THE ECONOMIC IMPACT OF EXPRESS CARRIERS FOR UK plc

A Report by

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Contents

The Economic Impact of Express Carriers for UK plc

Key Points

- Express operators provide guaranteed, fast, reliable, on demand, world-wide, integrated, door-to-door movement of shipments which are tracked and controlled throughout the journey. They are the “Business Class” of cargo services.

- The most important contribution the express industry makes to the UK economy is through its impact on the capabilities and competitiveness of other sectors of the economy - enabling UK companies to implement best international business practice, improve their customer service and compete effectively in the global economy. We calculate that it currently contributes £1.3 billion of economic activity a year in the UK through its ‘catalytic’ impact on the performance of the rest of the economy and by helping to keep productive sectors located in the UK.

- Our surveys of CBI members and companies in the East Midlands confirm the importance of express services to UK companies:
  - More than two-thirds of UK companies report that express delivery services are vital or very important for their businesses overall.
  - 80% of firms consider next-day express delivery services to be very important to meeting their commitments to clients.
  - Half of UK companies consider express services to be vital or very important to the efficient organisation of their production.
  - Good access to markets is the most important factor influencing international location decisions. Without guaranteed international next-day delivery, our survey suggests that 16% of UK firms may have to relocate some operations overseas.

- Moreover, the UK express industry is one of the UK’s fastest growing sectors and makes a significant contribution to the UK economy in its own right, helping to support at least 72,000 jobs. Employment in the express industry has risen at an average rate of 6% a year since the mid-1990s, six times the growth rate for UK employment as a whole.

- The express industry is expected to grow by 6.7% pa over the next ten years, nearly three times as fast as GDP, as the industry serves the increasing need for rapid, guaranteed delivery – especially from companies in the fastest growing sectors of the economy. As a result, the catalytic contribution of the express industry to UK GDP is set to increase over the next twenty years, to more than £5 billion a year in 2004 prices.

- The express industry is dependent upon flying at night from a limited number of airports to deliver the significant economic benefits it generates for UK plc. The UK is competing in global markets and the ability to move products quickly and cost-effectively is essential to retaining and enhancing competitiveness.

- The closure at night of specific airports with a strategic express freight function (such as Nottingham East Midlands and London-Stansted) would have a serious economic impact on the UK. We estimate that it would reduce UK GDP by nearly £6 billion a year by 2024. Over a twenty year period, we estimate that the cumulative cost in terms of forgone GDP would be over £35 billion.

- These costs need to be weighed against any environmental and other considerations that may lead some to recommend constraining the activities of the express industry, especially in flying from a small number of airports at night, which is vital for many next-day international delivery services.

Executive Summary
The Economic Impact of Express Carriers for UK plc

Background

- This report has been prepared by Oxford Economic Forecasting and Mott MacDonald. Through a combination of industry surveys, analysis and econometric modelling, it assesses the importance of the express industry to UK plc, updating a previous study published in 2002.

- The report concludes that the express industry is making a crucial contribution to the UK economy in facilitating trade and investment, and contributing to the overall competitiveness and efficiency of UK business. The express industry is enabling UK companies to implement best international business practice, improve their customer service and compete effectively in the global economy.

- In addition, a detailed study of the contribution of the express industry to the East Midlands regional economy has also been undertaken. This is published alongside, but separate from, this report.

What is the express industry?

- Express operators provide guaranteed, fast, reliable, on demand, world-wide, integrated, door-to-door movement of shipments which are tracked and controlled throughout the journey. They are the “Business Class” of cargo services. In order to provide that premium service with guaranteed delivery, the express industry depends on overnight transport, by fully utilizing time outside normal working hours. Shipments are distributed through major airport hubs, particularly Nottingham East Midlands and London-Stansted, and a network of depots in the UK.

- Express transportation is not confined to a single transport mode or routing. The inter-modal journey may comprise use of trucks, vans, trains, passenger and freight aircraft. As a result, express services meet the increasing demand for time-definite products, enabling customers to reduce delivery times, respond faster to market requirements, reduce stockholdings and save in warehousing.

- But in many cases the only way to achieve the next-day delivery schedule that companies require to meet their production and delivery commitments is by the operation of aircraft at night. Night flights are only used, however, when no other alternatives are available and where it is essential to meet next-day delivery deadlines required by customers.

The Express Industry – vital to UK economic growth

- **The most important contribution the express industry makes to the UK economy is through its impact on the capabilities and competitiveness of other sectors of the economy. We calculate that it currently contributes £1.3 billion of economic activity a year in the UK** through its ‘catalytic’ impact on the performance of the rest of the economy and by helping to keep productive sectors located in the UK – equivalent to almost twice the value-added of the machine tools industry. Over the past twenty years, this catalytic contribution totals £12 billion.

- The impact that the express industry has on GDP reflects the importance of its services to a broad range of industries. Moreover, the largest users include 'high-tech' and/or high value-added, knowledge-based sectors such as manufacturers of electronic components, the telecoms industry, and business and financial services.

- Our surveys of CBI members and companies in the East Midlands confirm the importance of express services to UK companies:
  - **More than two-thirds of UK companies report that express delivery services are vital or very important for their businesses overall.**
  - **80% of firms consider next-day express delivery services to be very important to meeting their commitments to clients.**
  - Of these, 60% rely on next-day delivery because their customers demand it to meet their streamlined production processes, while almost half have customers who demand next-day delivery of spare parts for machinery and equipment.
  - **Half of UK companies consider express services to be vital or very important to the efficient organisation of their production.**
  - Around a third frequently require either sub-components or spare parts the next day.
  - About 40% of UK firms would have to hold increased inventories if next-day delivery were no longer available, increasing their costs.
  - Half of Small and Medium Sized Enterprises (SMEs) expect that they would lose orders if next-day international delivery services were no longer available.
  - Good access to markets is the most important factor influencing international location decisions. **Without guaranteed international next-day delivery, our survey suggests that 16% of UK firms may have to relocate some operations overseas.**

- For the UK regions, the coverage provided by the express industry means that the more remote or peripheral regions can participate in world commerce. Together with the industry pricing structure, this coverage means that regional businesses operating from lower-cost locations do not have those benefits diluted by high transport costs or poor delivery times. This is an important net gain to the UK, and the role of the express industry in promoting regional development is considered further in the companion report on its contribution to the economy of the East Midlands region.

The direct economic impact of the express industry

- **The UK express industry is one of the UK's fastest growing sectors and makes a significant contribution to the UK economy in its own right:**
  - It carried about 160 million shipments to, from or within the UK in 2004.
  - It now employs 32,000 people – nearly 50% more than the UK machine tools industry - and contributes £910 million a year to Gross Domestic Product.
  - **Employment in the express industry has risen at an average rate of 6% a year since the mid-1990s, six times the growth rate for UK employment as a whole.**
  - Allowing for impacts through the supply chain, the express industry helps to support at least 72,000 jobs in the UK.
  - The express industry contributed £370 million to the UK Exchequer in 2004, equivalent to about 40% of the revenues raised by air passenger duty.
  - It transports £10 billion of UK exports a year, 5% of total goods exports.

- **Overall, the express industry currently helps to support at least 72,000 jobs in UK, taking into account both those who work in the supply chain to the express operators**

(so-called 'indirect' jobs) and the jobs supported by the spending of workers in the express industry ('induced' jobs).

Future impact of the express industry

- **The express industry is expected to grow by 6.7% pa over the next ten years, nearly three times as fast as GDP, as the industry serves the increasing need for rapid, guaranteed delivery** – especially from companies in the fastest growing sectors of the economy. As a result:
  - Direct employment in the express industry in the UK is expected to rise by over 50% over the next decade to 50,000 by 2014.
  - The direct contribution of the express industry to GDP is set to rise by over 90% to £1.74 billion by 2014.
  - Revenues to the Exchequer from the express industry are also expected to almost double to over £700 million in 2014.
  - **Overall, the express industry is expected to help support over 110,000 jobs in the UK by 2014, taking into account indirect and induced impacts.**
- Moreover, **the catalytic contribution of the express industry to UK GDP is set to increase over the next twenty years, to more than £5 billion a year in 2004 prices**. That is because the sectors that are most reliant on express services are among the most productive and the fastest growing sectors in the UK economy. And rapid, cost-effective delivery is becoming increasingly important to companies' ability to compete in global markets.
- Constraints on the growth of express services in the UK would therefore be more costly than just the loss in output from that sector. **By forcing some firms to relocate and others to become less competitive, national output overall would be lower in the long run than it has the potential to be – at a cumulative cost in forgone GDP of about £54 billion over the next twenty years.** Moreover, the short-run impact of such constraints would be even more pronounced: as firms close down their UK operations, unemployment would increase, and a significant proportion of the capital stock – especially in the most affected sectors – would pass out of use.
- Comparing the use of scarce runway slots, a slot used by a single express service contributes about £63,000 in economic catalytic benefits to the UK, while a scheduled passenger service contributes about £22,000. While there are social and other benefits arising from leisure travel which are not considered in this report (including the economic impact of inward tourism), there are no wider long-term productivity and competitiveness benefits to the economy from leisure travel. A typical tour charter flight therefore has no long-term catalytic impact on UK economic performance.

The economic cost of restricting night flights to UK plc

- The express industry is dependent upon flying at night from a limited number of airports to deliver the significant economic benefits it generates for UK plc. The UK is competing in global markets and the ability to move products quickly and cost-effectively is essential to retaining and enhancing competitiveness.
- Next-day delivery is crucial to the industry and its customers. Over half of businesses surveyed stated that they would be badly affected by the cessation of international next-day deliveries, which can only be guaranteed by the operation of night flights. Moreover, 16% of firms may relocate out of the UK if international next-day deliveries were not guaranteed,

while over a third of firms report that they risk losing orders because of the impact of longer delivery times.

- Our survey suggests that manufacturing firms would generally be more badly affected than those in the private services sector, with nearly three-quarters of all manufacturing firms reporting that they would be very badly affected. This finding underlines that the express industry does not just serve the service sector but is also critical to many parts of UK manufacturing industry.

- The express industry only needs access to a limited number of airports to deliver its service. It could function with access to one airport in the south (London-Stansted), one in the Midlands (Nottingham East Midlands) and one in Scotland (Edinburgh). The industry has deliberately located much of its infrastructure to concentrate at these airports where the impact on local residents is less than at other urban airports.

- **The closure at night of specific airports with a strategic express freight function (such as Nottingham East Midlands and London-Stansted) would have a serious economic impact on the UK. We estimate that it would reduce UK GDP by nearly £6 billion a year by 2024. Over a twenty year period, we estimate that the cumulative cost in terms of forgone GDP would be over £35 billion.**

- These costs need to be weighed against any environmental and other considerations that may lead some to recommend constraining the activities of the express industry, especially in flying from a small number of airports at night, which is vital for many next-day international delivery services.

- While it is important to consider how noise and other concerns of local residents can be addressed, this report clearly demonstrates that airports that operate as express hubs are serving a wider strategic economic role which generates substantial benefits for UK plc and their local economies in terms of trade, competitiveness, productivity and investment.

Introduction – The Economic Impact of Express Carriers for UK plc

The express industry has been one of the UK's fastest growing industries over the last decade. However, the express industry is not separately identified in the UK's official economic statistics, and as a result its growing importance is not widely appreciated. Neither is the critical role that the express industry plays in facilitating the successful performance of companies in other sectors of the economy through its impact on their ability to compete in a world where customers demand increasingly fast and reliable service.

This report sets out clearly the economic impact of express carriers for UK plc. And it highlights the costs that the economy would face if there were to be restrictions on the future growth of the express industry. These costs, which would be substantial, need to be weighed against any environmental and other considerations that may lead some to recommend constraining the activities of the express industry, especially in flying from a small number of airports at night, which is vital for many next-day international delivery services.

This report has an economic focus but it is understood that there are a range of wider issues related to the aviation industry and, in particular, to night-flights that policy-makers also need to consider. This report does not seek to cover all of these issues but it is hoped that it will be considered a useful contribution to assist understanding of the economic elements of the wider debate, and to help inform strategic and local decisions and discussions relating to this agenda.

The information in this report is drawn primarily from three surveys undertaken by Oxford Economic Forecasting and Mott MacDonald:

- **A survey of the four major 'integrators'** – DHL, FedEx, UPS and TNT – to identify the turnover and value-added of their operations, their staffing levels and contribution to the UK Exchequer.

- **A detailed survey of members of the Confederation of British Industry (CBI)**, undertaken in conjunction with the CBI. A questionnaire, drawn up jointly by the CBI and OEF, was circulated to 2,000 finance directors in CBI member companies. This survey asked a detailed set of questions about the importance of express delivery services to these companies, and how their activities would be affected if there were restrictions on the availability of next-day international express deliveries.

- **A telephone survey of companies in the East Midlands**, asking about the importance of express and other air services to their businesses, and the role of Nottingham East Midlands Airport.

We received 170 replies to our survey of CBI members, with 70 replies to our survey of companies in the East Midlands. We gratefully acknowledge the help we have received from all of the organisations who assisted with these surveys.

1 The Size and Reach of the Express Industry

Introduction

1.1 The most important contribution that the express industry makes to the UK economy is through its impact on the capabilities and competitiveness of other sectors of the economy. We describe in detail in this report how the express industry facilitates increased output, trade, productivity, investment and employment across UK plc.

1.2 But first, we begin by explaining what the express industry is and how it has developed in the UK since the mid-1980s. We then illustrate the size of the UK express industry itself within the UK economy, in terms of its contribution to gross output, GDP, employment and the Exchequer.

Key Findings:

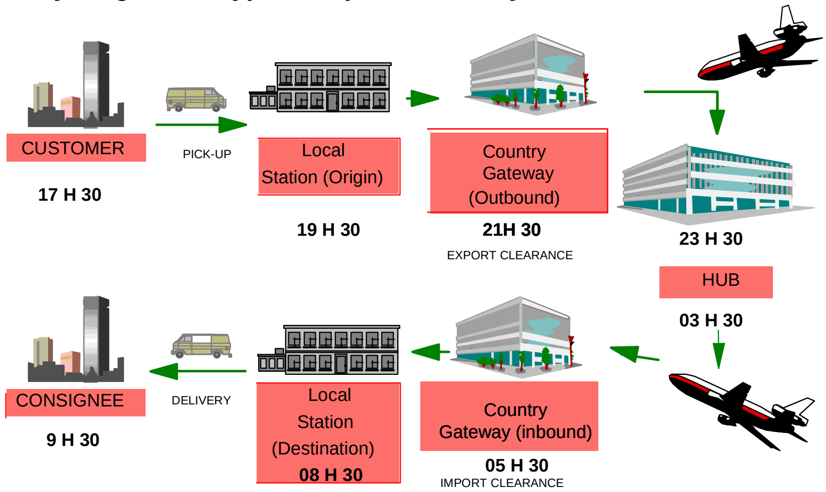
- **The express industry has been one of the fastest growing sectors in the UK economy. Its share in total UK gross output (ie turnover) has doubled since 1991.**
- **The UK express industry now employs 32,000 people and made a direct contribution to GDP of over £900 million in 2004.**
- **The express industry contributed about £370 million to the UK Exchequer in 2004, equivalent to about 40% of the revenues from air passenger duty.**
- **A broad range of industries in the UK use express services. But the largest users include the 'high-tech' and/or high value-added, knowledge-based sectors such as manufacturers of electronic components, the telecoms industry, and business and financial services.**
- **The greatest contribution made by the express industry is in enabling UK companies to compete effectively in an increasingly global market.**

What is the express industry?

1.3 The core business of the express industry is the provision of value-added, door-to-door transport and deliveries of next-day or time-definite shipments, including documents, parcels and merchandise goods. (Time-definite shipments normally incur a transit time of between 2 and 3 days. The express industry can also provide same-day delivery services in some circumstances.)

1.4 Four companies – DHL, FedEx, TNT and UPS, also referred to as 'integrators' – are the leaders of the global express industry, but there are many others in this highly competitive sector. The term 'integrator' refers to the ability of these companies to offer door-to-door, time-definite integrated services, where the company maintains control over all aspects of the distribution process – for instance, by offering the possibility of changing the destination and addressee in transit – and with each item being tracked at every step throughout its journey.

Figure 1.1: The key stages of a typical express delivery



Characteristics of the express industry

1.5 The express industry simplifies and speeds the process of transporting goods. It organises collection, usually at the end of the business day, allows the sender on-line access to information on the progress of shipments from pick-up to delivery, and provides proof of delivery. Where shipments cross international borders, the express industry handles customs clearance as well as the payment of duties and taxes as required. Figure 1.1 illustrates the key stages involved in a typical express delivery.

1.6 Other transport operators on their own cannot respond to the needs of UK business as effectively as the express industry. In particular, they are not able to offer the same level of rapid, guaranteed delivery to as wide a range of destinations. To meet the requirements of business, the express industry relies on overnight transport to use the 'dead time' from when a company hands over its shipment late in the working day to delivery to the recipient early the following day.

1.7 Express transportation is achieved by using a variety of different transport modes; lorries, vans, trains, passenger aircraft and freight aircraft as well as on-foot delivery. Where possible, though, the express industry uses surface transport modes. Air express services are only used where there are no other options available to meet same day and next-day delivery requirements. The most important express hub airports in the UK are Nottingham East Midlands and London-Stansted.

1.8 Some companies have outsourced all aspects of their distribution process to express companies to secure just-in-time logistic delivery and support.

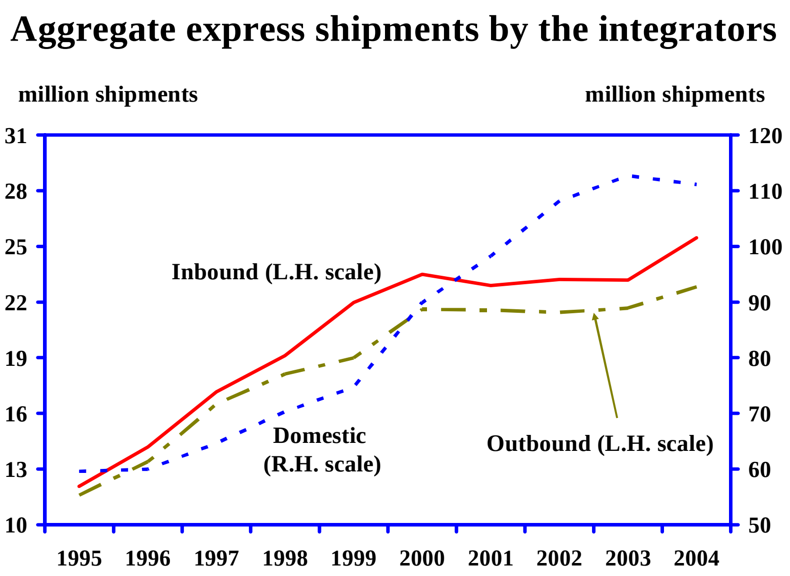
Development of express services in the UK

1.9 Express services were introduced to the UK in the mid-1980s, having initially developed in the USA. Unfortunately, the requirement of UK companies for time-definite, guaranteed delivery could not be routinely met by either postal services or freight forwarders.

1.10 The express industry has developed from the delivery of documents and parcels to specialist items such as high-tech products and semiconductors. Typically, the types of goods transported by express services are high-value / low-weight items such as electronic components, designer fashions and pharmaceutical products. Documents account for only about 25% of express shipments in the UK.

1.11 In 2004 the four integrators transported around 160 million express shipments to, from and within the UK. Of these, 25 million were international inbound; 23 million were international outbound and 111 million were domestic shipments. Chart 1.1 shows the growth in express shipments from 1995 to 2004. The fastest growing segment of the market was international inbound consignments, which grew at an average annual rate of 8.6% between 1995 and 2004.

Chart 1.1



1.12 Next-day delivery is by far the most important type of express delivery, representing around 75-85% of both the total revenues of the express industry and the number of shipments (Table 1.1).

Table 1.1: The express industry's revenues and shipments by category

	Revenue breakdown by delivery (£ million)				As % of total revenues		
	Next-day	Time-definite	Other	Total	Next-day	Time-definite	Other
1995	620	117	93	829	74.7	14.1	11.2
2004	1,460	196	220	1,876	77.8	10.4	11.7
% change, 1995-2004	135%	68%	137%	126%			
	Shipments breakdown by delivery (millions)				**As % of total shipments**		
	Next-day	Time-definite	Other	Total	Next-day	Deferred	Other
1995	70.1	6.8	6.3	83.2	84.2	8.2	7.6
2004	133.8	13.2	12.4	159.4	84.0	8.3	7.8
% change, 1995-2004	91%	94%	97%	92%			

Source: OEF survey of the integrators

The size of the express industry in the UK

1.13 The express industry is not separately identified in the National Accounts produced by the UK Office for National Statistics. As a result, the scale of the industry and its direct contribution to UK GDP, employment and government finances are therefore not well understood. We have therefore undertaken a detailed survey of the four integrators to quantify the size and reach of the express industry. Together they represent around 88% of the express delivery market. We have grossed up the results of our survey accordingly to estimate the size of the overall UK express industry.

1.14 It should be emphasised that the estimates presented here are of the size of the express industry itself in the UK: as noted earlier, they make no allowance for the output, jobs etc that the express industry encourages in other sectors of the economy. Those impacts are discussed in other Chapters in this report.

(i) The direct contribution of the express industry to UK sales and output

1.15 Total sales income (ie turnover) of the express industry is estimated to have been about £2.1 billion in 2004. While the express industry itself is a small part of the economy, it has grown very rapidly over the last two decades, although it faltered somewhat during 2001-03 when world trade, particularly in electronics, slowed sharply. Stripping out the effects of inflation, the express industry's turnover has increased by 70% since 1995 and by over 200% since

1991. As a result, the share of the express industry in UK gross output has doubled since 1991, as the express industry has grown much faster than the whole economy.

Chart 1.2

1.16 The direct contribution of the express industry to UK GDP is measured by its so-called ‘value-added’ – ie the value of the industry’s sales less the value of the intermediate purchases it buys from supplier industries (eg fuel, packaging materials etc). We estimate that the value-added of the express industry – its direct contribution to GDP – was around £910 million in 2004. This means that the express industry makes a similar direct contribution to GDP as the motor vehicle engine and the office equipment (eg photocopiers, fax machines) manufacturing sectors.

(ii) The direct contribution of the express industry to UK employment

1.17 The express industry now directly employs about 32,000 people in the UK. This means it is a larger employer than, for example, the UK machine tools industry. Around 77% of workers in the express industry are employed on a full-time basis, which is slightly higher than the national average.

1.18 The express industry’s employees are widely spread across the UK. But the express industry accounts for about 0.25% of employment in the East Midlands, nearly double its share of employment in the South East, in part reflecting the importance of Nottingham East Midlands Airport as a key hub airport. In general, however, relatively few of the jobs in the express industry are based at airports, largely because, as discussed earlier, air travel is just one of many transport modes used by the express industry.

Table 1.2: The size of the UK express industry

	1995	2001	2004
Turnover (2004 prices)	£1.10 billion	£1.67 billion	£2.12 billion
Value-added (2004 prices)		£600 million*	£910 million
Employment	19,146	29,309	32,000
Employment by Region:			
Scotland	Not available	Not available	1,360
North of England			4,960
Wales			470
Midlands			8,950
Of which: East Midlands			*4,740*
West Midlands			*4,210*
South West			2,940
Northern Ireland			220
South East			13,100
Employment at Hub Airports			
Nottingham East Midlands	Not available	Not available	1,500
London-Stansted			500

Source: OEF survey of the integrators ** Value-added in 2000*

(iii) The contribution of the express industry to the UK Exchequer

1.19 We estimate that the employees and companies directly involved in the express industry contributed almost £370 million to the UK Exchequer in 2004. This is equivalent to about 40% of the revenues raised by air passenger duty.

1.20 Of this Exchequer contribution in 2004, £211 million was from income tax and both employees' and employers' National Insurance contributions, while net VAT payments were about £92 million. The remainder was accounted for by fuel duties (£39 million), corporation tax payments (£13 million) and other taxes such as business rates (£12 million).

Which industries use express services?

1.21 The services provided by the express industry are used by companies across the spectrum of UK plc. We have analysed the top 50 customers of the integrators (who together account for around 25% of their total sales income) to identify which sectors are the greatest users of express delivery services.

1.22 The breakdown of these customers by industrial sector is shown below. The most important client sector is consumer goods at 22% of "top 50" sales income, followed by electronics/telecoms at 20% of sales. A number of other leading "growth sectors", such as financial, business and IT services, are also among the leading clients of the express industry.

Chart 1.3: Breakdown of main client sectors of express industry

Source: OEF survey of the integrators

Conclusions

1.23 The express industry has been one of the fastest growing industries both globally and in the UK over the last fifteen years. It makes a substantial direct contribution to UK GDP, employment and the Exchequer. But its most important role is in facilitating the success of other parts of the UK economy, which is the subject of the remainder of this report.

1.24 The analysis shows that a range of different sectors and types of company use express delivery services, many from high-growth and high-value sectors. These range from companies in high value-added manufacturing sectors, such as electronics and pharmaceuticals, as well as financial and business services.

2 The Role of the Express Industry in Facilitating UK Trade

Introduction

2.1 In this Chapter, we begin our analysis of the contribution that the express industry makes to the UK economy through the impact it has on the performance of companies in other parts of UK plc.

2.2 In part, this reflects the purchases that companies active in the express industry make from their suppliers and the jobs supported by the spending of the people who work in the industry. But the express industry contributes to the long-term growth potential of the UK economy in more dynamic ways. In particular, express delivery services are increasingly important to ensuring the continued competitiveness of UK companies, and so to winning export markets and encouraging investment.

2.3 The focus of this Chapter is on the role of express delivery services in international trade, and its importance to ensuring that UK benefits fully from the European Single Market. We also discuss the role of express services in the delivery of time-sensitive goods. Subsequent Chapters discuss the importance of the express industry to UK productivity and investment, and to the UK's long-term growth prospects.

Key Findings:

- **Half of UK companies consider express delivery services are vital to their organization for marketing and sales, and more than two-thirds report that they are vital or very important for their business overall.**
- **The proportion of UK exports delivered by express services has increased substantially since the early 1990s, and is set to increase further as rapid, guaranteed delivery to the US and emerging economies becomes an increasing determinant of UK competitiveness.**
- **80% of UK companies report that there are aspects of their delivery commitments to clients for which next-day delivery services are very important.**
- **Of these, 60% of companies rely on next-day delivery because their customers demand it to meet their streamlined production processes, while almost half have customers who demand next-day delivery of spare parts for machinery and equipment.**

The role of the express industry in international trade

2.4 The UK economy is very dependent on international trade. As Chart 2.1 shows, UK exports of goods and services have risen about twice as fast in real (ie inflation-adjusted) terms over the last 30 years as overall GDP. As a result, the share of exports in UK GDP (measured in real terms) has risen to around 26% now compared with only 15% in 1975 (Chart 2.2). At the same time imports into UK have also risen rapidly – from 14% in 1975 to about 30% now.

Chart 2.1

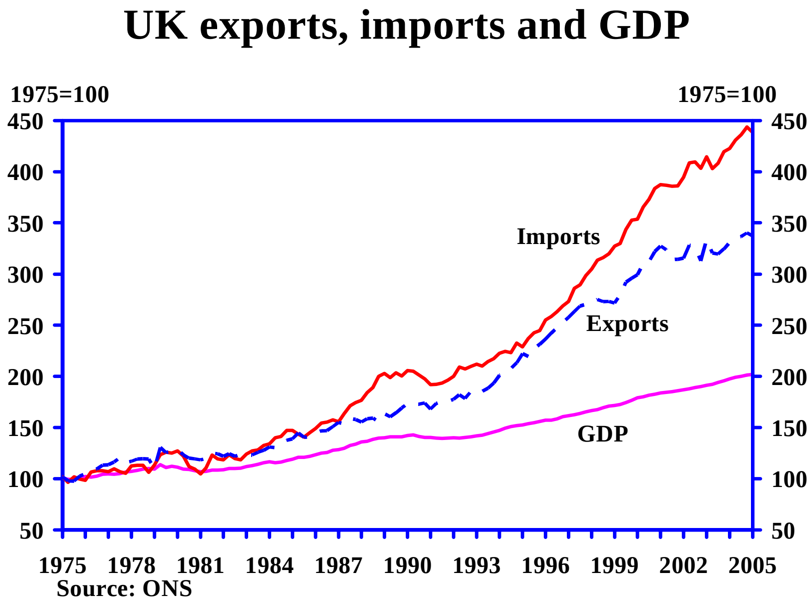
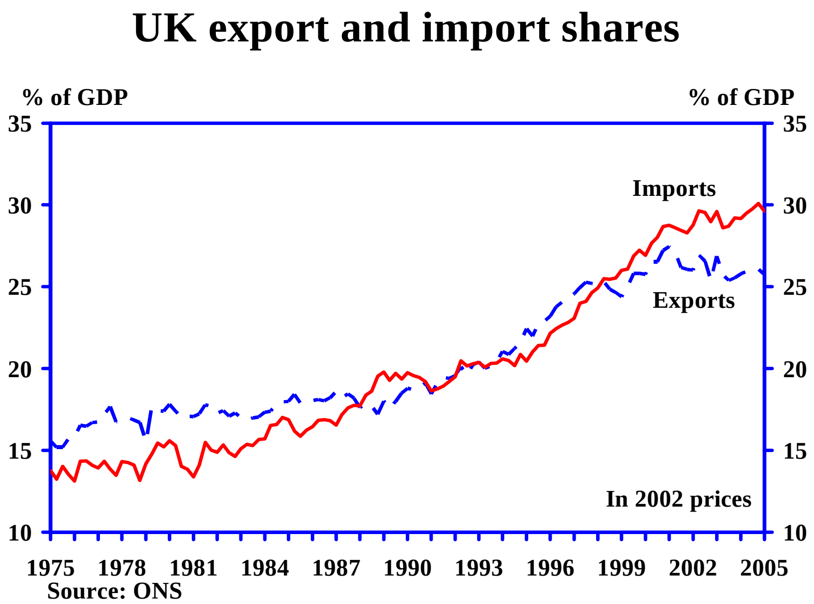


Chart 2.2

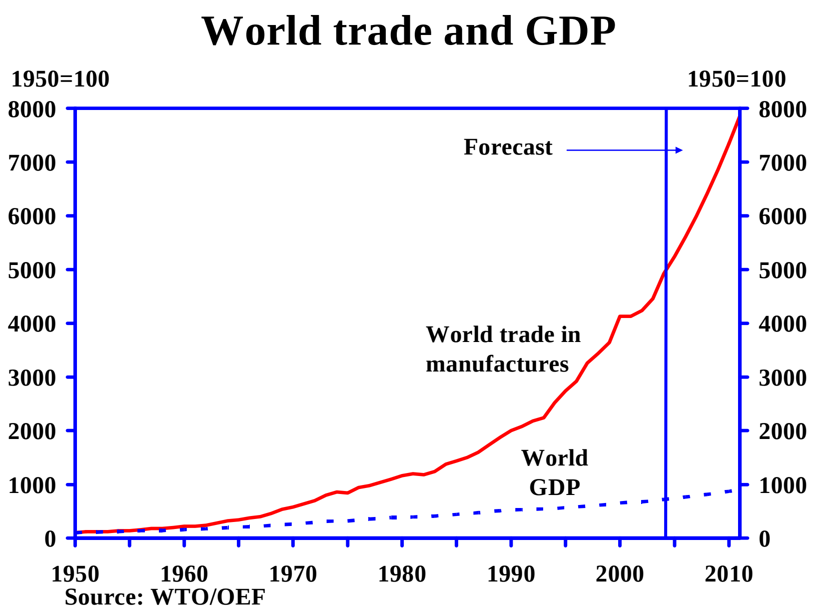


2.5 Rapid growth in international trade is by no means a phenomenon of only the last few decades – for example, world trade in manufactured goods increased over eight-fold between 1950 and 1975. But the absolute volume increase in world trade since the mid-1970s has been over four times that over the previous 25 years, driven by:

- **The gradual removal of barriers to international trade** - including the creation of the European Single Market and the widening influence of the World Trade Organisation.

- **Globalisation** – as new markets have opened up and more companies have established international operations, including both trading activities and the establishment and/or acquisition of foreign subsidiaries.
- **Increased specialisation** – encouraging countries to focus on the activities in which they have a comparative advantage, and trade with other countries that have an advantage in the production of other goods and services.
- **Global communications** – enabling companies to market their products around the world, and liaise with customers and suppliers in other countries.
- **More favourable political background** – allowing, most notably, increased trade with China and former communist countries.

Chart 2.3



2.6 OEF's global forecast shows these trends continuing, with world trade increasing by over 90% over the next decade, more than double the rise in world GDP (Chart 2.3).

2.7 The UK economy's increasing reliance on trade means that it is also increasingly dependent on efficient and competitive means of both delivering its exports to their destinations and bringing in imports from other countries. There are a number of aspects to such services that are important:

- **Speed**: For some organisations speed to market is even more important than cost in determining their competitiveness. This is obviously vital for perishable goods, such as pharmaceutical test materials. But it is also important, for example, for firms meeting orders to strict delivery dates or having to respond immediately to customer demand (ie the so-called 'Day+1 economy').
- **Reliability**: The reputation of UK exporters can be undermined if their deliveries fail to arrive with customers on time or are lost in transit.

- **Destinations served**: With trade growing most rapidly in the so-called emerging economies, particularly in Asia, the ability to ship products to and from an increasing number of countries cost-effectively and quickly – ie 'connectivity' - is also important.

Chart 2.4

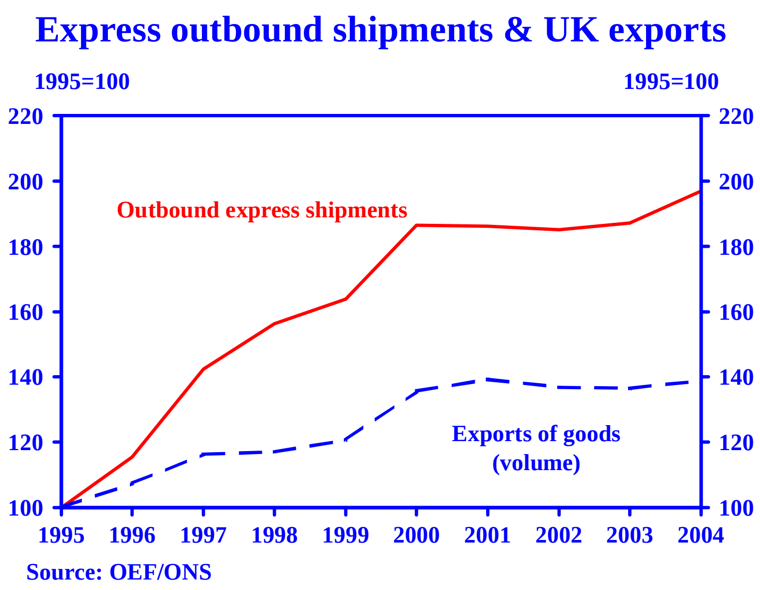
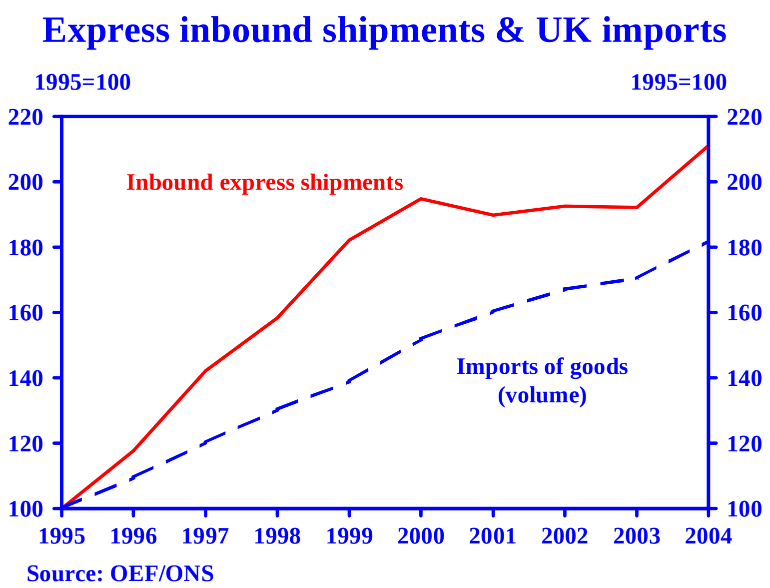


Chart 2.5



2.8 UK companies use a variety of means to transport goods to and from abroad, including road/rail and ferry, sea-freight and airfreight. But express delivery services – which represent the 'business class' of the freight transport market, focused on providing fast, highly reliable delivery – are becoming increasingly important. The express industry is able to offer delivery from UK to countries representing 90% of the world's GDP in 24-48 hours.

2.9 Express services are typically used for delivering relatively high-value/low-weight products. Data from Eurostat suggest that air transport is used to carry just 0.4% of UK exports by weight but over a quarter of exports by value. On the basis of the information provided by the leading express companies in AICES, we estimate that the express industry accounts for around 5% of overall UK exports of goods by value, equivalent to about £10 billion of goods in 2004.

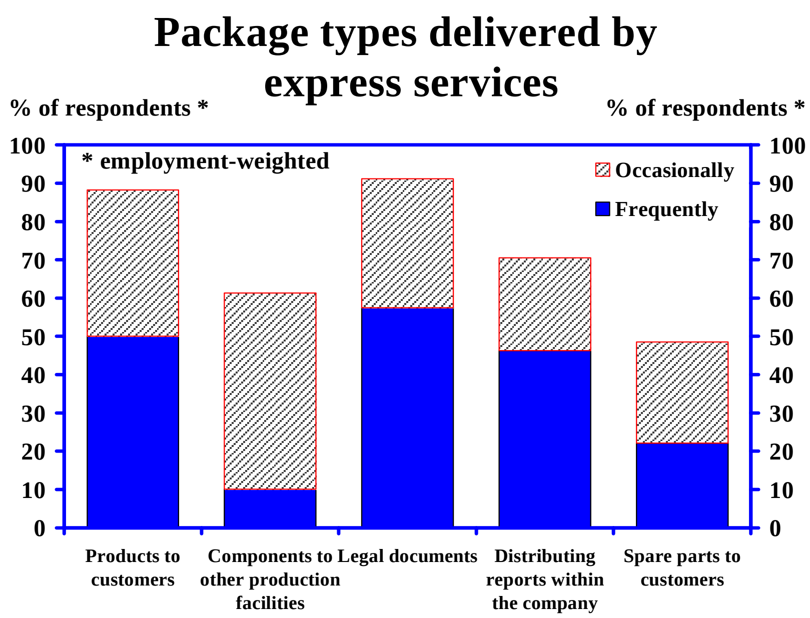
2.10 The benefits that express delivery offers to companies have resulted in it accounting for an increasing proportion of UK international trade shipments. Indeed, the number of outbound express shipments has risen more than twice as quickly as the volume of UK exports of goods since 1995, while the number of inbound shipments has risen almost 1.4 times faster than imports (Charts 2.4 and 2.5).

Companies' views on the importance of express delivery services for trade

2.11 The importance of the express industry in UK trade is highlighted by the results of our survey of UK companies. As explained in the Introduction to this Report, we conducted a detailed survey of companies across all sectors of the UK economy on their use of express delivery services, receiving 170 responses. It shows that more than half of respondents consider that express delivery services are vital to their organization for marketing and sales, and over two-thirds report that express services are vital or very important for their business overall.

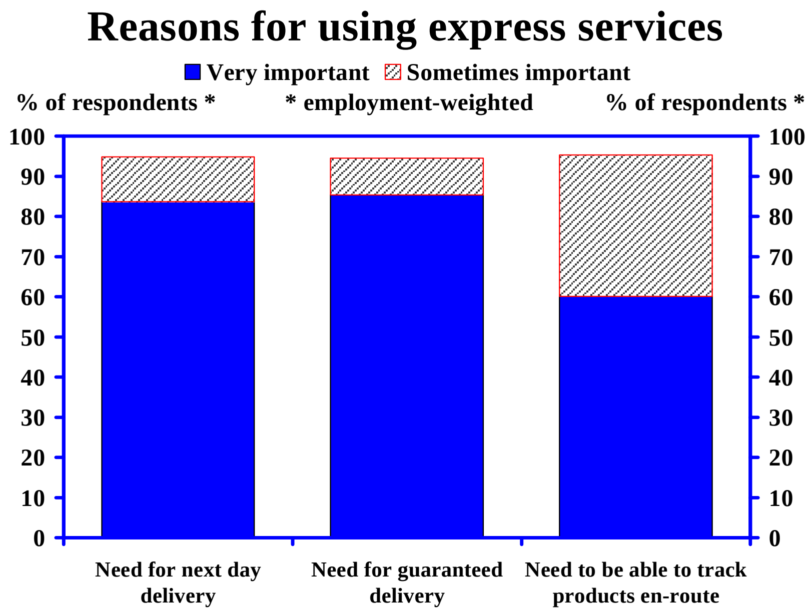
2.12 Our survey provides insight into the sorts of packages UK companies are sending by express delivery. As Chart 2.6 shows, half of respondents frequently use express delivery for sending products to customers, while almost all of them do so at least occasionally. And half of companies either frequently or occasionally use express delivery for sending spare parts to customers or sub-components to other production facilities. The majority of companies also use express delivery frequently or occasionally for legal documents and distributing reports within the company. But, as noted in Chapter 1, general shipments now account for 75% of total express shipments. Documents account for only 25% of shipments.

Chart 2.6



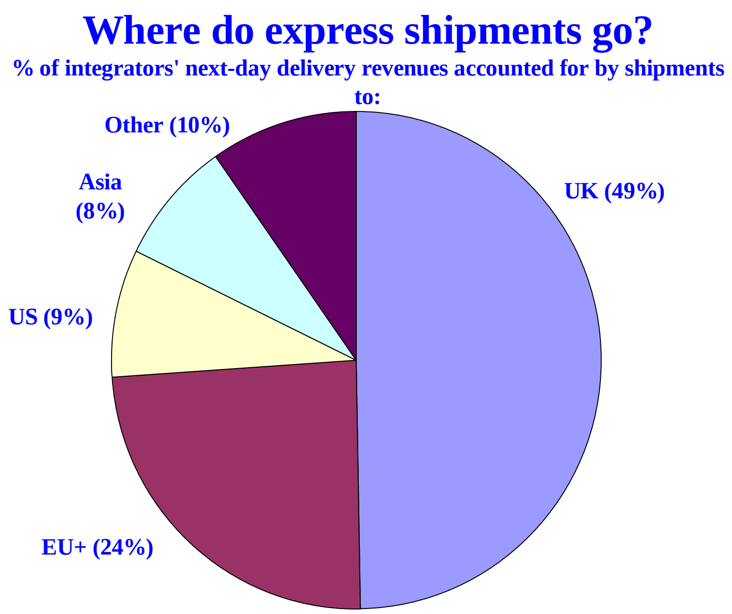
2.13 Our survey also sheds light on the reasons why companies use express services rather than alternative means of delivery. As Chart 2.7 shows, the vast majority consider both the need for next-day delivery and for guaranteed delivery to be very important. And nearly two-thirds of firms report that the need to be able to track the location of products en-route – a particular specialisation of express operators – is very important.

Chart 2.7



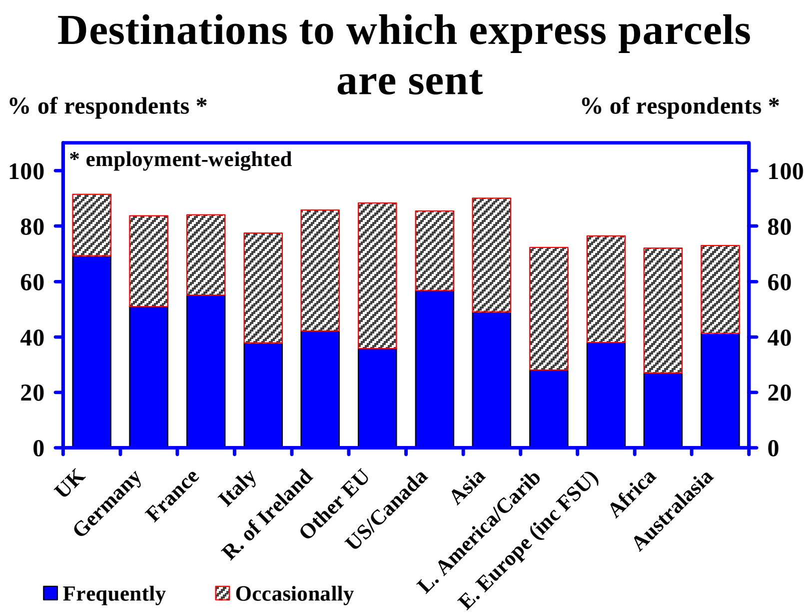
2.14 Delivery to overseas destinations represents around half of the express industry's revenues from next-day delivery services. Of these, around a quarter are accounted for by deliveries to the rest of the European Union compared with just under 10% for deliveries to both the US and Asia. These shares are broadly similar to the share of each region in the UK's exports (55% to the EU, 18% to the US and 14% to Asia).

Chart 2.8



2.15 This pattern of destinations to which express shipments are sent is mirrored in the results of our survey of UK companies. As Chart 2.9 shows, over two-thirds of respondents report that they frequently send express shipments elsewhere within UK, and almost all companies do so at least occasionally. However, most companies report that they frequently use express services for delivery to at least one other EU country, to North America and to Asia. And around 40% frequently send shipments by express delivery to Eastern Europe and Australasia. Relatively few respondents frequently send shipments by express delivery to Latin America or Africa, but over 70% do so at least occasionally.

Chart 2.9

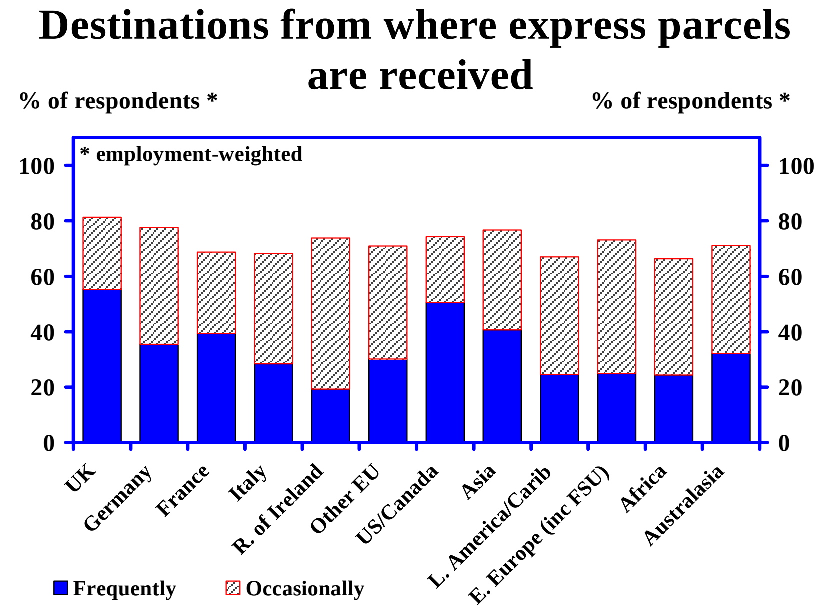


2.16 The same pattern is reflected in the destinations from which companies receive packages delivered by express services (Chart 2.10). It is clear that express services are used at least occasionally by the vast majority of respondents for trade with all regions of the world economy.

2.17 This analysis highlights:

- Express delivery accounts for an increasing proportion of UK exports and imports.
- The next-day and guaranteed delivery aspects of express services are particularly important to UK companies.
- With over 50% of UK exports to the rest of the EU, express services are important if UK is to benefit fully from the additional trade stimulated in the EU from the creation of the Single Market and Monetary Union, and from its expansion into Central Europe.
- But express services are also used significantly to deliver goods to other destinations, including the US and the emerging economies (eg China and India), which are generally expected to see the fastest economic growth over the next 10-20 years and therefore are likely to be UK's fastest-growing export markets.

Chart 2.10

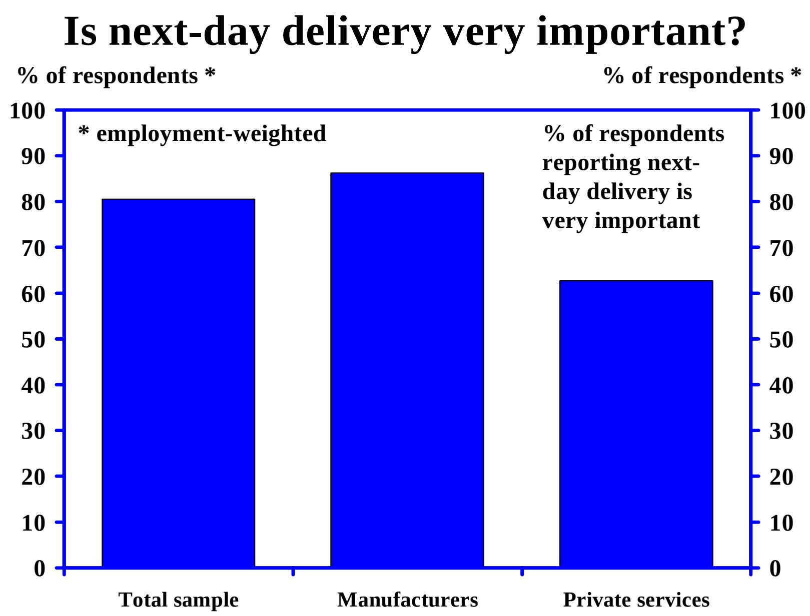


The role of express services in trade in time-sensitive goods

2.18 As we have seen, almost all of the companies using express services do so because they value the speed of delivery provided, and over three-quarters of the express industry's revenues are from next-day deliveries as opposed to deferred services.

2.19 Moreover, our survey found that 80% of UK companies consider that there are aspects of their delivery commitments to clients for which next-day delivery services are very important (Chart 2.11). Next-day delivery is particularly important for firms in the manufacturing sector.

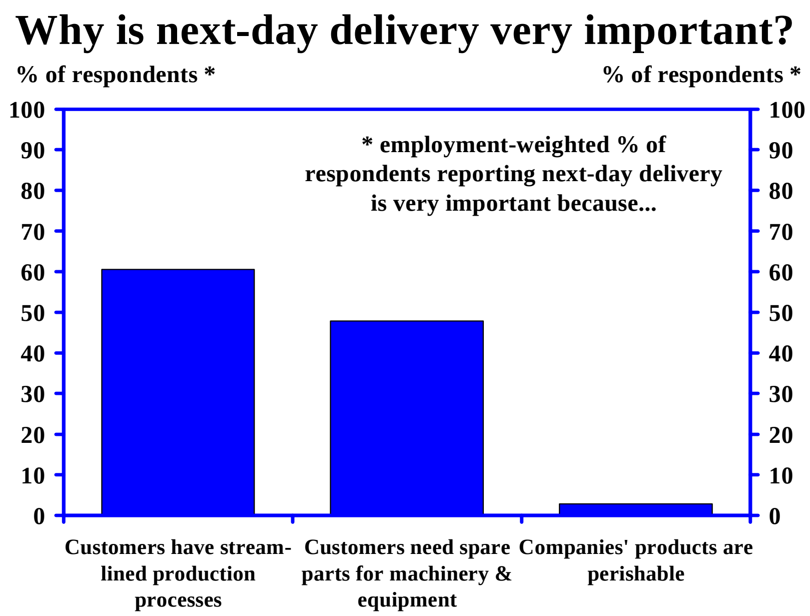
Chart 2.11



2.20 Of the companies for which next-day delivery is very important, only 3% report that this is because their companies' products are perishable (Chart 2.12). 60% of firms consider next-day delivery to be sometimes very important because their customers are using streamlined production processes, while almost half have customers who need next-day delivery of spare parts for machinery and equipment. Respondents also reported that next-day delivery is important where, for example, they are finalising contracts, making legal submissions, or conducting tests on sensitive materials.

2.21 Our survey of UK companies, together with detailed case study interviews conducted for the previous edition of this study, show that a very large proportion of UK business is time-sensitive – not just companies making perishable products, but many who will lose orders or fail to close important negotiations if their products or contracts arrive late. Moreover, express services allow these companies to centre their operations in UK while still serving a global market in time-sensitive or perishable products.

Chart 2.12



Conclusions

2.22 This Chapter has highlighted the increasingly important role that the express industry plays in UK trade. With the UK economy becoming more dependent on trade, and its fastest growing markets likely to be in the US and emerging economies (most notably in Asia), the fast, reliable and cost-effective services offered by the express industry will become even more important to the competitiveness of UK business.

2.23 The importance of express services is further underlined by the growing time-sensitivity of the UK economy. Being able to respond quickly to customer demand – for new products, spare parts, contracts etc – is essential to winning and maintaining business in an increasingly competitive global economy.

3 The Role of the Express Industry in Facilitating Productivity and Investment

Introduction

3.1 In this Chapter, we continue our analysis of the contribution that the express industry makes to the UK economy through the impact it has on the performance of companies in other sectors by considering its role in determining productivity and investment.

3.2 We begin by discussing the role of express services in the adoption of efficient production processes by UK companies. We then consider the importance of express services to firms seeking to minimise their inventory costs. We also discuss the importance of express services to UK's small and medium-size enterprises (SMEs), and their impact on regional development and foreign direct investment in UK. Finally, we estimate the "indirect" and "induced" employment supported by the activities of the express industry.

Key Findings:

- **Half of UK companies consider express services to be vital or very important to the efficient organisation of their production.**
- **The large majority of UK companies require their suppliers sometimes to deliver certain packages to them by express delivery. Around a third frequently require either sub-components or spare parts next-day.**
- **Around 40% of UK firms would possibly have to hold increased inventories if next-day delivery were no longer available, increasing their costs.**
- **The express industry enables small companies to utilise high quality, rapid delivery services which they could not provide themselves. Half of SMEs expect that they would lose some orders if next-day international delivery were no longer available.**
- **The express industry supports regional development by enabling businesses dependent on fast delivery to customers to locate in regions that are not close to their market. However, some companies who are very reliant on rapid delivery may have an incentive to cluster near express hubs to take advantage of later collection times for next-day delivery.**
- **Good access to markets is the most important factor influencing international location decisions. Without international next-day delivery 16% of UK companies might relocate some operations overseas.**
- **Allowing for impacts through the supply chain, the express industry helps to support at least 72,500 jobs in the UK.**

The role of express services in enabling efficient production

3.3 As well as using express services to deliver products to their customers, many companies in the UK also rely on express services in order to organise their production operations as efficiently as possible. Indeed, half of the respondents to our survey of UK companies consider express services vital or very important to the efficient organisation of their production. And the large majority of firms require their suppliers sometimes to deliver certain packages to them by express delivery.

3.4 Chart 3.1 provides details on the sorts of packages firms receive from suppliers by express delivery. It shows that three-quarters of our survey respondents either frequently or occasionally require express delivery both of spare parts and of sub-components to their production facilities. Not surprisingly, express services are used for these deliveries at some time by almost all of the manufacturing companies who replied to our survey.

3.5 Nearly all companies report that they also either frequently or occasionally require legal documents to be delivered by their suppliers using express services, while over 80% use express services to distribute reports within their company (eg accounts, confidential reports to directors).

Chart 3.1

3.6 Express services help companies to improve the efficiency of their production in a number of ways. For example:

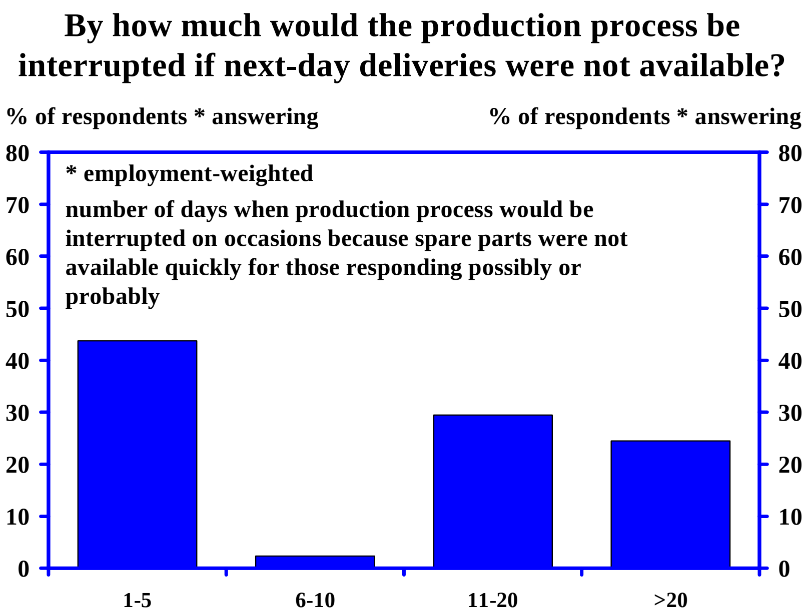
- They help companies reduce the number of idle periods and production shutdowns, as express delivery companies are able to ensure rapid delivery of materials and spare parts. Our survey respondents expect that, on average, production would be interrupted on around 3 days per year if spare parts for equipment could not be delivered next-day when needed. Some firms believe that their production might even be seriously affected on more than 20 days a year (Chart 3.2).
- They facilitate the adoption of international best practice in production, which increase companies' flexibility and ability to adapt to changes in demand. For example, many companies use express services to permit 'build-to-order', since time savings on delivery can be used to allow customisation to match particular client requirements (eg for computers). According to PA Consulting, these strategies have been found to reduce total supply chain costs by between 3% and 5%.
- They enable companies to make cost-savings both by reducing the amount of inventory they have to hold and by allowing firms to take advantage of rapid delivery from suppliers

in other countries, possibly under global-wide supply contracts. This can also have benefits in terms of the type and size of premises or sites required by companies, as a reduced need for inventory can mean less physical space is required for storage etc.

- They allow the fast handling of returned goods, either saving on inventory time if they can be resold or protecting firms' reputations by allowing repairs to be made quickly to faulty products

3.7 It should be stressed that it is not only companies in the manufacturing sector that rely on express services to maximise their efficiency. It is also important to firms in the service sector too.

Chart 3.2

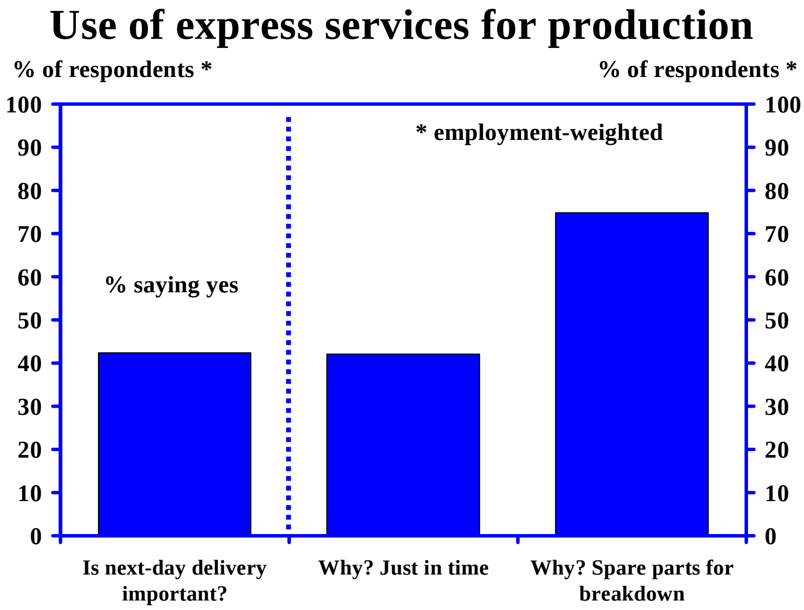


The role of express in reducing companies' inventory costs

3.8 Almost half of all firms replying to our survey of UK companies report that there are aspects of their production process for which next-day delivery of sub-components from their suppliers or elsewhere in their companies is very important (Chart 3.3). The proportion is even higher for manufacturing companies, at nearly three-quarters. Of these firms, over 40% report that next-day delivery of sub-components is important because they operate a just-in-time (JIT) inventory system, while the large majority require urgent delivery of spare parts for machinery in case of breakdown. Other reasons for needing sub-components on a next-day basis mentioned by respondents include getting samples to be approved before production processes can begin at their sites.

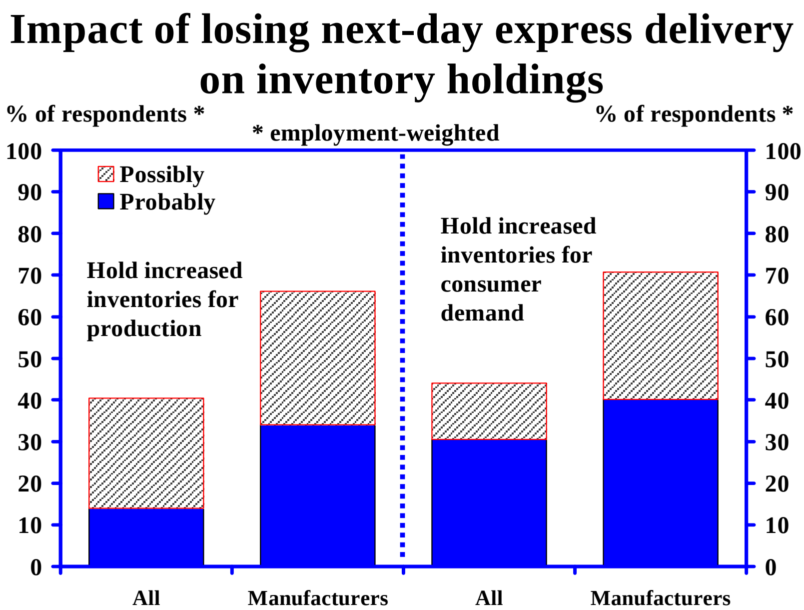
3.9 It is clear from our survey that JIT inventory controls are now increasingly important in UK industry, and that these have created strong demand for express delivery services. Under JIT, an increasing number of firms hold only very limited 'buffer' inventories in case they run short of critical sub-components or spare parts. Instead, they require their suppliers (which may be other parts of their business) to deliver to a strict timetable to fit in with the production runs. This system has contributed to a reduction of over 20% in the inventory-output ratio in the UK over the last 20 years, saving UK companies around £6 billion a year.

Chart 3.3



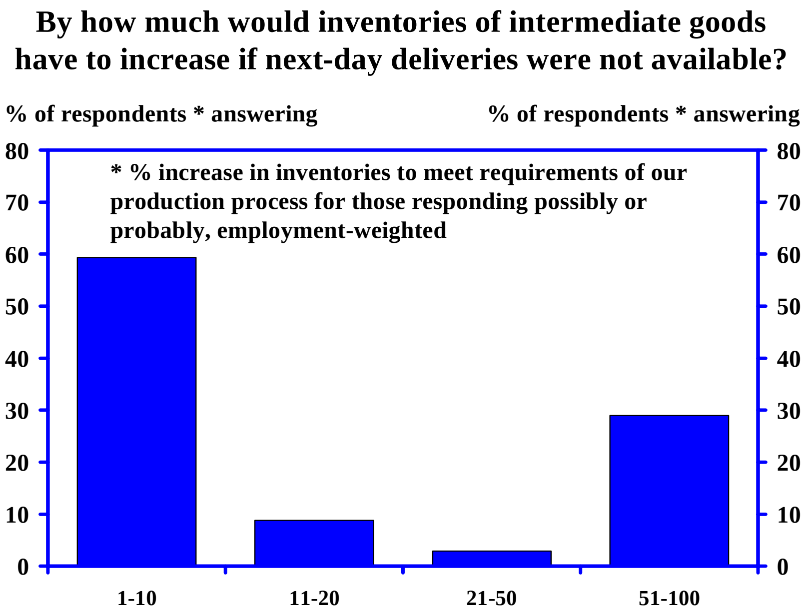
3.10 In order to illustrate the role of the express industry in helping firms to minimise their inventory costs, our survey asked firms how they would react if next-day delivery services to or from UK to foreign locations were no longer available. As Chart 3.4 shows, 14% reported that they probably would have to hold increased inventory at their UK site in order to meet the requirements of their production process, while a third reported that they would probably have to hold increased inventory to meet customer demand. Not surprisingly, a higher proportion of manufacturing than service sector companies would be affected.

Chart 3.4



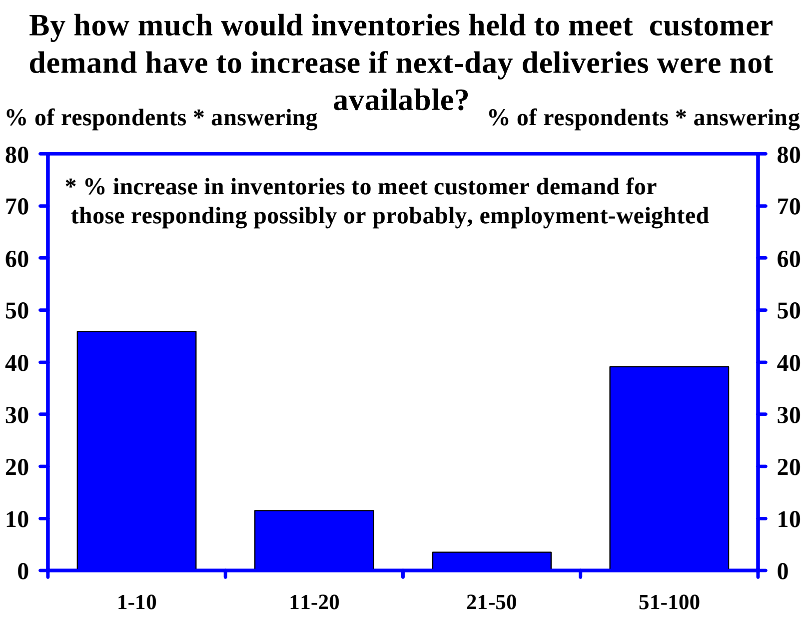
3.11 Our survey suggests that, if international next-day deliveries were withdrawn, firms would, on average, have to increase by 4% their inventories of intermediate goods to meet the requirements of the production process. As Chart 3.5 shows, some firms would have to increase their inventory holdings by considerably more.

Chart 3.5



3.12 Similarly, our survey suggests that, if international next-day deliveries were withdrawn, then UK companies' inventories of finished goods would have to increase by 5% on average in order to ensure that consumer demand could be promptly met. Again, as Chart 3.6 shows, some firms would have to increase their inventories by substantially more than this – possibly by over 50%.

Chart 3.6



The importance of express services to SMEs

3.13 The vast majority of UK firms are Small and Medium Size Enterprises (SMEs – ie firms with less than 250 employees). The majority of these are one-person organisations, but even so SMEs account for half of the UK's annual gross output and employ over 12 million people (over 55% of private sector employment).

3.14 Many SMEs are local businesses, such as retailers, plumbers, hairdressers etc, serving customers only in their neighbourhood. Nevertheless, estimates from the European Commission suggest that SMEs probably account for over a quarter of UK exports.

3.15 Even though many SMEs are wholly focused on serving markets in their locality, our survey of UK companies suggests that SMEs are substantial users of express delivery services. For example, almost half of SMEs report that express services are vital or very important to their business, while a third report that they are vital/very important for the efficient organisation of production. And over the last 5-10 years, about a quarter of SMEs report that their use of express services has increased.

3.16 Without next-day international express delivery, half of SMEs report that they may lose some orders. And a quarter report that they would possibly need to hold more product inventory to meet customer needs (Table 3.1).

Table 3.1: The importance of express services to SMEs[1]

Unweighted % of firms …	SMEs	Large Companies
Express services are vital or very important to business	44	42
Express services are vital or very important for marketing and sales	23	28
Express services are vital or very important for efficient organisation of production	32	20
Reporting increased use of express services over last 5-10 years	23	38
Reporting loss of next-day international services would possibly/probably mean:		
Lost orders because of longer delivery times	48	23
Need to hold more product inventory to meet customer needs	27	23

Source: OEF survey of UK companies

[1]SMEs are firms with less than 250 employees

3.17 Express delivery services are important to SMEs because they typically do not have the same transport delivery infrastructure that large companies have in place. While the scale of large manufacturers, such as the motor vehicle producers, makes it economic either for them to run their own transport fleet or buy-in dedicated services from a contractor, this would be uneconomic for most SMEs making relatively few and irregular deliveries. SMEs therefore frequently rely on transport services where a central provider delivers on behalf of a large number of customers.

3.18 The express industry enables SMEs to take advantage of the economies of scale its large-scale transport operations generate, while at the same time providing the same high quality of service – speed, reliability, tracking – provided to large companies.

The importance of express services to UK regional development

3.19 We noted in Chapter 1 that the employees of the express industry are widely spread around UK, although there is some concentration in the East Midlands associated with the use of Nottingham East Midlands International Airport as a key hub for express services. But the express industry contributes to regional development in a number of other ways as well:

- It enables businesses dependent on fast delivery to customers to locate in regions that are not necessarily close to their market, for example in Northern Ireland and the Highlands of Scotland.

  The leading express operators offer the same high quality of service at the same price to companies that are located in the less economically developed parts of the UK that they provide to firms in the South East and in major cities, So, a company based in, for example, Cornwall or Northumberland, has the same access to next-day delivery services, both within the UK and internationally, as a firm in central London. The express industry therefore brings all regions of the UK within the boundaries of the 'Day+1 economy'. Moreover, businesses operating from lower-cost locations do not have their benefits dissipated by excessive transport costs and poor delivery times.

- Companies who rely on next-day delivery to customers may have an incentive to locate near hubs for express services so as to make the last pick-up time for their deliveries as late as possible, providing them with maximum production flexibility. The box describes such clustering around the major express hubs in the US and continental Europe, and it also offers a potential stimulus to the region around, for example, Nottingham East Midlands International Airport.

3.20 The benefits of express companies to a regional economy are illustrated by a detailed survey we have undertaken of companies in the East Midlands. This found that access to air services through Nottingham East Midlands Airport is vital or very important for about 10% of companies in determining the decision to locate in the region. And if next-day express services were not available from Nottingham East Midlands Airport, 5% of companies report that they would have to relocate operations from the region to elsewhere in the UK and 5% report that they would relocate to another country.

Express hubs as a spur to regional economic development

(i) Liege

Liege Airport has been TNT’s European operating hub since 1998. As express and air cargo traffic has grown, so a number of distribution and logistics companies have established in the close vicinity of the airport. These companies are located within the Liege Logistics platform: Liege Logistics now employs over 500 people. Around 845 acres have been designated on and bordering the current airport site to enable Liege Airport’s economic growth through to 2020.

(ii) Brussels

In 1985, DHL established the Brussels hub as a sorting facility in the corner of a hangar at Brussels National Airport. Within a few years it became DHL Brussels Hub, the largest express hub outside the USA. Through its Express Logistic Centre (ELC), the hub acts as a central distribution point for a number of major companies based in the surrounding areas of the Brussels National Airport. DHL is not only the biggest customer of Belgocontrol (providing about 25% of their income) but also contributes almost 50% of the profit before taxes of the airport owner BIAC. According to a report issued in September 2003 by the Vlerick Leuven Management School and K U Leuven Universite Libre de Brussels and ECORYS Transport Rotterdam, the presence of DHL’s major hub at Brussels National Airport contributes €394 million of value-added to the Belgian economy. As from mid-2008, Leipzig will become the main hub in DHL’s European network and the Brussels hub will downsize.

(iii) Memphis

Memphis International Airport - Federal Express' world headquarters and Superhub - is the world's largest cargo airport. In addition to the jobs and direct economic benefits it provides, FedEx is a magnet for attracting distribution centre development to Memphis. According to SRI International more than 130 foreign-owned firms from 22 countries employing 17,250 workers have been drawn to Memphis since the early 1980s, largely due to the presence of FedEx. Examples of customers that relocated to Memphis metro area include Williams-Sonoma (distribution & data centre); Submitorder.com (Internet fulfilment centre); Hewlett Packard (Distribution) and Ingram Micro (Distribution / assembly / repair).

(iv) Louisville

Louisville Airport is home to the international airfreight hub of UPS. Many companies have located in or near Louisville because of the extensive logistics and distribution opportunities there. According to Greater Louisville Inc. The Metro Chamber of Commerce, the estimated annual impact of UPS’ Hub 2000 expansion was 13,965 new jobs (direct and indirect) and $478 million new payroll (direct and indirect). Companies doing e-commerce fulfilment in Greater Louisville include Nike and Gateway Computers, while companies doing traditional transportation fulfilment include GE and Ford.

The role of express services in facilitating foreign direct investment

3.21 The UK has been very successful in attracting foreign direct investment (FDI) – it attracted an average of £35 billion of inward investment a year between 1995 and 2004, more than any other country apart from the US. Inward investment brings with it important benefits to the recipient, most obviously in terms of increased employment and output but also in the transfer of technology and new management techniques.

3.22 A wide range of factors influence firms' decisions about how much and where to invest. However, surveys of international investors suggest that ease of access to markets and transport links are particularly important. For example, a survey by Healey & Baker shows that about 60% of companies consider easy access to markets, customers or clients, as "absolutely essential" when deciding where to locate their business, making it the most important influence on company location decisions.

3.23 Express services are an important element in ensuring that companies based in the UK have the best possible access to markets. Our survey of UK companies shows that foreign direct investment would be vulnerable if next-day delivery to or from the UK were no longer available: 16% of companies report that they would possibly have to relocate some operations from the UK to an overseas location. We return to this issue in Chapter 5.

The express industry as a supporter of jobs along the supply chain

3.24 In Chapter 1, we estimated that 32,000 workers are employed directly by the express industry. However, this does not represent the overall number of jobs supported by the express industry in UK. In addition, there are:

- The jobs in companies supplying goods and services to the express industry – so-called **'indirect employment'** – including those working in: commercial and cargo airlines employed by express operators; the aerospace industry building engines for the aircraft operated by express companies; the automotive industry building delivery vehicles; in companies supplying IT equipment and support services; in oil companies; accountants and lawyers; etc.

  On the basis of information provided by the integrators on their purchases from suppliers, and the input-output tables prepared by the Office for National Statistics, we estimate that the 32,000 or so direct jobs in the express industry generate an additional 26,000 indirect jobs in UK through the supply-chain.

- Employees in the express industry (whether directly or indirectly) use their income to purchase goods and services for their own consumption, and this spending then helps to support the jobs in the industries that supply these purchases.

  Estimates based on simulations conducted on the Oxford Economic Forecasting Macroeconomic Model of the UK economy suggest that this so-called **'induced employment'** may be around 14,500 (ie about 25% of direct and indirect employment in the express industry). This does not mean that these additional jobs would not exist without the express sector, but they are likely to do so only at somewhat lower real wages and living standards for those workers.

3.25 Putting these different elements together implies that the express industry now helps to support at least 72,000 jobs in UK, an increase of over 6% since 2001 and 63% since 1995. In addition, the express industry also helps to generate employment elsewhere in the economy by, for example, facilitating trade and investment in UK and improving the efficiency of its client companies, as discussed elsewhere in this Report.

Table 3.2: Direct, indirect and induced employment supported by the express industry			
	1995	**2001**	**2004**
Direct employment	19,146	29,309	32,000
Indirect employment	16,466	25,206	26,000
Induced employment	8,903	13,629	14,500
Total employment supported by express	**44,515**	**68,144**	**72,500**
% increase, 1995-2004			*63%*

Source: OEF

Conclusions

3.26 This Chapter has highlighted how the services provided by the express industry are now integral to business operations in UK. It would make it rather difficult for firms to operate their streamlined production processes and just-in-time inventory management systems if they could not rely on next-day express delivery of sub-components or spare parts for their machinery and equipment. In the absence of international next-day express delivery many would face increased production costs as they would have to carry extra inventory or face disruption to either their production lines or deliveries to customers. For some companies, the impact this would have on their competitiveness would be so great that they might decide to relocate some operations outside the UK.

4 The Express Industry – A Leading Growth Sector

Introduction

4.1 In this Chapter, we consider the future prospects for the express industry and compare its likely growth over the next decade with other industries in UK. To do this, we draw on the responses to our survey of UK firms that indicate how much they have increased their use of the express industry in the past and how much they expect their use to rise in the future, and on OEF's UK sectoral forecasts. We then calculate the likely direct contribution of the express industry to UK GDP and government finances in 10 years' time.

Key Findings:

- **The growth of express services is expected to average 6.7% pa over the next ten years, nearly three times as fast as GDP, providing there are no further constraints on its growth.**
- **That out-performance mainly reflects the continued expansion of international trade and the increasing need for rapid, guaranteed delivery. There is little sign that new technologies, such as e-mail, will prevent the express industry from growing much faster than the economy generally.**
- **As a result, employment in the express industry in UK is expected to increase from 32,000 now to 50,000 by 2014, if it is allowed to grow unconstrained. Revenues to the UK Treasury from the express industry are forecast to increase, from £370 million in 2004 to over £700 million in 2014.**
- **If express services were constrained to grow in line with GDP, then employment in the express industry would be 16,000 lower than these forecasts by 2014, and revenues to the Treasury from the express industry would be £235 million lower.**

The drivers of growth in the express industry

4.2 Over the last decade the express industry has been one of the fastest growing sectors of the UK economy, with aggregate shipments rising by 7% a year between 1995 and 2004, over twice as fast as growth in UK GDP. The strong growth of the express industry over the last decade reflects the increasing take-up of the industry's services across the economy as a whole, reflecting a number of structural and macroeconomic factors including:

- **Globalisation & world trade**: World trade has risen by about 7% a year on average over the past decade. OEF's global forecast shows this strong trend continuing, with world trade increasing by over 90% over the next decade compared with a rise of around 40% in world GDP.
- **Lean-inventory strategies & global sourcing**: Express services enable companies to achieve significant cost and time savings by facilitating streamlined production processes and rapid provision of spare parts, especially for companies with overseas subsidiaries or suppliers.
- **Quality of service**: To remain competitive many businesses have to offer a premium service to their customers, frequently involving an immediate response to their changed

requirements. The express industry facilitates this by offering guaranteed next-day delivery.

- **Competitive pricing**: Adjusted for inflation, the cost of express delivery services has generally declined over the last 20 years, reflecting the increased efficiency of the express operators.

The express industry and the knowledge-based economy

4.3 More recently, the use of the Internet and development of e-commerce has enabled rapid and efficient order processing and logistics planning, boosting demand for express delivery services. Similarly, the growth of knowledge-based sectors – for example. pharmaceuticals/biotechnology, financial and business services, research & development, and the 'high-tech' industries (eg information technology equipment and services) – means that the economy has become more dependent on express services.

4.4 Firms in the knowledge-based sectors are more-than-usually dependent on express services, reflecting the kind of products and services they provide, such as:

- High-value items, for which low stocks are essential (electronic components etc).
- Perishable items (such as tissue or blood samples for clinical trials).
- Failed items, such as personal computers, for which rapid repair and return is essential.
- Items purchased on-line, where rapid delivery to the customer is essential.

Growth prospects for the express industry services over the next decade

4.5 Our survey asked UK companies whether they had increased their use of express delivery services over the last five years. Table 4.1 summarises the response. Half of all respondents said their use of express services had risen by 5-10% over the last five years, while another 13% reported an increase of over 10%. Only 4% of firms said their use of express services had fallen.

Table 4.1: Has your use of the express industry increased?

Employment-weighted % of respondents reporting their views on how their use of express parcels/delivery services has changed over the last five years

	Up by over 10%	Up by 5-10%	Up by less than 5%	Remained about the same	Down by less than 5%	Down by 5-10%	Down by over 10%	No reply
Total sample	**13**	**49**	**19**	**12**	**2**	**0**	**2**	**3**
Manuf-acturers	13	28	29	23	5	1	0	1
Private services	13	61	14	5	0	0	4	3

Source: OEF survey of UK companies

Table 4.2: Will your use of the express industry increase?

Employment-weighted % of respondents reporting their views on how their use of express parcels/delivery services will change over the next five years

	Up by over 10%	Up by 5-10%	Up by less than 5%	Remain about the same	Down by less than 5%	Down by 5-10%	Down by over 10%	No reply
Total sample	**25**	**45**	**13**	**11**	**0**	**4**	**0**	**2**
Manuf-acturers	39	7	28	25	0	0	0	1
Private services	16	68	4	2	0	6	0	4

Source: OEF survey of UK companies

4.6 Looking forward over the next five years, this requirement for rapid delivery is likely to intensify further among existing users of the express industry and spread to other sectors of the economy as, for example, more businesses use the Internet for purchasing and supply management, and the demand for logistics services increases. Our survey asked UK companies whether they will be increasing their use of express delivery services over the next five years. Almost half of respondents expect an increase of 5-10% and a quarter expect an increase of over 10%; only 4% expect to reduce their use of express services (Table 4.2).

4.7 Only 5% of firms believe that they will be able to use other distribution methods (for example, by transferring information, data or contracts by secure electronic means such as secure web-based products and broadband data transmission) that will reduce their use of express services in the future (see Table 4.3).

Table 4.3: Will alternative distribution methods reduce your use of express services?

Employment-weighted % of respondents reporting their views on whether they anticipate alternative distribution methods that could reduce the use of express services within organisations

	Yes	No	No response
Total sample	5	90	5
Manufacturers	2	97	1
Private services	8	86	6

Source: OEF survey of UK companies

4.8 There are several factors that will support growth in the express industry over the next decade. First, in the short term the express industry may outperform overall UK GDP as the considerable uncertainty surrounding the state of the global economy makes its services particularly valuable for customers who wish to minimise their inventories but at the same time be in a position to respond rapidly to any change in demand. Second, whereas many businesses may already be using express delivery for transactions with the rest of the EU very intensively, this is less true for trade with the US and, particularly, Asia. It is widely expected that airfreight traffic between Europe and Asia will grow more rapidly than between other regions, as companies seek to capitalise on the rapid growth expected in the emerging economies. Third, companies and their customers are increasingly likely to demand rapid, guaranteed delivery.

4.9 But while there are many positive developments that should favour the express industry, there are also several factors that could stifle its growth:

- Increased regulation of air traffic. Express air operators already have to deal with regulations concerning environmental issues such as aircraft noise and emissions, and there is pressure for this regulatory burden to increase.
- There has been long-term underinvestment in the UK road network. Moreover, the express industry also has to deal with regulatory issues, particularly relating to delivery within Europe – for example, from restrictions to the number of hours that drivers are allowed to drive without rest.
- Increased security procedures across all modes of transport that might follow from the threat of further major terrorist attacks.

Estimating the growth of the express industry over the next decade

4.10 We expect the express industry to grow by an average of 6.7% a year in real terms between 2004 and 2014. This estimate – which is also consistent with the expectations of the leading express companies in AICES - is in line with the growth we expect in the international trade (exports and imports) in the sectors that use express services most intensively. It is almost three times faster than our forecast of 2.5% a year real growth for the UK economy as a whole over the next decade.

Table 4.4: Prospects for the express industry over the next decade

Inflation-adjusted (ie real terms)	Per annum growth 1994-2004	Per annum growth 2004-2014
Estimate of express industry output	7.6	6.7
World trade	7.3	6.7
UK GDP	2.9	2.5

Source: OEF

The direct impact of the express industry on the UK economy over the next ten years

4.11 The above analysis clearly indicates that the express industry will continue to be a high growth sector of the UK economy over the next decade. Its value-added will almost double by 2014 to about £1,740 billion in today's prices. This rate of growth will result in overall GDP being about £575 million higher by 2014 than if the express industry grew merely in line with our GDP growth forecast of 2.5% per annum. (And note that this is only the direct impact of the express industry's growth: it does not include the indirect or catalytic impacts of strong growth in the express industry on other sectors of the economy.)

4.12 There will also be benefits to total UK employment from the express industry's continued fast growth. Between 1995 and 2004 employment in the express industry is estimated to have increased from just over 19,000 to 32,000, implying that the sector's productivity has risen on average by 1.5% a year over the last decade. Looking forward, we assume that productivity growth in the express industry will rise at the whole economy average rate of 2% per annum. On this basis, we expect employment in the express industry to reach 50,000 by 2014. Overall, the express industry is expected to help support over 110,000 jobs in the UK by 2014, taking into account both those who work in the supply chain to the express operators ('indirect' jobs) and the jobs supported by the spending of workers in the express industry ('induced' jobs).

4.13 The high growth of this sector will boost government revenues. We estimate that the employees and companies directly involved in the express industry contributed around £370 million to the UK Treasury in 2004. By 2014 this might be expected to rise to over £700 million in today's prices if the sector grew in line with our forecasts. However, if the sector were constrained to grow in step with overall GDP then the sector would provide revenues of £235 million less than that in 2014.

Table 4.5: The prospective size of the express industry

	2004	2014
Value added (2004 prices)	£910 million	£1,740 million
Output growth 2004-2014		91%
Direct employment	32,000	50,000
Employment growth 2004-2014		56%

Source: OEF

Conclusions

4.14 The express industry is a fast-growing sector in its own right, outpacing GDP as the industry serves the increasing need for rapid, guaranteed delivery. Despite technological developments, such as email and the internet, the express industry will remain one of UK's fastest growing industries, supported by innovation and increasing demand for logistics services.

5 The Total Contribution of the Express Industry to the UK Economy

Introduction

5.1 In this Chapter, we assess the overall contribution of the express industry to the UK economy using an expanded version of Oxford Economic Forecasting's UK macroeconomic and sectoral models. We use the models to quantify the extent to which the UK economy would have been held back over the last 20 years if the express industry had not developed, and how the economy would be constrained over the next 20 years if the express industry were prevented from expanding any further from its current size. Finally, we examine the relative economic benefit of air transport capacity at constrained airports.

Key Findings:

- **The OEF aviation - express – economy model reflects four key channels by which the express industry influences the performance of UK plc: multiplier effects through the express industry's supply chain; the impact that cost and speed of delivery has on competitiveness; facilitating business efficiency and productivity; and influencing incentives for firms to invest in a country/region.**
- **If express services had not been available in the UK over the last 20 years, the OEF model suggests that productivity and competitiveness would have suffered such that GDP would now be £1.3 billion a year lower than it is. The overall cumulative cost to the economy over the last 20 years would be £12 billion.**
- **Preventing any further growth in express services would have a cumulative cost in forgone GDP of about £54 billion over the next 20 years.**
- **There are substantial competitiveness benefits to the UK economy from the use of air services by companies, whether for business travel, airfreight or express deliveries. These benefits are estimated to be about three times as great for a flight by an express industry operator than for a typical passenger flight.**

The OEF aviation – express – economy model

5.2 Given the variety of channels through which express services contribute to the performance of the UK economy, it is only possible to estimate the combined impact of the different forces at work in the context of a detailed model of the economy incorporating all the relevant effects. Such a model can be used to simulate alternative scenarios for express services and the implications for the rest of the economy.

5.3 We have modelled these effects by building an expanded version of Oxford Economic Forecasting's UK Macroeconomic and Sectoral Models. These models incorporate the effects of the growth of express industries on the productive capacity of the economy as a whole.

5.4 In the short term, a reduction in express services would have an impact on employment as well as on output, as firms relocated and their productivity was hit. But in the long run, the overall level of employment is not determined so much by the level of demand from particular industries as by the supply of workers looking for a job. If an expanding industry increases the demand for labour sufficiently, this will, over time, put upward pressure on wages as firms compete for the available pool of workers, until the increase in wages is sufficient to choke off the extra demand for labour. Conversely, if the demand for labour is below the available supply, over time there will be downward pressure on real wages and interest rates until the falling cost of employing people is sufficient to attract additional demand for labour. So in the long run, it is investment and productivity which are the key to the economy's output.

5.5 There are four routes through which express services enter into these relationships and affect other sectors in the economy:

- *Intermediate demand generates indirect effects through the supply chain*. Higher output and employment in express services would automatically generate increased demand in sectors supplying express companies. This in turn would affect the level of employment in those industries, and the additional wages they pay would generate extra demand and jobs elsewhere in the economy.
- *Changes in supply affect express prices and delivery speeds, which affect intermediate costs.* Restrictions in the supply of express services would put up costs for businesses, whether through directly higher rates, longer times in transit as a result of lower frequency of service, or the need to find alternative ways to transport packages that would otherwise be delivered by express. This in turn would lead to a loss of competitiveness for those UK industries which make significant use of express services, reflected in lower demand for UK goods and services.
- *Express services facilitate productivity growth elsewhere.* OEF's detailed statistical analysis of the relationship between total factor productivity of industrial sub-sectors and the output of transport service industries in the UK (of which the express industry is a key component) is incorporated into the model through the level of output the economy produces for given inputs. To calibrate the impact of express services, we have calculated the contribution of transport services to total factor productivity, and then adjusted these estimates to reflect the proportion of value-added in the transport services industry that is represented by the express industry, and the sectoral express intensities of production drawn from our survey.
- *Productivity also affects returns to capital and hence the level of investment.* As we have seen, the availability of next-day international express services is important to companies' decisions about whether or not to locate in the UK. This is reflected in the model through the impact of changes in productivity back onto investment and hence the amount of capital equipment available for production.

The contribution of the growth of express services to the UK economy today

5.6 20 years ago, international express delivery services in the UK were very limited. Had they not grown in the way they have, but remained limited over the last 20 years, UK productivity performance and competitiveness would have been poorer. In this section, we quantify that cost to the UK economy.

5.7 According to our model, if express services had not been available in the UK over the last 20 years, UK GDP would now be £1.3 billion per year lower than it is. Total employment would probably not be different, since those people employed in the express industry would have found other work. But average productivity per head across the whole economy would be lower. The overall cumulative cost to the UK economy over the last 20 years would have been £12.2 billion in 2004 prices.

5.8 There are two main reasons why the lack of express services over the last 20 years would have been costly for GDP in the UK as a whole:

- Some firms – particularly in sectors that rely heavily on express services - would not have located in the UK. The evidence from our survey suggests that 16% of firms might relocate some operations abroad were international next-day express services not available. In our calculations, we have made the cautious assumption that, of those who stated they would be forced to relocate, only 10% would in the event actually have done so. The loss of these firms to the UK would have meant the workers currently employed there would be employed elsewhere, but less productively, resulting in lower average productivity across the UK as a whole.
- The absence of express services would have meant that the UK lost out on the beneficial 'catalytic' effects, which have improved productivity in other sectors across the UK (eg increased use of just-in-time inventory systems). The loss of these catalytic effects contributes around half of the total loss in GDP.

5.9 So, although the express industry itself directly accounts for £910 million of total UK GDP, without express services the UK as a whole would have been much more badly hit than that figure suggests over the last 20 years. This clearly demonstrates that, like the aviation industry generally, the express industry 'punches above its weight' in the sense of facilitating extra growth in other sectors.

5.10 Moreover, our estimate of the cost to the UK economy is, if anything, likely to be an underestimate. If we were to assume that, rather than just 10%, 50% of firms saying that they might possibly relocate if there were no international next-day express services would actually have done so, the GDP cost would have been £1.7 billion a year, with a cumulative cost of £16 billion over the last 20 years.

Table 5.1: Impact on UK GDP of no growth in express services over the last 20 years

	Impact on GDP in 2004	Cumulative impact on GDP over last 20 years
Impact assuming 10% of firms who report they might have relocated would in fact have done so	£1.3 billion	£12.2 billion
Impact assuming 50% of firms who report they might have relocated would in fact have done so	£1.7 billion	£16.3 billion

Source: OEF

The impact of express services on the UK economy over the next 20 years

5.11 Going forward, express services are likely to make an even bigger contribution to UK economic performance than they have over the last 20 years. That is because the sectors that are most reliant on express services are among the most productive and the fastest growing sectors in the UK economy: their share of UK employment and output has increased over the last 20 years and is set to increase further over the next 20. So anything that makes them less competitive, or forces them to relocate overseas, would now be more costly to the UK economy than ever.

5.12 According to our model, if express services in the UK were not allowed to grow over the next 20 years, by the end of that period, GDP would be £5.4 billion a year lower in 2004 prices than it would be if express services were allowed to grow without constraint. The cumulative loss of GDP from no growth in the express industry over the next 20 years would amount to £54 billion in 2004 prices. That loss would continue to accumulate further into the future.

5.13 Once again, this impact would be distributed unevenly across the sectors. 'New economy' sectors, such as computers & office equipment and electrical engineering, as well as key UK export industries such as finance and business services, have among the highest express-intensities of production. Those who lost their jobs in express services or in industries highly reliant on those services would eventually be employed elsewhere. But they would probably be less productive than otherwise and their standard of living would be lower. And average productivity in all industries would fall if express services were withdrawn and the benefits discussed in earlier chapters were lost (see Chapter 3).

The economic benefits of flight slots for express operators compared to passenger aircraft

5.14 The analysis in the previous sections has described the impact over the last 20 years had express services not developed, and over the next 20 were express services constrained to no further growth. In both of these cases, the loss of express services results both in firms relocating from the UK and forgone catalytic impacts on productivity and competitiveness in other sectors. However, even marginal changes in the provision of express services will have an impact on UK GDP, via their catalytic effects and the direct impact on value-added from the express industry itself – even if such marginal changes do not push firms into deciding to relocate abroad. One way to think about such marginal changes is to explore the effect of increasing the number of express operator aircraft movement slots by one.

5.15 Our model allows us to quantify the impact of substituting an express operator flight slot for a passenger flight slot. The results of this comparison, however, depend very much on the nature of the passenger flight we consider:

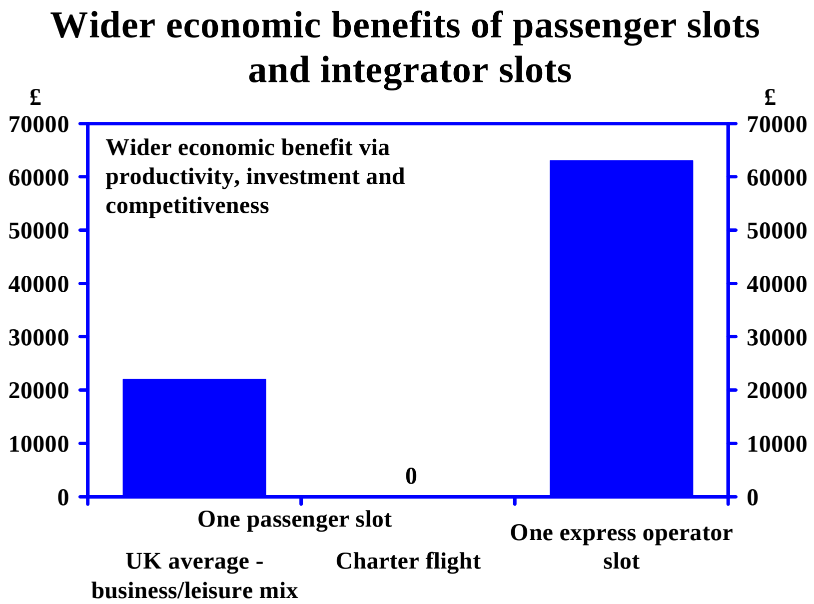
- OEF's research on the economic contribution of transport services to the sectoral performance of the UK economy suggests that there are substantial competitiveness benefits to the UK economy from the use of air services by companies, whether for business travel, airfreight or express deliveries.
- Combining this research with OEF's sectoral model of the UK economy (ie the OEF aviation – express – economy model), we estimate that the wider economic benefit from a passenger flight entirely consisting of business passengers would be around £63,000. This reflects the impact such a flight would have on, for example, the UK's trade position as those travelling meet with clients and potential clients to win business or to identify investment opportunities.

- On average, the International Passenger Survey suggests that around a third of the passengers on a passenger flight are business travellers, with the remainder travelling for leisure. Our model suggests that, although there are social and other benefits arising from leisure travel (including the economic impact of inward tourism), there are no wider long-term productivity and competitiveness benefits to the economy from leisure travel. The wider economic benefit of a typical passenger flight is therefore estimated to be £22,000, while a typical charter flight does not generate wider economic benefits.
- In taking this approach, it is important to consider that the proportion of business travellers on flights from the main airports used by the express industry is typically lower than the UK average.

5.16 Our model suggests that the wider economic benefit for a flight by an express delivery operator is around £63,000. This is almost three times greater than for the typical UK passenger flight. And the difference is likely to be even more pronounced with respect to a typical non-express flight from an airport frequently used by the express industry.

5.17 The wider economic benefit from an express operator flight is much greater than for typical passenger flights because all of an express aircraft is dedicated to serving business use. Passenger flights make a substantial contribution to UK productivity and competitiveness by facilitating business travel. But in practice they are rarely dedicated solely to business travel.

Chart 5.1



Conclusions

5.18 Like the aviation industry in general, the express industry 'punches above its weight'. It directly accounts for over £900 million of UK GDP, but through its impact on competitiveness, investment and productivity supports £1.3 billion of total output a year at present. Over the next 20 years, that contribution is set to increase to over £5 billion a year in 2004 prices. Constraints on the growth of express services in the UK would therefore be more costly than just the loss in output from that industry. By forcing some firms to relocate and others to become less competitive, overall output would be lower in the long run than it has the potential to be. Moreover, the short-run impact of such constraints would be even more pronounced: as firms close down their UK operations, unemployment would increase, and a significant proportion of the capital stock – especially in the most affected sectors – would pass out of use. This therefore has implications for policy and economic decisions about issues which affect the express industry, and when considering regional and national aspirations relating to economic growth and competitiveness.

6 Specific Air Express Issues

Introduction

6.1 In this Chapter we examine some specific issues relating to air express, with a focus on the necessity for the express industry to continue to operate at night[1] in order to deliver the significant economic benefits to the UK economy detailed in the previous Chapters. As part of our analysis, we also provide an estimate of the impact and costs incurred in stopping nighttime express flights at UK airports.

Key Findings:

- **The express industry is dependent upon flying at night from a limited number of airports to deliver the significant economic benefits described in previous Chapters of the report. Without this, the advantages of international connectivity provided by the sector would be lost, as would a significant amount of international trade.**
- **Many UK businesses believe that they would be badly affected by the cessation of next-day deliveries guaranteed by the operation of night flights. 16% of firms may relocate some operations if next-day deliveries were not guaranteed.**
- **The economic costs of a ban on night-flights would be substantial: the impact on GDP could build up over a 20-year period to nearly £6 billion a year in today's prices, with a cumulative cost of over £35 billion. These costs need to be weighed against any environmental and other considerations that may lead some to recommend constraining the activities of the express industry, especially in flying from a small number of airports at night, which is vital for many next-day international delivery services.**

The necessity of night flights for the express industry

6.2 Express services are used primarily by UK business to achieve the next-day delivery of goods and documents to customers throughout Europe and North America[2]. As we have previously reported, products are time-sensitive because they move according to thin and high velocity supply chains, enabling reduced obsolescence costs and inventory costs. This usually requires goods to be picked up at the end of the working day, for delivery early the following day. This reduction of 'daylight' in-transit time is one way in which companies perceive that delivery lead times provide competitive advantage.

6.3 The only way to achieve such a delivery schedule is by the operation of aircraft outside of normal business hours, including those defined as night, between 11pm and 7am. Night flights are only used when no other alternatives are available and where it is essential to meet next-day delivery deadlines required by customers.

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[1] Night is defined as being between 11pm and 7am.

[2] Goods to areas other than Europe and North America can take between 2 and 3 days to deliver by express services.

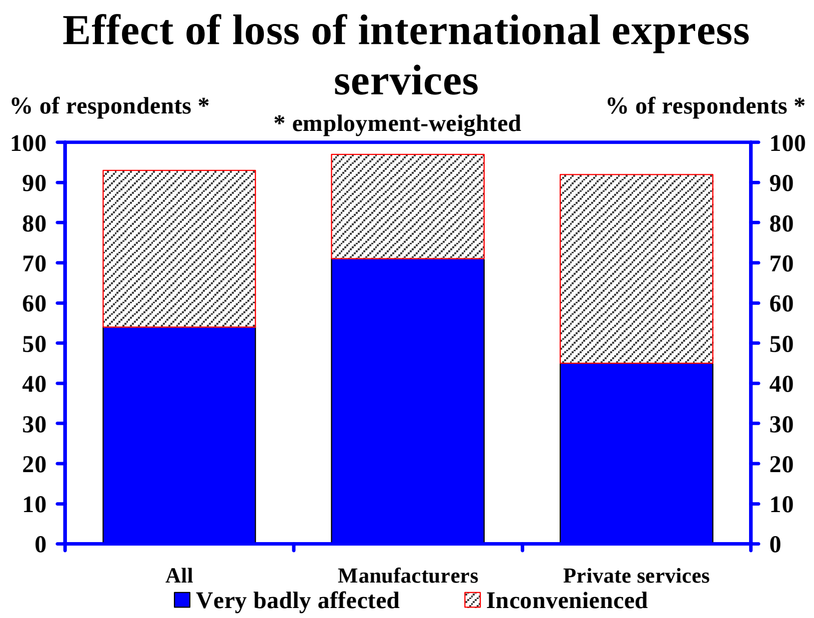
6.4 If night flights were banned at UK airports, many of the next-day consignments currently carried on those services would not be transported, and the resultant trade would be lost to the UK economy. This is because the express industry would not be able to maintain the connectivity that is required with other major air express operating hubs in Europe within the much-reduced time-window available. To process everything for multiple express flights departing before 12 am or arriving after 5/6 am would not be possible. This would be damaging to the UK's role as a trading nation and its privileged position in the centre point of the world's time zones.

6.5 Not only do shippers value access to the speed and efficiency of next-day deliveries, but there are also other operational advantages to be gained from air operations at night. It would be difficult to operate express flights during the day because of increased congestion both in terms of surface access to airports and the availability of runway slots at the airports themselves. Express flights would have to compete with passenger aircraft for scarce resources.

6.6 Night flights also enable:

- Optimal use of both road and air infrastructure (ie on a 24 hour basis).
- Spreading of airport, airspace and Air Traffic Control utilization, keeping those capacities open for higher volume passenger traffic during daylight hours.
- Better utilisation of existing airport resources since night-flights have comparatively little add-on cost to their normal operations.

Chart 6.1:



Impact of no international next-day express delivery

6.7 Chart 6.1 shows the impact that a cessation of next-day international express deliveries would have on UK business. Over half of respondents to our survey report that their business would be very badly affected, while a further 40% say that they would be inconvenienced.

6.8 Manufacturing firms would generally be more badly affected than those in the private services sector, with nearly three-quarters of all manufacturing firms reporting that they would be very badly affected. This finding underlines that the express industry does not just serve the service sector but is also critical to many parts of UK manufacturing industry.

Table 6.2: Effect on organisations if there were no international next-day delivery

		Probably	Possibly	Never
Operations would have to relocate from the UK to another country	All sectors	8	8	74
	Manufacturing	22	16	61
	Private Services	0	3	81
Orders would be lost because of longer delivery times	All sectors	13	22	46
	Manufacturing	26	20	30
	Private Services	5	24	55
Increased inventories would have to be held at UK site to meet production requirements	All sectors	14	27	47
	Manufacturing	34	32	29
	Private Services	3	23	58
Increased inventories of products would have to be held to meet customer demand	All sectors	31	13	45
	Manufacturing	40	31	29
	Private Services	25	4	55

Source: OEF survey of UK companies

6.9 Table 6.2 summarises the impact that the ending of next-day international delivery would have on organisations. It shows:

- 8% of firms would probably have to relocate from UK to overseas, and a further 8% of firms report they possibly would have to do so.
- Within manufacturing, over a third of firms might have to relocate. If so, most would probably move to a continental European country offering next-day delivery services, but some companies with a large American market might possibly locate to the US. This finding demonstrates the role express services play in helping to facilitate business investment in countries/regions that are not necessarily close to firms' markets, and hence the contribution express services can make to regional development (see Chapter 3).
- Over a third of firms report that they might lose orders because of longer delivery times.
- Again, manufacturers would be particularly badly hit, with about half reporting that they might lose orders.

- Almost half of firms might have to hold more inventories of products to meet customer demand. Similarly, nearly half of firms might have to hold more stock to meet the requirements of their production process.

The economic cost of restricting night-time express flights

6.10 OEF's aviation – express - economy model has been used to assess the implications of a complete ban on night-time express flights. As described in Chapter 5, this takes into account the effects that such a ban would have on the express industry itself; the companies in its supply chain; and, more importantly, other sectors of the economy, as firms' competitiveness would be undermined by increased delivery costs and slower delivery times. As our survey demonstrates, this would lead to a significant loss of sales by UK companies and would also result in some firms possibly moving their operations from the UK to be either in countries that offer next-day express services or in areas close to key markets.

6.11 Taking into account all of these effects on the economy, our analysis suggests that a ban on night flights would lead to a loss of GDP of £1.4 billion a year.

6.12 If the effect of the abolition of night flights were also to halve the expected growth in the express industry's business over the next 20 years – which would then compete with traditional 'non-express' freight-forwarders – we estimate that the overall impact on GDP by 2024 would be a loss of nearly £6 billion a year in today's prices. Over a 20-year period, we estimate that the cumulative cost in terms of forgone GDP would be over £35 billion.

Conclusions

6.13 The express industry is dependent on flying at night to deliver the significant economic benefits described in this Report. Restricting night flights from the UK would undermine the industry at significant cost to the wider UK economy and competitiveness. The impact on GDP could build up over a 20-year period to nearly £6 billion a year in today's prices, with a cumulative cost of over £35 billion.

6.14 This result clearly underlines the economic importance of express carriers for UK plc and the costs that the economy would face if there were to be restrictions on the future growth of the express industry. These substantial costs need to be weighed against any environmental and other considerations that may lead some to recommend constraining the activities of the express industry, especially in flying from a small number of airports at night, which is vital for many next-day international delivery services.

6.15 While it is important to consider how noise and other concerns of local residents can be addressed, this report clearly demonstrates that airports that operate as express hubs are serving a wider strategic economic role which generates substantial benefits for UK plc and their local economies in terms of trade, competitiveness, productivity and investment.