential role of co-ordinator be fully familiar with the aviation world. The ability of the W.M.C.C. to influence the provision of air services has not been proved, however.

It has been discovered that the existing regulatory system offers the W.M.C.C. a chance to improve the services to Amsterdam. First, however, it would be necessary to mount a passenger survey to acquire some information for traffic forecasting. This data would also be of value when seeking to increase frequency on existing routes and attempting to provide flights to new destinations. Having drawn up specific suggestions, it is felt necessary to give careful consideration to the airline approached.

There are indications of a brighter future for the development of air services from Birmingham Airport. Publication of the Government's airport strategy is likely to support an increase in services at Birmingham. Developments within both British Airways and British Midland Airways also appear favourable.

The W.M.C.C. should continue to be actively involved in the development of air services from Birmingham Airport. It cannot stand idle and rely exclusively on the airlines to bring about a growth. It would be folly to spend £50M on a new terminal and not invest a fraction of this figure in attempting to attract airlines to utilise these facilities, and thereby aid the local economy.

## Conclusions

While it is not suggested that any two U.K. regional airports are alike in detail, it is felt that there exist certain similarities and some broad characteristics which enable some of the findings of this work to be applied elsewhere. Airport Authorities must consider their reasons for possession of such a facility, and then clearly define the role which it should play.

The West Midlands County Council has a valid policy in seeking to use Birmingham Airport to aid the local economy: while the carriage of freight by air from Birmingham is not essential, and the possession of an airport to encourage commercial development is largely for negative reasons, the Airport may be used to stimulate the local tourist industry. However, the Airport is only important because it enables air services to be provided - without these services, it loses much of its value to the region. International scheduled and in-bound non-scheduled passenger services are of greatest worth to the West Midlands area. For other regions, different categories of flight may bring the desired economic benefits.

Investigation has revealed that airlines, when providing air services, consider airport terminal facilities to be unimportant compared with airside facilities. The essential feature here is the runway which ultimately determines the operations of the airlines. The survey of airlines has also shown that there is reason for considerable concern about the methods by which air services are established and developed. In order to overcome the existing deficiencies in the scheduled air services from Birmingham Airport, the W.M.C.C. should become actively involved with the air transport industry.



The involvement of the W.M.C.C. in the two licence applications described in this thesis has shown that a useful function can be played, particularly if the statistical system is improved. Although the C.A.A. holds statistics which it does not and cannot (for reasons of confidentiality) publish, the information stored is still very inferior to that available in West Germany.

Although it is difficult to judge from the outcomes of the two airlines' proposals, it appears that the influence the W.M.C.C. can exert in the scheduled sector may be limited, because of the complexities of the issues involved. Indeed, had either of the applications described in Chapter 14 involved the acquisition of fifth freedom traffic rights, other complications would have arisen. The D.O.T. has indicated that such an application by a foreign airline would stand its best chance of success if British aviation gained something in return. Thus, if the W.M.C.C. approached Alitalia to fly from Milan to Birmingham with fifth freedom rights via Zurich, it might also have considered such proposals as British Airways flying on the route Manchester-Geneva-Rome, on the principle that forewarned is forearmed.

Specific suggestions of this type, together with the varied nature of the British scheduled airlines and the possible use of multi-sector flights to develop air services, cannot be considered for one airport in isolation. There must be a co-ordination of efforts of the different airports and airlines, and this would be best accomplished within the framework set by a national scheduled air services plan. Such a plan should go into more detail than the White Paper on the

national airports' policy, shortly to be published, and ideally should specify destinations to be served together with frequencies. There are, of course, difficulties in creating such a blue-print, and attempting to implement it would be even harder. However, a rational air services network would be able to emerge.

In the absence of a plan of this type, the W.M.C.C. should develop specific suggestions for a route network based on Birmingham, and approach carefully selected airlines to operate these services.

Air services depend for their viability on the support of the travelling public. Suggestions for further work on the psychology of travellers deciding the route of their journey are given later, but the results of such research are liable to indicate that an airport must also be marketed to the general public.

Thus, in order to confer the maximum possible benefits on its surrounding region, an airport must be marketed to both the air transport industry and the general public. Development of air services is of paramount importance, and might best be accomplished within the framework of a national scheduled services plan.

### Recommendations for Further Work

During the course of this thesis various proposals for continued involvement in this field have been presented, notably in Chapters 13 and 15. The early stages of the work also revealed opportunities for action: by common-rating air freight tariffs to certain destinations, the financial performances of the scheduled passenger services might be improved (Chapter 4); attempts might be made to attract specialist firms in the air transport industry to the Airport (Chapter 5). Study of possible U.K. expansion of overseas companies, particularly those based near to continental points served directly from Birmingham, might also be beneficial.

There is a need to study the psychology of passengers when choosing their travel route. Such research should seek to establish the importance of the frequency and timing of flights, and the significance of Heathrow being "on-the-way" to many of Birmingham's potential destinations, while Frankfurt is in the opposite direction to many of the cities served directly from Stuttgart. The role and effect of the existing passenger tariff structure should also be clarified.

The purpose of this thesis has been to study one of the basic policies of the W.M.C.C. in relation to Birmingham Airport, because little was understood about the ways by which the local economy might be assisted. A second fundamental policy remains un-considered, and in the Author's opinion, it has been the subject of very little investigation:

the length and condition of the main runway. A conclusion of this research is that the runway is the essential feature of an airport. While the C.A.A. may have recommended that the runway need not be extended, it is possible that this decision was based on "London criteria" which may not be valid to judge regional problems. It is important that the W.M.C.C. studies this topic in some detail. It may be undesirable to extend the runway for local political reasons, but the implications of this decision and the limitations on the effectiveness of the economic policy considered here, must be known.

"Airport Strategy for Great Britain -  
The response of the County of  
West Midlands."



Astron University

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Letter from the Institute of  
Freight Forwarders



Aston University

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Questionnaire used for interviews with  
U.K. scheduled passenger airlines

Airline Survey (1976)

1. Would you briefly describe the history of your airline ?

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2. How old is your present equipment, and was it new when you bought it ?

<u>Aircraft Type</u>	<u>Number</u>	<u>Average Age</u>	<u>New/secondhand/leased</u>
<hr/>	<hr/>	<hr/>	<hr/>
<hr/>	<hr/>	<hr/>	<hr/>
<hr/>	<hr/>	<hr/>	<hr/>
<hr/>	<hr/>	<hr/>	<hr/>
<hr/>	<hr/>	<hr/>	<hr/>

3. When, and with what, do you intend to replace these aircraft ?

<u>Present a/c type</u>	<u>Additional or Replacement a/c type</u>	<u>Number</u>	<u>Time Period</u>	<u>New/secondhand/leased</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

4. How would you describe your present type of operation ?  
 (Please indicate approximate mixes in terms of percentages of flights.)

- (i) (a) Domestic flights (intra-Britain and Northern Ireland) \_\_\_\_\_
- (b) Channel Islands \_\_\_\_\_
- (c) International flights to and from U.K. \_\_\_\_\_
- (d) Other flights \_\_\_\_\_
- (ii) (a) Scheduled flights \_\_\_\_\_  
 (aimed at individual passengers particularly the business sector, but including leisure passengers using APEX fares) \_\_\_\_\_



7. When was your present U.K. main base established ?

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8. Why was this particular airport chosen ?

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9. Please indicate the importance of the following factors in choosing your present base :

Of no importance	Of little importance	Fairly important	Quite important	Very important	Essential
(i) Regional identity					
(ii) Airport facilities (please specify): (landside) _____ _____ (airside) _____ _____					
(iii) Favourable rents					
(iv) Favourable landing charges					
(v) Potential market for services					
(vi) Ease of accessibility (landside)					
(vii) Licensing considerations					
(viii) Maintenance facilities					
(ix) Interlining services					
(x) Other (please specify) _____ _____					

10. If you were choosing a base at the present time, how important would these factors be ?

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11. Where is routine aircraft maintenance performed ?

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12. Is your route pattern such that all your aircraft normally "night-stop" at your base ?

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13. (a) Is the degree of "night-stopping" elsewhere sufficient for you to consider aircraft as being based at other airports ? YES/NO

(b) If "Yes", please indicate the circumstances :

Airport

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Number of Aircraft

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

14. How do you rank the following operational considerations when using these airports rather than your main base ?

Situation Eased	No difference	Slight difficulty	Several problems	Considerable difficulties	Extreme difficulties
(i) Aircraft integration					
(ii) Aircraft utilisation					
(iii) Aircraft maintenance					
(iv) Replacements for u/s aircraft					
(v) Positioning flights					
(vi) Ground handling of passengers					
(vii) Operating costs					
(viii) Crew costs					
(ix) Other (please specify)					

15. How are these reflected in your policy of operating from Airports other than your base ?

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16. When you operate away from base airport, do you have any policy or preferred practice over handling of:

1. Passenger check-in;
  2. Baggage loading and unloading;
  3. Aircraft manouvering;
  4. Aircraft maintenance;
  5. Cargo;
- i.e. Do you use other airlines, local handling companies, Airport Authority etc. as agents, or do you establish your own staff for handling, and if so, at what level of activity are they introduced ?

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17. What reflection does your replacement of present aircraft have on your future operations ?

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18. Do you envisage any future operations in which aircraft payload and range will place restrictions on airports used (because of runway length) ? If so, please give examples of types of operation.

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19. When did you last expand or take-over (from another airline) an existing route ?

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20. Which route was it ?

21. Where did the suggestion originate, and to whom was it made ?

22. How was it investigated prior to implementation ?

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23. Is this procedure reasonably typical of such situations ? (if "No", please outline a more usual path).

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24. When did you last introduce a service to a new destination ?

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25. Which one was it ?

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26. Where did the suggestion to serve this particular destination originate, and to whom was it made ?

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27. How was it investigated prior to implementation ?

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28. Is this procedure reasonably typical of such situations ? If "No", please outline a more usual path.

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29. When you introduce a service to a new destination, are you prepared to accept an initial loss ?  
If so, to what extent and for how long ?

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30. How large is your market research department ?

- (a) Percentage of total budget allocated
- (b) Number of staff

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31. When forecasting the traffic level on a particular route, is any account taken of :

- (a) Fare differentials ?
- (b) Effect on interlining - and feeder traffic on existing services ?
- (c) Cargo capacity and potential ?

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34. Approximately what percentage of your total budget goes on publicity and advertising ?

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35. Are you satisfied with your present U.K. base in terms of :

	Inappropriate, Of no Interest	Not satisfied at all	Partly satisfied	Satisfied	Quite satisfied	Very satisfied	Extremely satisfied
1. Potential Market/Catchment area							
2. Ease of landside access (a) public transport (b) private "							
3. Car Parking (a) passengers (b) staff							
4. Passenger facilities (a) No. of check-in desks (b) lounges (c) baggage handling and reclaim (d) Customs + immigration arrange- ments (e) Security checks (f) Restaurants + catering facilities							
5. Cargo facilities							
6. Maintenance facilities							
7. Staff accommodation (a) on Airport (b) in locality (housing)							
8. Staff availability							
9. On-airport rental charges							
10. Landing fees							
11. Navigation charges							
12. Runway length and direction							
13. Degree of congestion							
14. Ability to operate at requested times							
15. Number of interlining services							
16. Number + standard of Hotels near Airport							
17. Industrial disputes							
18. Opening hours of airport							
19. Terminal-aircraft transfer for passengers							
20. Special facilities for business- men							
21. Other (please specify)							

36. Are any of these factors sufficiently serious to consider moving your base ?

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37. What are the main factors in passengers' complaints about airport facilities ?

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38. How frequently do you review the facilities and catchment areas of Airports you do not use ?

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39. Is there more scope for co-operation between airlines and airports, and, if so, in which areas would you consider this appropriate ?

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German Statistical System:  
"Flugbericht"



Aston University

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Traffic between Stuttgart and  
Amsterdam



## Traffic between Stuttgart and Amsterdam

This Appendix assesses the potential for a direct service between Stuttgart and Amsterdam by two means, and suggests several manners in which such an operation could be mounted.

The statistics from the Bundesamt in Wiesbaden allow the number of outbound passengers from Stuttgart to the Netherlands to be determined. This amounted in 1975, to some 10,328 passengers who interlined mostly at other German Airports. This flow was larger than the flow to Denmark (9,248) and only slightly smaller than the traffic to Belgium (10,879) during the same period, despite the direct connections to these countries from Stuttgart. Taking a figure of 20,000 passengers as a base (twice 1975 departures), this may be increased by 10% for interline passengers at Amsterdam (assuming a convenient timing of the flights)\* and, perhaps, by 5% for inclusive-tour packages. The number of transfer passengers at Stuttgart is liable to be small. The total for local passengers is, therefore, approximately 23,000 passengers per year. If allowance for a general increase of 10% in air travel since 1975 is made, then the passenger flow is about 25,000 per annum. This figure includes little allowance for the stimulation of terminating traffic that the research described in Section 12.3.3 suggests is possible, particularly if accompanied by some active marketing.

The estimate of 25,000 passengers per year must be reduced since the timing will not be convenient to all potential travellers. Figure 12.2 indicates that a five times weekly service could attract 55% of traffic\*. Applying this proportion, the local traffic on a flight would be approximately 14,000.

Forecasting traffic on this route is aided by the existence of direct flights between the two points until early 1970. For two years during this operation, a direct comparison with traffic on services to two other northern European points (still served from Stuttgart) may be made. The ratio of local traffic on the Amsterdam flights to local traffic to and from the other two cities was 1:x\*\* and 1:y\*\*. Application of these same ratios to 1976 passenger flows on the routes indicates that approximately 20,000 passengers per year would use a five times weekly service between Stuttgart and Amsterdam.

Thus, both forecasting techniques indicate that there is a substantial market for a direct service on the Stuttgart-Amsterdam route.

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\* Statistics available in Germany are susceptible to more detailed analysis which would then yield more accurate values for these parameters.

\*\* Confidential.

In view of the development of other international services, the following operational possibilities for providing such a flight might be considered:-

1. Non-stop service by K.L.M. continuing south with fifth freedom traffic rights, perhaps to Yugoslavia (in view of the holiday traffic to this country);
2. Direct single-sector service with the smaller aircraft of N.L.M.;
3. Multi-sector flight by Lufthansa (or K.L.M. in pool with D.L.H.) via Cologne/Bonn;
4. Fifth freedom flights between Amsterdam and Stuttgart by, for example, Olympic Airways as an extension to its Athens service;
5. Operation by aircraft in a joint passenger/freight configuration.

It is interesting to note that when K.L.M. did fly from Amsterdam to Stuttgart, it used a multi-sector operation, often continuing to Munich. This extension was stopped in March 1967, but before the joint load factor between Amsterdam and Stuttgart (i.e. with Munich transit passengers included) had reached 70%. At the same time, larger aircraft were introduced, increasing capacity by 40%. The load factor between Amsterdam and Stuttgart dropped to below 30% in 1968 with this single-sector mode of operation, and all services were eventually withdrawn in 1970.

This Appendix represents in both form and philosophy the type of exercise which the W.M.C.C. should perform on specific routes from Birmingham. It also demonstrates that with the correct statistics, an airport authority can perform a function normally associated with the airlines but which, in this particular instance, had been neglected.

W.M.C.C. Involvement in the  
establishment of non-scheduled services



W.M.C.C. Involvement in the  
establishment of non-scheduled services

In Chapter 6 of this thesis, the degree of use of Birmingham Airport by foreign visitors to the N.E.C. has been analysed, and the attitude of the Centre's management described. This opinion on the potentially serious consequences of the low level of activity was shared by Industrial and Trade Fairs Ltd. (I.T.F.), which organised many of the exhibitions. To rectify some of the deficiencies, the W.M.C.C. proposed a scheme to provide additional air services, designed specifically to cater for the demands of exhibition visitors: basically, I.T.F. should consider chartering an aircraft and then sell tickets for the flight to foreign delegates.

In detail, an aircraft owned by British Air Ferries, should be hired to fly from its Southend base to Birmingham. The departure time from Southend should allow fast connections to be made from B.A.F.'s existing inbound scheduled services from Rotterdam and from Ostend. The domestic charter would arrive in Birmingham before 10 o'clock local time, and thus would offer continental businessmen a full day at the N.E.C. The charter would return to Southend in the early evening, and make convenient connections to the scheduled services to Rotterdam and to Ostend.

This idea was put to both I.T.F. and B.A.F. in the late summer of 1977, and received with enthusiasm. Discussions took place between the three bodies, and it was decided to attempt to mount an experiment during an exhibition period early in 1978. The operation would be on Monday, Wednesday and Friday of the selected week, and would therefore be able to offer three-and five-day stays, in addition to day-return facilities. The longer visits would also benefit from cheaper excursion fares available on the international sectors from Southend, enabling attractive package deals to be arranged.

At the time of writing, the feasibility of the scheme is still being investigated. In particular, a licence from the C.A.A. for the domestic charter sector has to be obtained, and the rules for combining domestic and international fares clarified. The W.M.C.C. is also considering a reduction in landing and handling fees.

The outcome of the proposal has still to be seen. It has, however, further demonstrated that the W.M.C.C. has a role to play in bringing together two companies, previously ignorant of each other's existence, and suggesting plausible and attractive schemes for the mutual benefit of all concerned.

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